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ROMEX® COMPENDIUM

valid from 1st August 2020

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GERMANY

ROMEX®

ROMEX®



Since 1989 ROMEX® stands for **high quality** and **exceptional service**.
Worldwide we will accompany you every step of the way with your projects.
Because our experience means your success!

IMPRINT

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Founding family Meurer

Who we are and what we do

As a family business, since its founding in 1989 by our senior Rolf Meurer, ROMEX® has developed into a specialist supplier of industrial floor coatings and pavement jointing mortar with international significance.

We serve the trade with 1 and 2 component pavement jointing mortar binding agents and are considered to be the best-assorted manufacturer in this area. Rolf Meurer was the first to use synthetic resins as a binding agent for problem-free paving stone jointing for laymen and professional laying companies and who implemented this with top products, quality and corresponding customer advice.

In the field of project management we have specialized in producing epoxy resin (EP) and polyurethane (PU) industrial floor coatings for large industrial projects. In cooperation with our partner laying companies we offer the highest level of advice and supervised laying to ensure the best results for our customers. This also applies to projects involving our bedding and jointing systems for paving stone and slab flooring.

Because we have the longest experience. We leave no customer alone – because our experience is your success!





Quality thanks to own production

ROMEX® products rightly have the quality seal „Made in Germany“. All floor coatings and synthetic resin pavement jointing mortars are produced in our own production facility in Meckenheim near Bonn, Nordrhein-Westfalen. Our own Research and Development department, develops formulas that satisfy highest quality standards. ROMEX® has also set up its own standards, that surpass the generally valid norms. Primers, floor coatings, sealants and pavement jointing mortar as well as pouring mortars made of synthetic resins and high-quality fillers are the main products, which are developed and produced according to the most modern aspects.

The factory test procedures as well as the production control fulfill all requirements for the harmonized Norm EN 1504-2: 2004.

Certificate for the conformity of works own production control

ROMEX® products that fall under the currently valid CE norms requiring identification, all have the CE mark. This confirms that we as the manufacturer that our products conform to the valid EU guidelines. The entire product range is comprehensively tested on a regular basis. In addition, all products newly added to the program, are tested according to the applicable standards and guidelines and CE marked.

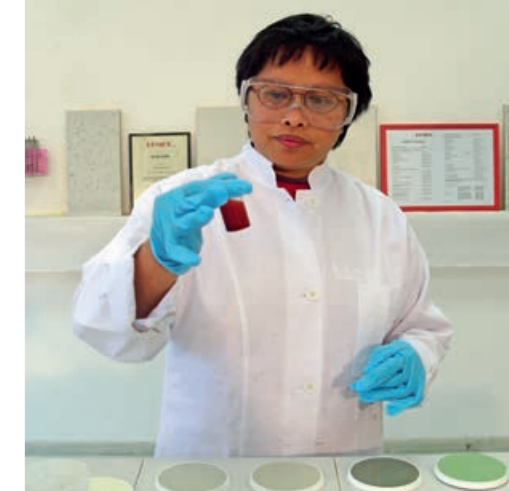


Progress through innovation

In order to work consistently at a high level, we continue to develop our products. The entire range of coating systems and pavement jointing mortars are developed based on own formulations developed by the ROMEX® Research and Development Department and are checked and constantly improved. New development is always oriented towards the norms and standards we have set up and that go far beyond current norms.

All ROMEX® products are put to the acid test in our own laboratory and application engineering department and subsequently certified by independent reviewers.

Thinking ahead and following new paths has made ROMEX® what it is today: a global family business with excellent and award-winning products, such as the patented ISATec® displacement protection system, which was awarded the Innovation Medal in 2014 by the Federal Association GaLaBau (BGL).



Membership in associations

ROMEX® is a member of the trade association for screed and coatings, a service provider for the companies in the German screed and coatings trade. It supports its member companies primarily in technical trade questions, in order to give the best possible technical advice to contractors and architects.

Since 2006 ROMEX® is part of the concrete association road, landscape, garden e. V., which independently represents the interests of manufacturers of concrete products, with the goal of making concrete paving stone construction even more effective for permanently functional and aesthetic surface coverings.

ROMEX® is also a member of the Association of the Chemical Industry e.V. and the Central association of the manufacturers of construction chemical products "Deutsche Bauchemie".



Sustainability

Sustainable commerce means taking responsibility for the future and to act conscientiously. ROMEX® has made it their objective, to carry out projects for the development of innovative, biologically based, degradable and at the same time cost effective biopolymers. As manufacturer of highly loadbearing industrial floor coatings made of epoxy and polyurethane as well as mortar products, which for the most part are used outdoors and remain there usually until the end of their life cycle, ROMEX® has a big interest in binding agents, which will decompose into non hazardous substances.

Throughout the world, mortar products are sold in large quantities in plastic buckets, which end up in the environment, especially outside of Europe. That is why ROMEX® wants to use biodegradable packaging in the future and has become a partner with the cooperative network for BioPlastics, which is a project promoted by the Federal Ministry for Economics and Energy (BMWi), with the aim of combining the benefits of longevity with degradability.



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Our core competence



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PAVEMENT JOINTING MORTAR

Our range of pavement jointing mortars is based on the different requirements of joints. The ROMEX® pavement jointing mortar systems offer solutions against weeds, pollution and displacements for natural and concrete stones, clinker and porcelain stoneware and provide a permanently visually appealing image. Areas of application are both private and public areas with different loads, starting at lighter pedestrian loads up to the strongest traffic loads.



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DISPLACEMENT PROTECTION

As developer and manufacturer of displacement protection devices, we offer solutions to absorb shear forces on large format slabs and paving stone surfaces in innercity areas such as town squares, in pedestrian zones or in other areas of representative design. For almost all areas of application, including on bonded base courses, ROMEX® offers a solution by use of specific anchor technology. A large range of various anchor types are available for this.



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AUXILLIARY PRODUCTS

The decorative grit and gravel strengthener ROMPOX® - DEKO and ROMPOX® - PROFI-DEKO are the modern solution for tree surrounds, footpaths and representative surfaces and thanks to the many advantages is replacing the classic metal tree surrounds. With the drainage capable bedding mortar ROMEX® - TRASS-BED we offer assurance for permanent paving stone jointing. With our repair mortar ROMPOX® - D4000 HR potholes can be quickly and permanently filled.



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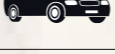











FLOOR COATING

Our portfolio of modern products, such as primers, coatings and sealants, are especially designed for the industrial sector and their various requirements. We also offer high quality coatings for commercial and private sector use. Our floor coatings are used in production halls, clean rooms, carparks and underground carparks, the food industry and on stadium stands. They are suitable for steel surfaces or as concrete protection and are chemically and abrasion resistant.

Exceptionally competent. Experience and expert knowledge with modern building materials for 25 years.

ROMEX® product overview

pavement jointing mortars, auxilliary products and displacement protection

	Product	Optimum areas of application	Joint width	Joint depth	Load class	Water permeability	Containers	Page
Private sector	ROMPOX® - JOINTING SAND NP	<ul style="list-style-type: none"> For tightly laid paving stones Interlocking paving Driveways 	≥ 1 mm 1/16"	≥ 30 mm 1 1/4"	 All load classes	Permeable	25 kg 55.12 lb bag	24–25
	ROMPOX® - EASY	<ul style="list-style-type: none"> Patio, Garden path For coated and sensitive stone surfaces 	≥ 5 mm 1/4" narrower joints can be jointed but with increased work	≥ 30 mm 1 1/4"	 Light traffic loads up to 3.5 tons	Highly water permeable	15 kg 33.07 lb bucket, 25 kg 55.12 lb bucket	26–27
	ROMPOX® - POWER JOINT	<ul style="list-style-type: none"> Paved stone surfaces with traffic loads 	≥ 8 mm 3/8" narrower joints can be jointed but with increased work	≥ 30 mm 1 1/4"	 Medium traffic loads up to 7.5 tons	Permeable	25 kg 55.12 lb bucket	28–29
	ROMPOX® - PATIO	<ul style="list-style-type: none"> Sensitive stones Coated stone surfaces 	≥ 5 mm 1/4"	≥ 30 mm 1 1/4"	 Light traffic loads up to 3.5 tons	Highly water permeable	25 kg 55.12 lb bucket	30–31
	ROMPOX® - DRAIN	<ul style="list-style-type: none"> Driveways, parking space 	≥ 5 mm 1/4"	≥ 30 mm 1 1/4"	 Light traffic loads up to 3.5 tons	Highly water permeable	26.8 kg 59.08 lb bag	32–33
	ROMPOX® - DRAIN PLUS	<ul style="list-style-type: none"> Driveways, parking space 	≥ 5 mm 1/4"	≥ 30 mm 1 1/4"	 Light traffic loads up to 3.5 tons	Highly water permeable	26.5 kg 58.42 lb bag, 25 kg 55.12 lb bucket	34–35
	ROMPOX® - D1	<ul style="list-style-type: none"> Polygonal slabs Driveways, parking space 	≥ 3 mm 1/8"	≥ 30 mm 1 1/4"	 Medium traffic loads up to 7.5 tons	Highly water permeable	27.5 kg 60.63 lb bag, 12.5 kg 27.56 lb bucket, 25 kg 55.12 lb bucket	36–37
	ROMPOX® - FLEX-LIGHT	<ul style="list-style-type: none"> Unbonded surfaces around the house subject to heavy loads 	≥ 5 mm 1/4"	≥ 30 mm 1 1/4"	 Medium traffic loads up to 7.5 tons	Highly water permeable	25 kg 55.12 lb bucket	42–43
	ROMPOX® - JOINT STRENGTHENER	<ul style="list-style-type: none"> Coated concrete and natural stones as well as clinker surfaces 	≥ 1 mm 1/16"	≥ 30 mm 1 1/4"	 Light traffic loads up to 3 tons	Highly water permeable	1 Ltr. 0.26 gal bottle, 5 Ltr. 1.32 gal canister, 10 Ltr. 2.64 gal canister	44–45
	ROMPOX® - D7000	<ul style="list-style-type: none"> For pathways and commercial surfaces 	–		 Light traffic loads up to 3 tons	Very high water permeable	20 Ltr. 5.28 gal canister	46–47
	ROMPOX® - DEKO	<ul style="list-style-type: none"> Suitable for light grit/gravel 	surface depth ≥ 30 mm 1 1/4"		 Light traffic loads up to 3 tons	Very high water permeable*	1 kg 2.2 lb tin, 30 kg 66.14 lb bucket	130–131
	ROMPOX® - DEKOFIX	<ul style="list-style-type: none"> for light wells, spray strips, private tree surrounds, non loadbearing decorative surfaces, graves and unused surfaces 	surface depth ≥ 20 mm		–	Highly water permeable	25 kg 55.12 lb bucket	132–133
Public sector	ROMPOX® - FLEX-JOINT	<ul style="list-style-type: none"> Unbonded surfaces in the public sector subject to heavy loads 	≥ 5 mm 1/4"	in case of traffic loads 2/3 of stone height	 Medium to heavy, up to 25 t in combination with ground anchors	Highly water permeable	25 kg 55.12 lb bucket	50–51
	ROMPOX® - D2000	<ul style="list-style-type: none"> Public paved stone surfaces 	≥ 5 mm 1/4"	≥ 30 mm 1 1/4"	 Medium to heavy (up to 25 t)	Permeable	27.5 kg 60.63 lb bag	52–53
	ROMPOX® - D3000	<ul style="list-style-type: none"> Suitable for repairing broken cement surfaces 	≥ 3 mm 1/8"	≥ 10 mm 3/8" Depth of joint crack	 Medium to heavy (up to 25 t)	Highly water permeable	27.5 kg 60.63 lb bag	56–57
	ROMPOX® - TRAFFIC V2	<ul style="list-style-type: none"> Public surfaces with heavy loads 	≥ 8 mm 3/8"	≥ 30 mm 1 1/4"	 Heaviest loads (up to 40 t)	Permeable	28 kg 61.73 lb bag	64–65
	ROMPOX® - D4000 HR	<ul style="list-style-type: none"> Renovation, repair of public areas 	surface depth ≥ 10 mm 3/8"		 Heaviest loads (up to 40 t)	–	17.5 kg 38.58 lb bucket	140–141
	ROMPOX® - PROFI-DEKO	<ul style="list-style-type: none"> Path construction, tree surrounds Suitable for dark grit/gravel 	surface depth ≥ 30 mm 1 1/4"		 Light traffic loads up to 3 tons	Very high water permeable*	3 kg 6.62 lb container, 30 kg 66.14 lb bucket	134–135
	ISAT®c DISPLACEMENT PROTECTION	<ul style="list-style-type: none"> Public sector 	As described in the leaflet for surface fastenings with large formats (MFG issue 2013).		 Heaviest loads (up to 40 t)	–	–	146–161
Auxiliary products	ROMPOX® - TRASS-BED-COMPOUND	<ul style="list-style-type: none"> Private and public sector 	≥ 30 mm 1 1/4" layer thickness		 Heaviest loads (up to 40 t)	Highly water permeable	40 kg 88.18 lb bag, 25 kg 55.12 lb bag (Compound)	118–119
	ROMPOX® - ADHESION ELUTRIANT	<ul style="list-style-type: none"> Private and public sector 	≥ 3 mm 1/8" layer thickness		 Heaviest loads (up to 40 t)	–	25 kg 55.12 lb bag	120–121

* depending on grain size



PAVEMENT JOINTING MORTARS

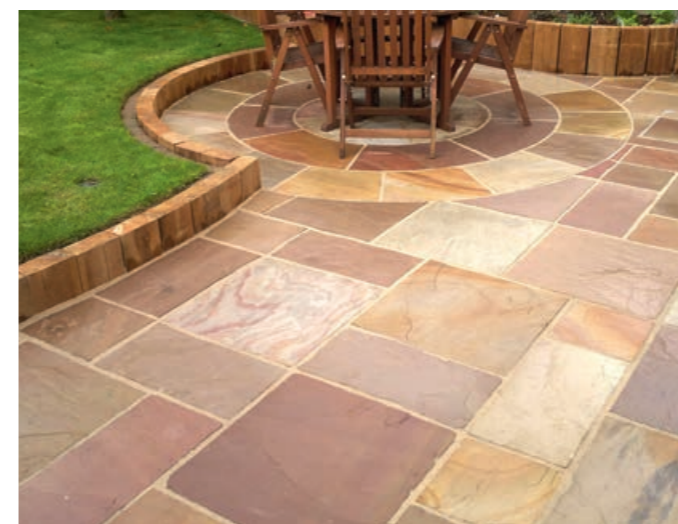
You always make a good choice when using our **pavement jointing mortars**. Regardless of whether it is a 20 m² | 215 sq ft **patio** or a 20 000 m² | 215 000 sq ft **market square**. We can do it.



Areas of application of our pavement jointing mortars

Using ROMEX® pavement jointing mortars, all types of paved stone and slab surfaces in various areas can be jointed quickly and easily. Whether in the private sector such as patios, garden paths, driveways or on public roads, pedestrian zones or on market squares. Yearly innumerable surfaces are jointed with our jointing mortar. They are much loved thanks to their ease of application in just a few steps. Weeds, frost damage or washing out of joints are a thing of the past, thanks to the fact that all ROMEX® pavement jointing mortars are frost and de-icing salt resistant as well as resistant to street sweepers and weed growth.

From DIY enthusiasts to construction companies and architects, one thing is always sure: you are always guaranteed a clean and permanently jointed surface. Worldwide our products contribute to the high quality construction or repair of paved stone surfaces, garden and landscaping and parliament squares and have made their mark on the image of towns and communities.



Patios

pavement jointing mortars are often used around the house. It is mainly patios and garden paths that are jointed, in order to permanently prevent weed growth. Synthetic resin pavement jointing mortars are especially liked for use on patios paved with high quality stones. They are not only the best solution against weeds and ants, but also offer longterm visually attractive surfaces. The classic product for all non trafficked areas around the house is our jointing mortar **ROMPOX® - EASY**. This comes mixed and ready to use and can be easily worked into the at least 5 mm | ¼" wide joints using a rubber squeegee or broom. Ideal for all who like to do DIY.

Our 2 component systems offer further possibilities for jointing. If you have joint widths below 3 mm | ⅛", then you can use **ROMPOX® - D1**. Thanks to it's pouring capability it is most suitable for jointing 3 mm | ⅛" joint widths. We also recommend D1 for the jointing of polygonal slabs (also called broken stone or wild form slabs). If large quantities of rainwater need to be dispersed quickly into the ground or if standing water is left after rain showers because it doesn't drain off quickly enough through the joints, then we recommend our pavement jointing mortar **ROMPOX® - DRAIN**. It has a water permeability value of 15 l | 3.96 gal per minute per m² of jointing mortar, which is the most water permeable.

If the joints on your patio are less than 3 mm | ⅛" wide, which is often the case with concrete stone slabs, then we recommend against using pavement jointing mortar for the joints. In this case we recommend using **ROMPOX® - JOINTING SAND NP**, which is much better than general purpose jointing sands or **ROMPOX® - JOINT STRENGTHENER**, a special liquid for strengthening sand joints. The joints are filled with dry quartz sand before the special liquid is poured into the joints.



Driveways

In order to prevent weedgrowth on surfaces around the house with higher loads, such as driveways or parking spaces, using our high quality 2 component systems are just the thing. Due to higher compressive strengths and better adhesion to edges compared to 1 component pavement jointing mortars, the systems **ROMPOX® - DRAIN**, **ROMPOX® - D1** and their "plus" versions, are ideal for driveways with traffic loads up to 7.5 t. The highly water permeable pavement jointing mortars allow rainwater to drain away quickly, which communities count as surfaces that are not sealed and thus contribute to environment protection.

Jointing should be uncomplicated, with a high quality and environmentally friendly result. Our new 1 component pavement jointing mortar **ROMPOX® - 1 comp. POWER JOINT** is mixed ready to use and is suitable for water permeable, bonded construction methods. It is quick and easy to use and is thus aimed at professional laying companies and garden landscapers as well as private users that want to do their jointing at home themselves.



Asphalt repair and curbstone repair

Potholes, damaged areas and breakages on curbstones are annoying and a source of risk. It is therefore logical that towns and communities are interested in making sure that these occurrences are permanently resolved as soon as possible. In winter as well. With **ROMPOX® - D4000 HR** we have a unique, highly reactive repair mortar, which can be laid even at temperatures of up to -10 degrees Celsius. This means that road maintenance companies can use the product all year round to keep on top of damaged areas and potholes. Thanks to its property of high strength mortar system, even broken off curbstones can be permanently repaired.



Repairing old cement joints

Until now, the repair of old paved stone surfaces was limited. Depending on usage and degree of damage to the paved stone surface, the only way was to re-lay the surface as new, which is very expensive. The old joints can be repaired without having to take up and re-lay the paving stones, if the surface is still in good shape and can be walked and driven on, and it is only joint repair and stabilising of the surface that needs to be achieved.

Using **ROMPOX® - D3000** it is possible to re-work and repair old cement joints. Narrow joints and cracks in the paved stone surface can also be repaired. The joint width must be at least 3 mm | 1/8", the depth at least 10 mm | 3/8".

Pedestrian zones, market squares and roads

The most commonly planned regulation construction methods are carried out as unbonded or open construction methods according to DIN 18318. Due to ever increasing traffic loads, delivery traffic, weekend and christmas markets, extreme weather effects and the effect of paved stone cleaning using vacuum sweeping machines, the joints disappear and erosion of the entire paved stone surface commences. Each period of frost causes hydraulically bound joints to have weak areas which crack and break out. Longterm the result is empty joints, dislodged paving stones and a damaged surface. A major problem in this, is that the surface becomes dangerous to walk on and the risk of accidents for residents and tourists increases.

Thanks to our synthetic resin pavement jointing mortar, frost damage is a thing of the past, as well as unsightly cement residue. With our jointing systems, all your surfaces will be made to look particularly appealing. A further advantage of synthetic resin systems is the quick re-opening to traffic after jointing. In comparison to most hydraulically bound pavement jointing mortars where re-opening to traffic usually only happens after 28 days, surfaces jointed with our pavement jointing mortar **ROMPOX® - D2000** can be re-opened after just 24 hours.

Even surfaces meant for heaviest loads such as bus and lorry traffic can be jointed using our jointing mortar **ROMPOX® - TRAFFIC V2**, our strongest pavement jointing mortar with a compressive strength of well over 50 N/mm² | 145 psi, able to withstand such loads.



Gutters

Acc. to ATV DIN 18318:2006 the joint widths for gutters should be between 8–12 mm | 3/8"–1/2", the paving stone should be set "fresh on fresh" and jointed using bonded pavement jointing mortar. For jointing gutters made of natural stone or concrete stone paving stones, which drain surface water into the drainage system, we recommend **ROMPOX® - D2000**. This combines high compressive strength with very good application properties.



Using ROMEX® pavement jointing mortars

all types of paved stone surface
and slabs in various areas
can be jointed quickly and easily.



Natural stones



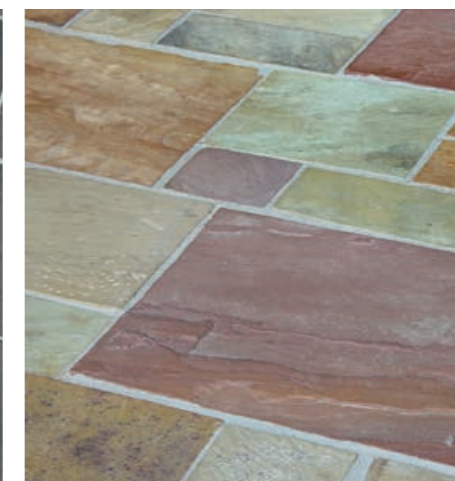
Polygonal and crazy paving



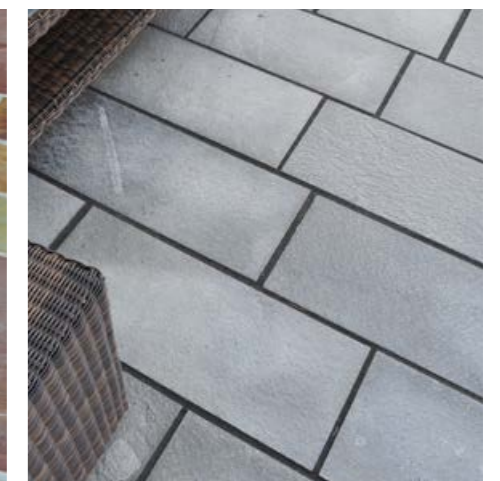
Concrete stones and slabs



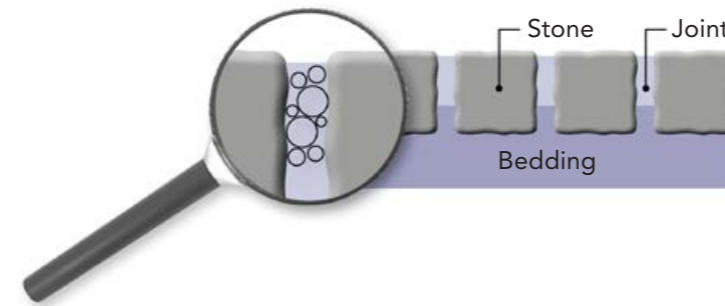
Ceramic fine stoneware



Sandstone



Granite and slate



The capillary effect

The capillary effect is the way liquids react when they come into contact with capillaries i.e. tight pipes, cracks or hollow areas in hard materials.

Example: if you dip a glass tube vertically into water, the water will rise slightly in the tube against gravity.

This effect occurs due to surface tension of the liquids themselves and from the border surface tension of the liquids with the hard surface (in this example: glass).

In the construction industry, when synthetic resin bound pavement jointing mortar is used i.e. on paved stone surfaces that have been jointed with synthetic resin based pavement jointing mortar, the capillary effect can be seen in the joints, because depending on the joint mortar used and the pore content or sand grainsize, varying amounts of moisture are able to rise against gravity.

This means that even if a foundation is only slightly water permeable, water will not remain permanently in the joint.

Using ROMEX® systems, you can do your part to be environmentally friendly. Because the ROMEX® products strengthen surfaces, paths and squares, without sealing them!

Water permeability

That is why our pavement jointing mortars are water permeable and frost resistant

In Geotechnology, permeability is used to quantify the permeability of ground and rock for liquids or gases (i.e. groundwater, crude oil, natural gas).

Seepage is more proactive than environmental protection

Environmentally friendly construction and ecological actions, are part of the central concept in towns and communities to promote an environment conducive to a good quality of life. This includes preserving historic parts of towns and country, creating leisure and recreational areas including the development of effective biotope systems.

The result of increasing surface sealing, is that there is more surface water. In case of heavy rain, there is a risk of high water and the drainage system is overloaded. This results in poorer quality of our rivers and lakes.

Rainwater is a raw material vital to life and should go back into the natural cycle of things, not into drains. An alternative to the usual method of diverting rainwater is to catch it and let it seep - an environmentally friendly, effective and cost effective solution: rainwater is absorbed by paved stone systems and fed directly back to the ground and groundwater.

On your property you will be able to actively contribute to the environment, by having surfaces strengthened that allow seepage and become de-sealed, allowing near to nature rainwater management. This does not mean you will be deprived of functional or creatively attractive surfaces for paths, patios or driveways.

A **calculated value** that quantifies the permeability of water through ground or rock, is called the permeability value or hydraulic conductivity value.

Water permeability acc. to DIN 18130:

very highly permeable	from 10^{-2} m/s
highly permeable	10^{-2} up to 10^{-4} m/s
permeable	10^{-4} up to 10^{-6} m/s
slightly permeable	10^{-6} up to 10^{-8} m/s
very slightly permeable	below 10^{-8} m/s





PAVEMENT JOINTING MORTAR

PRIVATE SECTOR

Patios | driveways

For more than 25 years, ROMEX® has been a worldwide leader for synthetic resin pavement jointing mortar. Our jointing mortar that has been tailored to meet various requirements, forms the basis of a solid, clean and permanent paved stone joint.

As manufacturer of modern products for the sector paving stone jointing and old paving stone repair, with our own research and development department, you can expect from ROMEX® tested, certified and trademark protected products of the highest quality. The quality of our products is ensured by quality standards developed by ourselves, which surpass the generally valid norms.

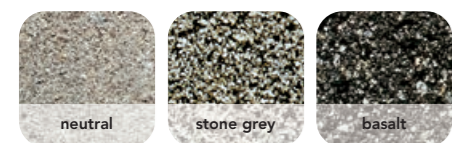
Paved stone surfaces, that are laid without solid joints, start to look messy over time. Weeds grow in the joints, the stones become tainted through moss and dirt. Regular cleaning to clear the moss and dirt has to be carried out. Clean the paved stone surface and then re-fill the joints with a ROMEX® pavement jointing mortar, without having to exceed the available budget.



ROMPOX® - JOINTING SAND NP

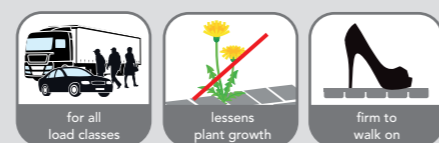
The solid jointing sand that prevents weeds

ROMPOX® - JOINTING SAND NP is a jointing sand for water permeable joints, that prevents weed growth and is made mainly of natural raw materials. Thanks to its uncomplicated and quick application, ROMPOX® - JOINTING SAND NP is ideal for narrow joints, especially with interlocking paving stones on patios and driveways as well as in public spaces. The binding agent ensures that when small joint cracks come into contact with water, they repair themselves. ROMPOX® - JOINTING SAND NP is more durable than all other unbonded joint fillings and fulfills the requirements of the AgBB-Scheme according to testing by the eco-Institute in Köln.



Properties

- for joint widths from 1–5 mm | 1/16–1/4"
- for tightly laid paving stones
- self repairing
- suitable for coated and sensitive stone surfaces as well as ceramic slabs
- AgBB certified
- frost and de-icing salt resistant
- water permeable
- no cement haze / residue



APPLICATION

Construction site requirements: The foundation needs to be prepared according to the expected traffic loads. Regulations and leaflets regarding construction of paved stone surfaces should be heeded. Do not use in "permanently wet areas" (swimming pools, fountains, drains, drip edges etc.), as the joint sand slowly dissolves when exposed to permanent water or standing water. Only use with water permeable superstructures (bed and base course) or on a slope of at least 2 %.

Preparation: The entire joint must be free of any roots or organic matter in order to prevent existing weeds in the ground from re-growing. Use appropriate methods. ROMPOX® - JOINTING SAND NP should be worked in to at least 2/3 of the height of the stone. With a slab thickness less than 30 mm, bonded laying methods should be used and the whole joint filled completely with ROMPOX® - JOINTING SAND NP.

Application: Pour the jointing sand onto the dry surface and mix it with a spade, to ensure the best mixing of grain size. Using a broom work into the joints. In order to achieve the best filling of the joint, always sweep diagonally to the joint. Fill the jointing sand up to the top edge of the paving stone or the bevel. Sweep of the paved stone surface carefully using a fine hair broom, until no more sand is on the stone surface. Then wet the joints using a spray set to fine mist (Do not use a watering can). The joint should be moistened until it no longer absorbs the water. Repeat this process after 1-2 hours.

With new construction we recommend compacting using a vibratory plate as long as the paved stone / slab covering is suitable for vibratory plates. If necessary use a protective mat. Afterwards re-fill joints again.

Professional tip: On some porous and/or dark surfaces, it can be difficult to completely remove all product residue. In order to remove all residue from the stone surface, use a leaf blower. If there is still a visible light residue on the stone surface, then this will disappear over time from weathering.

Final cleaning: If necessary, any sand residue left on the surface can be swept off using a large, coarse broom the next day. The surface is loadbearing after 24–48 hours.

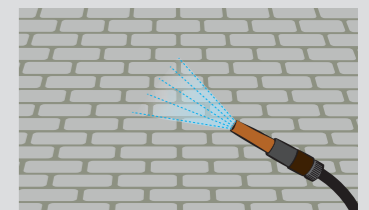
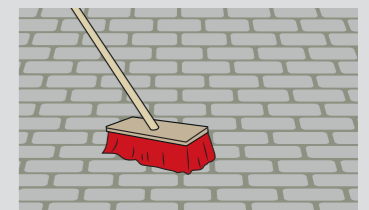
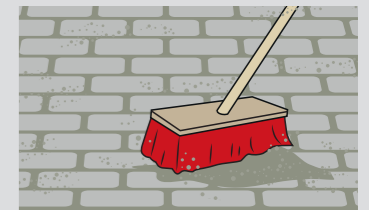
Subsequent treatment: For joint maintenance care should be taken, to ensure that no organic matter (i.e. soil) is left on the surface of the joints. Rotting leaves/grass should be cleaned regularly off the stone surface and out of the joints. Use general purpose algae and moss remover. In order to prevent weed growth and movement of paving stones, regular re-filling of the joints to the top edge of the paved stone / slab covering, should be carried out. The best results are achieved by completely filling the joint. The jointing sand becomes plastic if subjected to long periods of water loads. Any settling cracks or small areas of damage, can be smoothed and removed using a smoothing iron when the joint has become plastic.

Important note: Avoid rivulets. During damp periods, white discolouration of the edge of the paved stones may occur during the drying phase. This will disappear from weathering after a period of time or it can be easily cleaned away with water. Not suitable for high pressure cleaning. In case of uncertainty, a sample surface should be tested before the entire jointing is done.

Technical data

Pouring density	1.55 g/cm ³ 96.8 lb/cu ft
Application time at 20 °C 68 °F	unlimited
Application temperature	min. +5 °C +41 °F, dry surface
Re-opening of surface at 20 °C 68 °F	after 24–48 hours can be walked on
Water permeability coefficient*	water permeable
Storage life	24 months, dry, in originally sealed bag

Consumption table in kg/m ² lb/sq ft - Basis of calculation: joint depth Ø 30 mm 1 1/4" / joint width Ø 3 mm 1/8" **							
Joint width	Stone size	80 x 40 cm 31 1/2" x 15 3/4"	60 x 60 cm 23 1/2" x 23 1/2"	40 x 40 cm 15 3/4" x 15 3/4"	32 x 24 cm 12 1/2" x 9 1/2"	24 x 16 cm 9 1/2" x 6 1/4"	9 x 11 cm 3/8" x 3/8"
	1 mm 1/16" (min.)	0,2 kg 0.4 lbs	0,2 kg 0.4 lbs	0,2 kg 0.5 lbs	0,4 kg 0.8 lbs	0,5 kg 1.1 lbs	1,0 kg 2.1 lbs
	3 mm 1/8"	0,5 kg 1.2 lbs	0,5 kg 1.0 lbs	0,7 kg 1.6 lbs	1,0 kg 2.3 lbs	1,5 kg 3.2 lbs	2,7 kg 6.0 lbs



All filler materials are natural products which are subject to natural colour deviations. The information printed in this brochure is based on experiential values and the current levels of knowledge in science and practice, however they are not binding and have no legal force. All previous information becomes invalid with the issue of this brochure. Images similar. Effective June 2020. We reserve the right to make changes.

* Water permeable according to „Leaflet on surfaces that allow for seepage“ (MVV), Issue 2013.

** Individual consumption is the value from the table divided by 30 mm | 1 1/4" and multiplied by the actual joint depth in mm | inch.



ROMPOX® - EASY

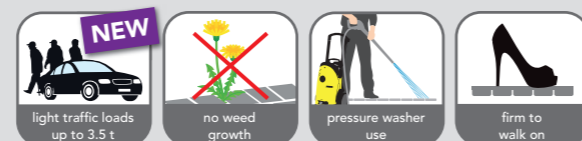
Easiest to use pavement jointing mortar

ROMPOX® - EASY is a mixed and ready to use 1-component pavement jointing mortar. After application it hardens/cures with air/oxygen and thus comes vacuum packed. Thanks to it's ease of use, this highly water permeable jointing mortar is ideal for DIY enthusiasts. ROMPOX® - EASY is used all around the house such as patios, foot-paths and surfaces that have occasional light vehicle loads (with non settling, water permeable foundation beds). The pavement jointing mortar can be used with almost all natural stones, natural and concrete stone slabs as well as clinker stone surfaces.



Properties

- recommended joint widths from 5 mm | 1/4", narrower joints can be jointed but with increased work
- for joint depths from 30 mm | 1 1/4"
- mixed ready to use, vacuum packed
- also for DIY use
- suitable for coated and sensitive stone surfaces as well as ceramic slabs
- frost and de-icing salt resistant
- water permeable



APPLICATION

Construction site requirements: The foundation needs to be prepared according to the expected traffic loads. Regulations and leaflets regarding construction of paved stone surfaces should be heeded. Loads that later go over the surface must not cause the surface to sink or loosen stones. Ideally, you would use ROMEX® Trass-Bed products as well as the ROMEX® SYSTEM-GUARANTEE (RSG). For optimum application it is recommended using ROMEX® application tools. Do not use in "permanently wet areas" (swimming pools, fountains, drains, drip edges etc.) Only use with water permeable superstructures (bed and base course) or on a slope of at least 2 %.

Preparation: Clean out joints to a depth of at least 30 mm | 1 1/4" (in case of traffic loads 2/3 of stone height, minimum joint width 5 mm | 1/4"). With a slab thickness less than 30 mm, bonded laying methods should be used and the whole joint filled completely with ROMPOX® - EASY. The surface to be jointed should be cleaned of all impurities before work commences. Adjacent surfaces that are not to be jointed must be taped off to avoid resin contact.

Pre-wetting: It is important to pre-wet the surface and keep it moist during the install. More porous surfaces as well as hotter surface temperatures, will require more and consistent pre-wetting. Ensure water is not collecting in the joints.

Application: Open the bucket, take out vacuum bag, cut open and pour the pavement jointing mortar evenly and completely onto the well moistened surface. Subsequently, work the pavement jointing mortar into the joints using a broom or rubber squeegee, ensuring it compacts deep into the joints and fills them completely. All tools as well as work shoes should be regularly cleaned with a water spray during jointing, to avoid impurities by binding agent and footprints on the stone surface.

Tip for narrow joints: In order to compact the joints even better, the freshly applied paving joint mortar can be elutriated using a water spray jet. Sunken joints are re-filled with more pavement jointing mortar. Avoid any standing water in the fresh joints, ensure there is sufficient slope.

Final cleaning: Use a soft, hair broom to carefully sweep the stone surface until all residual mortar has been removed. Sweeping should be done diagonally to the joint. Do not re-use swept off material. Residual material on the stone surface can still be swept off with a street broom after 24 hours.

Important information: ROMPOX® - EASY has a unique odour. This will disappear after time as the product fully hardens. We thus recommend only using the product in well-ventilated areas outdoors. With application without pre-wetting, a gloss film is formed which changes the colour of the stone and protects it from dirt. This will disappear over time from weathering. In case of doubt, please lay a sample surface before commencing entire jointing. Work tools can be cleaned with water after jointing. During work, it is recommended that impermeable and resistant protective gloves, tightly closed protective glasses and protective work clothing are worn. Moss, leaves and weeds that can store water should be removed from the jointed surface regularly. Due to raw materials, the joint may sand off slightly. All filler materials are natural products which are subject to natural colour deviations.

Information: It takes time for the pavement jointing mortar to harden to it's full strength. This process can take up to 4 weeks or longer, depending on how often the hardening process is interrupted by rain or low temperatures. The pavement jointing mortar really needs dry weather to harden fully. Moisture/cold delays this process. Hardening will eventually take place, sooner or later. It is recommended, not to use high pressure cleaners on the jointed paved surface during the first month. Solvents or solvent-containing colour enhancers (except the ROMPOX® - COLOUR-ENHANCER) should also not be used on the pavement jointing mortar because these can dissolve the mortar.

Technical data

Test report, audited colour „neutral“, goods in buckets.		
System	1-component-Polybutadiene	
Compressive strength	7.1 N/mm ² 1 030 psi Laboratory value 5.9 N/mm ² 856 psi Building site value	DIN 18555 part 3
Bending tensile strength	3.4 N/mm ² 493 psi Laboratory value 3.6 N/mm ² 522 psi Building site value	DIN 18555 part 3
Static elasticity module	820 N/mm ² 118 931 psi Laboratory value 690 N/mm ² 100 076 psi Building site value	DIN 18555 part 4
Hard mortar raw density	1.54 kg/dm ³ 0.89 oz/in ³	DIN 18555 part 3
Application time at 20 °C 68 °F	approx. 25 minutes	ROMEX®-norm 04
Application temperature	5 °C up to max. 30 °C 41 °F up to max. 86 °F At lower temperatures slow hardening, At high temperatures quick hardening	
Re-opening of surface at 20 °C 68 °F	after 24 hours can be walked on, after 6 days fully load bearing	
Water permeability coefficient*	3.91 × 10 ⁻³ m/s ≈ approx. 12 l/min/m ² for a joint fraction of 10 % 554.2 iph ≈ approx. 0.29 gal/min/sqft for a joint fraction of 10 %	
Storage life	24 months dry, frostfree (Protect container against direct sunlight, do not stack pallets)	

Consumption table in kg/m ² lb/sq ft - Basis for calculation: joint depth Ø 30 mm 1 1/4"							
Joint width	Stone size	80 × 40 cm 31 1/2" × 15 3/4"	60 × 60 cm 23 1/2" × 23 1/2"	40 × 40 cm 15 3/4" × 15 3/4"	32 × 24 cm 12 1/2" × 9 1/2"	24 × 16 cm 9 1/2" × 6 1/4"	9 × 11 cm 3/8" × 3/8"
	5 mm 1/4" (min.)	0,9 kg 1.9 lbs	0,8 kg 1.7 lbs	1,2 kg 2.6 lbs	1,7 kg 3.7 lbs	2,4 kg 5.2 lbs	4,4 kg 9.6 lbs
	10 mm 3/8"	1,7kg 3.8 lbs	1,5 kg 3.4 lbs	2,3 kg 5.0 lbs	3,2 kg 7.1 lbs	4,5 kg 9.9 lbs	7,9 kg 17.5 lbs
Polygonal slabs		We recommend ROMPOX® - D1					



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* Water permeable according to „Leaflet on surfaces that allow for seepage“ (MVV), Issue 2013



ROMPOX® - POWER JOINT

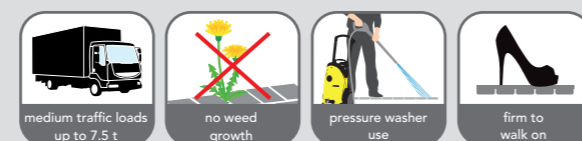
The strongest 1-component pavement jointing mortar

ROMPOX® - POWER JOINT is a mixed and ready to use paving joint mortar for water permeable and bonded construction. It is quick and easy to use and is thus suitable not only for professional laying companies but also for DIY use. ROMPOX® - POWER JOINT is for medium traffic loads up to 7.5 tons and is thus perfect for use all around the house. Frost damage or washing out of joints will not happen with this pavement jointing mortar. Care was taken to make sure the product is frost and de-icing salt resistant as well as resistant to street sweepers. Joints also remain free from weeds. Our strong 1 component pavement jointing mortar is best for joint widths of 8 mm | 3/8" and joint depths of 30 mm | 1 1/4".



Properties

- recommended joint widths from 8 mm | 3/8", narrower joints can be jointed but with increased work
- joint depths from 30 mm | 1 1/4"
- mixed ready to use, vacuum packed
- also for DIY use
- frost and de-icing salt resistant
- water permeable
- no cement haze / residue



APPLICATION

Construction site requirements: The foundation needs to be prepared according to the expected traffic loads. Regulations and leaflets regarding construction of paved stone surfaces should be heeded. Loads that later go over the surface must not cause the surface to sink or loosen stones. Ideally, you would use ROMEX® Trass-Bed products as well as the ROMEX® SYSTEM-GUARANTEE (RSG). For optimum application it is recommended using ROMEX® application tools. Do not use in "permanently wet areas" (swimming pools, fountains, drains, drip edges etc.) Only use with water permeable superstructures (bed and base course) or on a slope of at least 2 %.

Preparation: Clean out joints to a depth of at least 30 mm | 1 1/4" (in case of traffic loads 2/3 of stone height, minimum joint width 8 mm | 1/4"). With a slab thickness less than 30 mm, bonded laying methods should be used and the whole joint filled completely with ROMPOX® - POWER JOINT. The surface to be jointed should be cleaned of all impurities before work commences. Adjacent surfaces that are not to be jointed must be taped off to avoid resin contact.

Pre-wetting: It is important to pre-wet the surface and keep it moist during the install. More porous surfaces as well as hotter surface temperatures, will require more and consistent pre-wetting. Ensure water is not collecting in the joints.

Application: Open the bucket, take out vacuum bag, cut open and pour the pavement jointing mortar evenly and completely onto the well moistened surface. Subsequently, work the pavement jointing mortar into the joints using a broom or rubber squeegee, ensuring it compacts deep into the joints and fills them completely. All tools as well as work shoes should be regularly cleaned with a water spray during jointing, to avoid impurities by binding agent and footprints on the stone surface.

Final cleaning: Use a soft, hair broom to carefully sweep the stone surface until all residual mortar has been removed. Sweeping should be done diagonally to the joint. Do not re-use swept off material. Residual material on the stone surface can still be swept off with a street broom after 24 hours.

Subsequent treatment: Rain protection is not necessary during drizzle. In case of permanent or heavy rain, the freshly jointed surface should be protected for 24 hours. The rain protection layer (building sheet/tarpaulin) can be laid directly onto the paved surface. During the initial period a very thin film of epoxy resin remains on the stone surface and intensifies the colour of the stone and protects it from dirt. This film, however, disappears from the surface in open weather and through abrasion in the coming months.

Important information: ROMPOX® - POWER JOINT has a unique odour. This will disappear after time as the product fully hardens. We thus recommend only using the product in well-ventilated areas outdoors. In case of doubt, please lay a sample surface before commencing entire jointing. Work tools can be cleaned with water after jointing. During work, it is recommended that impermeable and resistant protective gloves, tightly closed protective glasses and protective work clothing are worn. Moss, leaves and weeds that can store water should be removed from the jointed surface regularly. Due to raw materials, the joint may sand off slightly. All filler materials are natural products which are subject to natural colour deviations.

Technical data

System	1-component-Polybutadiene	
Compressive strength	15,1 N/mm² 2 190 psi	DIN 18555 part 3
Bending tensile strength	6 N/mm² 870 psi	DIN 18555 part 3
Static elasticity module	1 350 N/mm² 195 801 psi	DIN 18555 part 3
Hard mortar raw density	1,6 kg/dm³ 0.92 oz/in³	DIN 18555 part 3
Application time at 20 °C 68 °F	20–30 minutes	ROMEX®-norm 04
Application temperature	5 °C up to max. 30 °C 41 °F up to max. 86 °F At lower temperatures slow hardening, at high temperatures quick hardening	
Re-opening of surface at 20 °C 68 °F	after 24 hours can be walked on, after 6 days fully load bearing	
Water permeability coefficient*	6,09 × 10 ⁻⁵ m/s ≈ approx. 0,36 l/min/m² for a joint fraction of 10 % 6.1 iph ≈ approx. 0,01 l/min/m² for a joint fraction of 10 %	
Storage life	24 months, dry, frostfree	

Consumption table in kg/m² lb/sq ft – Basis of calculation: joint depth Ø 30 mm 1 1/4" / joint width Ø 5 mm 1/4"							
Joint width	Stone size	80 × 40 cm 31 1/2" × 15 3/4"	60 × 60 cm 23 1/2" × 23 1/2"	40 × 40 cm 15 3/4" × 15 3/4"	32 × 24 cm 12 1/2" × 9 1/2"	24 × 16 cm 9 1/2" × 6 1/4"	9 × 11 cm 3/8" × 3/8"
	8 mm 3/8" (min.)	1,4 kg 3.2 lbs	1,3 kg 2.8 lbs	1,9 kg 4.2 lbs	2,7 kg 6.0 lbs	3,8 kg 8.4 lbs	6,8 kg 15.1 lbs
10 mm 3/8"	1,8 kg 3.9 lbs	1,6 kg 3.5 lbs	2,4 kg 5.2 lbs	3,4 kg 7.4 lbs	4,7 kg 10.3 lbs	8,2 kg 18.2 lbs	
Polygonal slabs	We recommend ROMPOX® - D1						



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* Water permeable according to „Leaflet on surfaces that allow for seepage“ (MVG), Issue 2013



ROMPOX® - PATIO

The pavement jointing mortar for sensitive surfaces

ROMPOX® - PATIO is a 1-component special resin pavement jointing mortar that hardens/cures with air/oxygen after application. It was especially developed for the jointing of sensitive surfaces and coated concrete stone slabs. The jointed stone surface is almost resin film free, which maintains the natural colour of the stone. ROMPOX® - PATIO is used on patios and on surfaces around the house with light, occasional vehicle loads (on settling-free, water permeable bed). The pavement jointing mortar can be used on almost all natural stone, natural stone slabs, concrete stone slabs and clinker surfaces.



Properties

- joint widths from 5 mm | 1/4"
- joint depths from 30 mm | 1 1/4"
- lightstable
- resin film free
- suitable for coated and sensitive stone surfaces as well as ceramic slabs
- frost and de-icing salt resistant
- highly water permeable
- no cement haze / residue



APPLICATION

Construction Site Requirements: The foundation needs to be prepared according to the expected traffic loads. Regulations and leaflets regarding construction of paved stone surfaces should be heeded. Future loads must not cause the surface to settle or loosen stones. Ideally, you would use ROMEX® Trass-Bed products as well as the ROMEX® SYSTEM-GUARANTEE (RSG). For optimum application it is recommended using ROMEX® application tools.

Preparation: Clean out joints to a depth of at least 30 mm | 1 1/4" (in case of traffic loads 2/3 of stone height, minimum joint width 5 mm | 1/4"). With a slab thickness less than 30 mm, bonded laying methods should be used and the whole joint filled completely with ROMPOX® - PATIO. The surface to be joint-fixed should be cleaned of all impurities before work commences. Adjoining surfaces that are not to be joint-fixed are taped off.

Pre-wet: Pre-wet the surface carefully, ideally with water spray. Do not let water accumulate in the joints. Avoid the use of too much water.

Mixing: Open the bucket, open the tin within and pour the contents completely into the filler material component. In order to fully use the container content, the tin should be scraped out. Start the mixing process. After 3 minutes of mixing time pour the pavement jointing mortar into a clean, dry bucket and mix for at least 3 more minutes. Please make sure that when pouring into the new bucket, all the resin remains on the inside of the bucket are scraped off and added to the new bucket. Do not add water! Total mixing time: at least 6 minutes. Use professional agitator.

Application: Pour the pavement jointing mortar evenly and completely onto the moistened surface. Subsequently, work the pavement jointing mortar into the joints using a broom or rubber squeegee, ensuring it compacts deep into the joints and fills them completely. All tools as well as work shoes should be regularly cleaned with a water spray during jointing, to avoid impurities by binding agent and footprints on the stone surface.

Final cleaning: Afterwards sweep of the stone surface using a coarse street broom. Then use a soft, hair broom to do a final cleaning until all residual mortar has been removed from the surface. Sweeping should be done diagonally to the joint. Do not re-use swept off material.

Subsequent treatment: The freshly jointed surface needs to be protected against rain for the next 24 hours. The rain protection layer must not be laid directly onto the paved surface, to ensure sufficient air circulation.

Important note - resin film: During the initial period a very thin film of epoxy resin could remain on the stone surface and intensifies the colour of the stone and protects it from dirt. The resin film is temporary and will disappear over time due to weathering and abrasion. In case of uncertainty, a sample surface should be tested before the entire jointing is done. A resin film does not constitute an „application fault“ and the quality of the surface is not compromised in any way. For further information please take note of the ROMEX® compendium.

Technical data

Referred to test report, audited colour "neutral".		
System	1-component Polyurethane resin (PU)	
Compressive strength	17.9 N/mm ² 2 596 psi Laboratory value 16.7 N/mm ² 2 422 psi Building site value	DIN 18555 part 3
Bending tensile strength	7.1 N/mm ² 1 030 psi Laboratory value 6.4 N/mm ² 928 psi Building site value	DIN 18555 part 3
Static elasticity module	1 350 N/mm ² 195 801 psi Laboratory value 1 140 N/mm ² 165 343 psi Building site value	DIN 18555 part 4
Hard mortar raw density	1.59 kg/dm ³ 0.92 oz/in ³ Laboratory value 1.48 kg/dm ³ 0.86 oz/in ³ Building site value	DIN 18555 part 3
Application time at 20 °C 68 °F	20–30 minutes	ROMEX®-norm 04
Application temperature	> 7 °C up to max. 30 °C > 44.6 °F up to max. 86 °F At lower temperatures slow hardening, at high temperatures quick hardening	
Surface re-opening at 20 °C 68 °F	after 24 hours can be walked on, after 6 days fully load bearing	
Water permeability coefficient*	4.96 × 10 ⁻³ m/s ≈ approx. 15 l/min/m ² for a joint fraction of 10 % 703 iph ≈ approx. 0.37 gal/min/sqft for a joint fraction of 10 %	
Storage life	12 months, dry, frostfree	

Consumption table in kg/m ² lb/sq ft - Basis for calculation: joint depth Ø 30 mm 1 1/4"							
Joint width	Stone size	80 × 40 cm 31 1/2" × 15 3/4"	60 × 60 cm 23 1/2" × 23 1/2"	40 × 40 cm 15 3/4" × 15 3/4"	32 × 24 cm 12 1/2" × 9 1/2"	24 × 16 cm 9 1/2" × 6 1/4"	9 × 11 cm 3 5/8" × 3 5/8"
	5 mm 1/4" (min.)	0,8 kg 1.9 lbs	0,8 kg 1.7 lbs	1,1 kg 2.5 lbs	1,6 kg 3.5 lbs	2,3 kg 5.0 lbs	4,2 kg 9.2 lbs
	10 mm 3/8"	1,7 kg 3.6 lbs	1,5 kg 3.2 lbs	2,2 kg 4.8 lbs	3,1 kg 6.8 lbs	4,3 kg 9.5 lbs	7,6 kg 16.8 lbs
	Polygonal slabs	We recommend ROMPOX® - D1					

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* Water permeable according to "Leaflet on surfaces that allow for seepage" (MVV), Issue 2013.



It can also be used as a cement-free, open to diffusion wall jointing mortar for use on walls and brickwork. It doesn't seal!



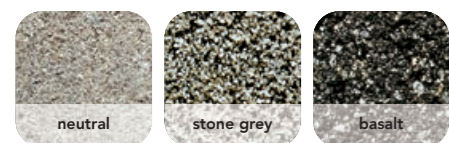
PAVEMENT JOINTING MORTAR



ROMPOX® - DRAIN

The permeable pavement jointing mortar

ROMPOX® - DRAIN is a highly water permeable 2-component epoxy resin based pavement jointing mortar. This is our classic since day one. ROMPOX® - DRAIN is used all around the house, especially in driveways and parking spaces in front of the house. Joint almost all natural or concrete stones as well as slabs with a joint width of at least 5 mm | 1/4", and protect your paved stone surface permanently against weed growth. Make your contribution to environmental protection by using the highly water permeable pavement jointing mortar ROMPOX® - DRAIN. Because you will be strengthening your surfaces, paths and driveways without sealing them!



Properties

- joint widths from 5 mm | 1/4"
- joint depths from 30 mm | 1 1/4"
- **highest water permeability**
- self compacting
- water emulsifiable
- frost and de-icing salt resistant
- highly water permeable
- no cement haze / residue



APPLICATION

Construction site requirements: The foundation needs to be prepared according to the expected traffic loads. Regulations and leaflets regarding construction of paved stone surfaces should be heeded. Future loads must not cause the surface to settle or loosen stones. Ideally, you would use ROMEX® Trass-Bed products as well as the ROMEX® SYSTEM-GUARANTEE (RSG). For optimum application it is recommended using ROMEX® application tools.

Preparation: Clean out joints to a depth of at least 30 mm | 1 1/4" (in case of traffic loads 2/3 of stone height, minimum joint width 5 mm | 1/4"). With a slab thickness less than 30 mm, bonded laying methods should be used and the whole joint filled completely with ROMPOX® - DRAIN. The surface to be joint-fixed should be cleaned of all impurities before work commences. Adjoining surfaces that are not to be joint-fixed are taped off.

Pre-wetting: Pre-wet the surface. Porous surfaces as well as higher surface temperatures, require more intense pre-wetting.

Mixing: Pour the 25 kg | 55 lbs filler components into the mixing tub and start the mixing process. Whilst mixing, slowly add the separately packaged 1.8 kg | 4.0 lbs resin/hardener component completely into the mixture. After mixing for 3 minutes add 2 litres | 0.53 gal of water. To do this, fill up the two previously emptied resin/hardener bottles with 1 litres | 0.26 gal of water, close, shake vigorously and add the contents of the bottle to the mixture. Continue mixing well for at least 3 minutes. Use professional agitator or rotary-drum mixer / compulsory mixer.

Application: Apply the mixed pavement jointing mortar onto the well moistened surface and work it carefully into the joints using a squeegee/rubber slider. The mortar is poured out at three or four spots within the jointing area in order to make best use of the fluidity of the pavement jointing mortar. If the ready mixed mortar is not used up straight away, before continuing with application and remaining within the stated application time, mix the remaining mortar through again briefly to ensure it has optimum flow capability. All tools as well as work shoes should be regularly cleaned with a water spray during jointing, to avoid impurities by binding agent and footprints on the stone surface.

Final cleaning: After approx. 10–15 minutes the excess mortar on the surface of the stones can be swept off carefully with a large, coarse broom. Then use a soft, hair broom to do a final cleaning until all residual mortar has been removed from the surface. The correct moment for sweeping, is when white smears no longer form on the stone surface during sweeping. Sweeping should be done diagonally to the joint. Do not reuse swept off material.

Subsequent treatment: The freshly jointed surface needs to be protected against rain for the next 12–24 hours. The rain protection layer must not be laid directly onto the paved surface, to ensure sufficient air circulation.

Important note - resin film: During the initial period a very thin film of epoxy resin remains on the stone surface and intensifies the colour of the stone and protects it from dirt. The resin film is temporary and will disappear over time due to weathering and abrasion. In case of uncertainty, a sample surface should be tested before the entire jointing is done. A resin film does not constitute an "application fault" and the quality of the surface is not compromised in any way. For further information please take note of the ROMEX® compendium.

Technical data

Test report no. 55-2909/04 CPH-7134-DRAIN, audited colour „neutral“, goods in bags.		
System	2-component epoxy resin pavement jointing mortar	
Compressive strength	15.1 N/mm ² 2 190 psi Laboratory value 9.2 N/mm ² 1 334 psi Building site value	DIN 18555 part 3
Bending tensile strength	7.4 N/mm ² 1 073 psi Laboratory value 5.1 N/mm ² 740 psi Building site value	DIN 18555 part 3
Static elasticity module	1 240 N/mm ² 179 847 psi Laboratory value 1 550 N/mm ² 224 808 psi Building site value	DIN 18555 part 4
Hard mortar raw density	1.57 kg/dm ³ 0.91 oz/in ³ Laboratory value 1.29 kg/dm ³ 0.75 oz/in ³ Building site value	DIN 18555 part 3
Application time at 20 °C 68 °F	20–30 minutes	ROMEX®-norm 04
Application temperature	> 0 °C up to max. 30 °C > 32 °F up to max. 86 °F At lower temperatures slow hardening, At high temperatures quick hardening	
Re-opening of surface at 20 °C 68 °F	after 24 hours can be walked on, after 6 days fully load bearing	
Water permeability coefficient*	4.96 × 10 ⁻³ m/s ≈ approx. 15 l/min/m ² for a joint fraction of 10 % 703 iph ≈ approx. 0.37 gal/min/sqft for a joint fraction of 10 %	
Storage life	24 months resin/hardener components: frostfree, filler components: dry	

Consumption table in kg/m ² lb/sq ft - Basis for calculation: joint depth Ø 30 mm 1 1/4"							
Joint width	Stone size	80 × 40 cm 31 1/2" × 15 3/4"	60 × 60 cm 23 1/2" × 23 1/2"	40 × 40 cm 15 3/4" × 15 3/4"	32 × 24 cm 12 1/2" × 9 1/2"	24 × 16 cm 9 1/2" × 6 1/4"	9 × 11 cm 3 5/8" × 3 5/8"
	5 mm 1/4" (min.)	0,7 kg 1.6 lbs	0,7 kg 1.4 lbs	1,0 kg 2.1 lbs	1,4 kg 3.1 lbs	2,0 kg 4.3 lbs	3,7 kg 8.0 lbs
	10 mm 3/8"	1,4 kg 3.2 lbs	1,3 kg 2.8 lbs	1,9 kg 4.2 lbs	2,7 kg 6.0 lbs	3,8 kg 8.3 lbs	6,6 kg 14.6 lbs
Polygonal slabs		We recommend ROMPOX® - D1					



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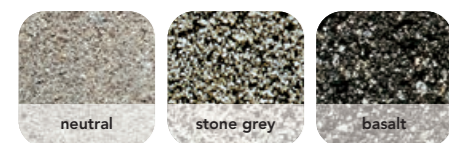
* Water permeable according to „Leaflet on surfaces that allow for seepage“ (MVV), Issue 2013.



ROMPOX® - DRAIN PLUS

The secure pavement jointing mortar

ROMPOX® - DRAIN plus is a 2-component epoxy resin pavement jointing mortar, that is used for surfaces with light to medium traffic loads. Our permeable pavement jointing mortar ROMPOX® - DRAIN has been improved to become „PLUS“ and can be applied at the lowest temperatures and in the rain. It is no longer necessary to cover the surface after application. It also enables an even quicker re-opening to traffic.



Properties

- joint widths from 5 mm | 1/4"
- joint depths from 30 mm | 1 1/4"
- can be applied during drizzle
- no need to cover the area during drizzle
- quick re-opening to traffic
- self compacting
- frost and de-icing salt resistant
- highly water permeable
- no cement haze / residue



APPLICATION

Construction site requirements: The foundation needs to be prepared according to the expected traffic loads. Regulations and leaflets regarding construction of paved stone surfaces should be heeded. Future loads must not cause the surface to settle or loosen stones. Ideally, you would use ROMEX® Trass-Bed products as well as the ROMEX® SYSTEM-GUARANTEE (RSG). For optimum application it is recommended using ROMEX® application tools.

Preparation: Clean out joints to a depth of at least 30 mm | 1 1/4" (in case of traffic loads 2/3 of stone height, minimum joint width 5 mm | 1/4"). With a slab thickness less than 30 mm, bonded laying methods should be used and the whole joint filled completely with ROMPOX® - DRAIN plus. The surface to be joint-fixed should be cleaned of all impurities before work commences. Adjoining surfaces that are not to be joint-fixed are taped off.

Pre-wet: Pre-wet the surface. Porous surfaces as well as higher surface temperatures, require more intense pre-wetting.

Mixing: Pour the 25 kg | 55 lbs filler components into the mixing tub and start the mixing process. Whilst mixing, slowly add the separately packaged 1.5 kg | 3.3 lbs resin/hardener component completely into the mixture. After mixing for 3 minutes add 2 litres | 0.53 gal of water. To do this, fill up the two previously emptied resin/hardener bottles with 1 litres | 0.26 gal of water, close, shake vigorously and add the contents of the bottle to the mixture. Continue mixing well for at least 3 minutes. Use professional agitator or rotary-drum mixer / compulsory mixer.

Application: Apply the mixed pavement jointing mortar onto the well moistened surface and work it carefully into the joints using a squeegee/rubber slider. The mortar is poured out at three or four spots within the jointing area in order to make best use of the fluidity of the pavement jointing mortar. If the ready mixed mortar is not used up straight away, before continuing with application and remaining within the stated application time, mix the remaining mortar through again briefly to ensure it has optimum flow capability. All tools as well as work shoes should be regularly cleaned with a water spray during jointing, to avoid impurities by binding agent and footprints on the stone surface.

Final cleaning: After approx. 10–15 minutes the excess mortar on the surface of the stones can be swept off carefully with a large, coarse broom. Then use a soft, hair broom to do a final cleaning until all residual mortar has been removed from the surface. The correct moment for sweeping, is when white smears no longer form on the stone surface during sweeping. Sweeping should be done diagonally to the joint. Do not reuse swept off material.

Subsequent treatment: Rain protection is not necessary during drizzle. In case of permanent or heavy rain, the freshly jointed surface should be protected for 12–24 hours. Do not put the rain protection directly onto the surface, to ensure air circulation.

Important note - resin film: During the initial period a very thin film of epoxy resin remains on the stone surface and intensifies the colour of the stone and protects it from dirt. The resin film is temporary and will disappear over time due to weathering and abrasion. In case of uncertainty, a sample surface should be tested before the entire jointing is done. A resin film does not constitute an "application fault" and the quality of the surface is not compromised in any way. For further information please take note of the ROMEX® compendium.

Technical data

Test report no. 55-2909/04 CPH-7134-DRAIN-PLUS, audited colour „neutral“, goods in bags.		
System	2-component epoxy resin pavement jointing mortar	
Compressive strength	24.1 N/mm ² 3 495 psi Laboratory value 9.5 N/mm ² 1 378 psi Building site value	DIN 18555 part 3
Bending tensile strength	8.1 N/mm ² 1 175 psi Laboratory value 3.0 N/mm ² 435 psi Building site value	DIN 18555 part 3
Static elasticity module	2 640 N/mm ² 382 900 psi Laboratory value 1 610 N/mm ² 23 511 psi Building site value	DIN 18555 part 4
Hard mortar raw density	1.64 kg/dm ³ 0.95 oz/in ³ Laboratory value 1.29 kg/dm ³ 0.75 oz/in ³ Building site value	DIN 18555 part 3
Application time at 20 °C 68 °F	20–30 minutes	
Application temperature	> 0 °C up to max. 30 °C > 32 °F up to max. 86 °F At lower temperatures slow hardening, At high temperatures quick hardening	
Re-opening of surface at 20 °C 68 °F	after 24 hours can be walked on, after 6 days fully load bearing	
Water permeability coefficient*	4.91 × 10 ⁻³ m/s ≈ approx. 15 l/min/m ² for a joint fraction of 10 % 695.9 iph ≈ approx. 0.37 gal/min/sqft for a joint fraction of 10 %	
Storage life	24 months resin/hardener components: frostfree, filler components: dry	

Consumption table in kg/m ² lb/sq ft - Basis of calculation: joint depth Ø 30 mm 1 1/4" / joint width Ø 8 mm 3/8"							
Joint width	Stone size	80 × 40 cm 31 1/2" × 15 3/4"	60 × 60 cm 23 1/2" × 23 1/2"	40 × 40 cm 15 3/4" × 15 3/4"	32 × 24 cm 12 1/2" × 9 1/2"	24 × 16 cm 9 1/2" × 6 1/4"	9 × 11 cm 3 5/8" × 3 5/8"
	5 mm 1/4" (min.)	0,7 kg 1.6 lbs	0,7 kg 1.4 lbs	1,0 kg 2.1 lbs	1,4 kg 3.1 lbs	2,0 kg 4.3 lbs	3,7 kg 8.0 lbs
	10 mm 3/8"	1,0 kg 2.1 lbs	1,3 kg 2.8 lbs	1,9 kg 4.2 lbs	2,7 kg 6.0 lbs	3,8 kg 8.3 lbs	6,6 kg 14.6 lbs
Polygonal slabs		We recommend ROMPOX® - D1					



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* Water permeable according to „Leaflet on surfaces that allow for seepage“ (MVV), Issue 2013.



ROMPOX® - D1

The proven pavement jointing mortar

Our proven 2-component pavement jointing mortar ROMPOX® - D1 is a real allrounder. Thanks to its strong pouring capacity, it can be used for joint widths from 3 mm | 1/8". That makes D1 ideal for jointing polygonal slabs and crazy paving, that are often difficult to joint because of uneven edges and often conical running joints. This paving joint mortar can be used without problem in driveways and entryways, as it can withstand loads of up to 7.5 tons. ROMPOX® - D1 is also very good for use in repairing old paved stoned surfaces around the house.



Properties

- joint widths from 3 mm | 1/8"
- joint depths from 30 mm | 1 1/4"
- ideal for polygonal slabs
- best flow capability
- self compacting
- water emulsifiable
- frost and de-icing salt resistant
- highly water-permeable



APPLICATION

Construction Site Requirements: The foundation needs to be prepared according to the expected traffic loads. Regulations and leaflets regarding construction of paved stone surfaces should be heeded. Future loads must not cause the surface to settle or loosen stones. Ideally, you would use ROMEX® Trass-Bed products as well as the ROMEX® SYSTEM-GUARANTEE (RSG). For optimum application it is recommended using ROMEX® application tools.

Preparation: Clean out joints to a depth of at least 30 mm | 1 1/4" (in case of traffic loads 2/3 of stone height, minimum joint width 3 mm | 1/8"). With a slab thickness less than 30 mm, bonded laying methods should be used and the whole joint filled completely with ROMPOX® - D1. The surface to be joint-fixed should be cleaned of all impurities before work commences. Adjoining surfaces that are not to be joint-fixed are taped off.

Pre-wet: Pre-wet the surface. Porous surfaces as well as higher surface temperatures, require more intense pre-wetting.

Mixing bags: Pour the 25 kg | 55 lbs filler components into the mixing tub and start the mixing process. Whilst mixing, slowly add the separately packaged 2.5 kg | 5.5 lbs resin/hardener component completely into the mixture. In order to fully use the contents of the bottle, both bottles should be rinsed with water. To do this, fill up the two previously emptied resin / hardener bottles with 0.5 litres | 0.13 gal of water, close, shake vigorously and add the contents of the bottle to the mixture. After mixing for 3 minutes add 3 litres | 0.8 gal of water and continue mixing well for at least 3 minutes. Use professional agitator or rotary-drum mixer / compulsory mixer.

Mixing bucket: Open the bucket, open bottles within and pour the contents completely into the filler material component. In order to fully use the contents of the bottle, both bottles should be rinsed with water. To do this, fill up the two previously emptied resin/hardener bottles with 250 ml | 0.13 gal of water, close, shake vigorously and add the contents of the bottle to the mixture. Start the mixing process. Do not add water! Total mixing time: at least 6 minutes. Use professional agitator or rotary-drum mixer / compulsory mixer.

Application: Apply the mixed pavement jointing mortar onto the well moistened surface and work it carefully into the joints using a squeegee/rubber slider. The mortar is poured out at three or four spots within the jointing area in order to make best use of the fluidity of the pavement jointing mortar. If the ready mixed mortar is not used up straight away, before continuing with application and remaining within the stated application time, mix the remaining mortar through again briefly to ensure it has optimum flow capability. All tools as well as work shoes should be regularly cleaned with a water spray during jointing, to avoid impurities by binding agent and footprints on the stone surface.

Final cleaning: After approx. 10–15 minutes the excess mortar on the surface of the stones can be swept off carefully with a large, coarse broom. Then use a soft, hair broom to do a final cleaning until all residual mortar has been removed from the surface. The correct moment for sweeping, is when white smears no longer form on the stone surface during sweeping. Sweeping should be done diagonally to the joint. Do not reuse swept off material.

Subsequent treatment: The freshly jointed surface needs to be protected against rain for the next 12–24 hours. The rain protection layer must not be laid directly onto the paved surface, to ensure sufficient air circulation.

Important note - resin film: During the initial period a very thin film of epoxy resin remains on the stone surface and intensifies the colour of the stone and protects it from dirt. The resin film is temporary and will disappear over time due to weathering and abrasion. In case of uncertainty, a sample surface should be tested before the entire jointing is done. A resin film does not constitute an „application fault“ and the quality of the surface is not compromised in any way. For further information please take note of the ROMEX® compendium.

Technical data

Test report, audited colour „neutral“, goods in bags.		
System	2-component epoxy resin pavement jointing mortar	
Compression strength	25.8 N/mm ² 3 742 psi Laboratory value 16.6 N/mm ² 2 408 psi Building site value	DIN 18555 part 3
Bending tensile strength	12.0 N/mm ² 1 740 psi Laboratory value 7.9 N/mm ² 1 145 psi Building site value	DIN 18555 part 3
Static elasticity module	8 000 N/mm ² 1 160 302 psi Laboratory value 2 180 N/mm ² 316 182 psi Building site value	DIN 18555 part 4
Hard mortar raw density	1.68 kg/dm ³ 0.97 oz/in ³ Laboratory value 1.43 kg/dm ³ 0.83 oz/in ³ Building site value	DIN 18555 part 3
Application time at 20 °C 68 °F	20–30 minutes ROMEX®-norm 04	
Application temperature	> 0 °C up to max. 30 °C > 32 °F up to max. 86 °F At lower temperatures slow hardening, at high temperatures quick hardening	
Re-opening of surface at 20 °C 68 °F	after 24 hours can be walked on, after 6 days fully load bearing	
Water permeability coefficient*	7.5 × 10 ⁻⁴ m/s ≈ approx. 2.3 l/min/m ² for a joint fraction of 10 % 106.2 iph ≈ approx. 0.06 gal/min/sqft for a joint fraction of 10 %	
Storage life	24 months resin/hardener components: frostfree, filler components: dry	

Consumption table in kg/m ² lb/sq ft - Basis of calculation: joint depth Ø 30 mm 1 1/4"							
Joint width	Stone size	80 × 40 cm 31 1/2" × 15 3/4"	60 × 60 cm 23 1/2" × 23 1/2"	40 × 40 cm 15 3/4" × 15 3/4"	32 × 24 cm 12 1/2" × 9 1/2"	24 × 16 cm 9 1/2" × 6 1/4"	9 × 11 cm 3 5/8" × 3 5/8"
	3 mm 1/8" (min.)	0,5 kg 1.1 lbs	0,4 kg 1.0 lbs	0,7 kg 1.4 lbs	1,0 kg 2.1 lbs	1,3 kg 3.0 lbs	2,5 kg 5.6 lbs
	10 mm 3/8"	1,6 kg 3.5 lbs	1,4 kg 3.2 lbs	2,1 kg 4.6 lbs	3,0 kg 6.6 lbs	4,2 kg 9.2 lbs	7,4 kg 16.2 lbs
Polygonal slabs		approx. 4–6 kg 8–13 lbs					



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Swedish star architect's holiday home

Polygonal slabs made of sandstone, limestone, granite, quartzite, gneiss or slate, also called broken slabs, have for years been the favourite materials for making surface coverings and are particularly suitable for making patios and garden pathways as well as directly next to the house. Ideally the slabs are laid into earth damp, drainage capable trass cement gravel / grit-bed (i.e. ROMPOX® - TRASS-BED). The underside should be treated with an adhesion elutriant (i.e. ROMPOX® - ADHESION ELUTRIANT), to ensure optimum adhesion with the foundation and avoid cracks in the joint area and loose slabs.



In the past, it was then usual for cement based jointing mass to be applied using a jointing tool and sponge, "on the knees", which is a complex, costly and not very effective solution. Cheaper, polygonal broken stone slabs often only have a slab strength of 1-4 cm | 3/8"-1 1/2" - if the bed is only 1/3 of the height of the stone, then the required 3 cm | 1 1/4" joint depth for synthetic resin paving jointing mortar is no longer given. If slabs are to be laid, that are below 4 cm | 1 1/2" strength, then there is only one way to ensure permanent laying: 1. a bonded bed - ideally water permeable, 2. for joint depths below 3 cm | 1 1/4", use our 2 component paving jointing mortar ROMPOX® - D1/D1 PLUS - which guarantees very good joint adhesion between stone surface and bed, with more flat joints.



This is worth it!

140 m² | 1 507 sq ft of high quality ALTA quartzite slabs on the terrace of the weekend villa were jointed using approx. 168 kg | 371 lbs of ROMEX® pavement jointing mortar. That is equal to a consumption of approx. 1.2 kg | 2.65 lbs per square metre!

Two landscapers needed two 8 hour days, so 16 working hours to joint 140 m² | 1 507 sq ft. Each square metre only needs an average of 7 minutes jointing time!

Summary:

Not even 7 minutes and just a good kg per square metre! Thus leaving more time to appreciate the good results and more money in your pocket.

- ✓ Quick
- ✓ Cost effective
- ✓ Visually attractive

ROMEX® - products in buckets

The advantages lie with the ease of use

Six good reasons for buckets!

1. **Handiness** – mixing can hardly be more practical. You can mix the jointing mortar directly on site in the bucket. It is thus easier to distribute on the surface.
2. **Packaging** – A further plus is the stability of the packaging. Ripped open paper bags are a thing of the past, as well as paper bags that have become damaged by moisture. Buckets can also occasionally be left out in the rain.
3. **Re-using** – After use, the bucket can still be used for whatever purpose you choose. Clean the bucket with water first.
4. **Avoid mixing mistakes** – Everything you need is in front of you. A clean bucket for mixing, the sand, resin and hardener as well as flow agent, which is already added to the sand.
5. **Cleanliness** – A clean container for mixing prevents, amongst other things, colour deviations, that may arise from using a dirty mixer.
6. **Time saving** – After using a mixer it needs to be cleaned of all resin which may otherwise stick permanently. This time can be saved.

Time saving:
open bucket, add resin and hardener, mix – ready to go!



These products are all available in practical buckets:

- ROMPOX® - EASY
- ROMPOX® - POWER JOINT
- ROMPOX® - PATIO
- ROMPOX® - D1
- ROMPOX® - FLEX-LIGHT
- ROMPOX® - FLEX-JOINT
- ROMPOX® - D4000 HR





ROMPOX® - FLEX-LIGHT

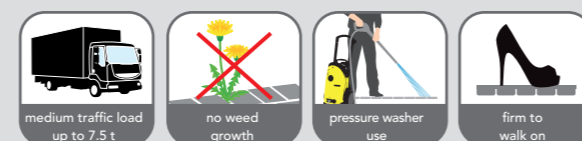
The viscous elastic pavement jointing mortar

ROMPOX® - FLEX-LIGHT is a 2-component pavement jointing mortar suitable for use with joint widths from 5 mm | 1/4" and joint depths from 30 mm | 1 1/4" on surfaces with medium traffic loads. It is the first and only viscous elastic jointing mortar on the market. Thanks to its maximum expansion of 6.15 % the material can be used for bonded and unbonded construction. It is water permeable, self compacting and water emulsifiable. ROMPOX® - FLEX-LIGHT also prevents all weed growth.



Properties

- joint widths from 5 mm | 1/4"
- joint depths from 30 mm | 1 1/4"
- flexibilised
- can be applied during drizzle
- for bonded and unbonded construction
- frost and de-icing salt resistant
- highly water permeable
- no cement haze / residue



APPLICATION

Construction site requirements: The foundation needs to be prepared according to the expected traffic loads. Regulations and leaflets regarding construction of paved stone surfaces should be heeded. Future loads must not cause the surface to settle or loosen stones. Ideally, you would use the ROMEX® SYSTEM-GUARANTEE (RSG). For optimum application it is recommended using ROMEX® application tools.

Preparation: Clean out joints to a depth of at least 30 mm | 1 1/4" (in case of traffic loads 2/3 of stone height, minimum joint width 5 mm | 1/4"). With a slab thickness less than 30 mm, bonded laying methods should be used and the whole joint filled completely with ROMPOX® - FLEX-LIGHT. The surface to be joint-fixed should be cleaned of all impurities before work commences. Adjoining surfaces that are not to be joint-fixed are taped off.

Pre-wet: Pre-wet the surface. Porous surfaces as well as higher surface temperatures, require more intense pre-wetting.

Mixing: Open the bucket, open bottles within and pour the contents completely into the filler material component. In order to fully use the contents of the bottle, both bottles should be rinsed with water. To do this, fill up the two previously emptied resin/hardener bottles with 100 ml | 0.025 gal of water, close, shake vigorously and add the contents of the bottle to the mixture. Start the mixing process. Do not add water! Total mixing time: at least 6 minutes. Use professional agitator or rotary-drum mixer / compulsory mixer.

Application: Apply the mixed pavement jointing mortar onto the well moistened surface and work it carefully into the joints using a squeegee/rubber slider. The mortar is poured out at three or four spots within the jointing area in order to make best use of the fluidity of the pavement jointing mortar. If the ready mixed mortar is not used up straight away, before continuing with application and remaining within the stated application time, mix the remaining mortar through again briefly to ensure it has optimum flow capability. All tools as well as work shoes should be regularly cleaned with a water spray during jointing, to avoid impurities by binding agent and footprints on the stone surface.

Final cleaning: After approx. 10 minutes the excess mortar on the surface of the stones can be swept off carefully with a large, coarse broom. Then use a soft, hair broom to do a final cleaning until all residual mortar has been removed from the surface. The correct moment for sweeping, is when white smears no longer form on the stone surface during sweeping. Sweeping should be done diagonally to the joint. Do not reuse swept off material.

Subsequent treatment: Rain protection is not necessary during drizzle. In case of permanent or heavy rain, the freshly jointed surface should be protected for 12-24 hours. Do not put the rain protection directly onto the surface, to ensure air circulation.

Important note - resin film: During the initial period a very thin film of epoxy resin remains on the stone surface and intensifies the colour of the stone and protects it from dirt. The resin film is temporary and will disappear over time due to weathering and abrasion. In case of uncertainty, a sample surface should be tested before the entire jointing is done. A resin film does not constitute an „application fault“ and the quality of the surface is not compromised in any way. For further information please take note of the ROMEX® compendium.

Technical data

System	2-component epoxy resin	
Deflection at breaking load *2,*3	9.4 mm 0.370" Laboratory value	DIN EN 1015-11
Bending tensile strength *2	1.4 N/mm² 203 psi Laboratory value	DIN EN 1015-11
Tensile strength	0.328 N/mm² 48 psi Laboratory value	DIN EN 527-1
max. expansion ε	6.15 % Laboratory value	DIN EN 527-1
Hard mortar raw density	1.23 kg/dm³ 0.71 oz/in³ Laboratory value	DIN EN 1015-10
Application time at 20 °C 68 °F	20-30 minutes	ROMEX®-norm 04
Application temperature	> 7 °C up to max. 30 °C > 44.6 °F up to max. 86 °F At lower temperatures slow hardening, at high temperatures quick hardening	
Re-opening of surface at 20 °C 68 °F	after 24 hours can be walked on, after 7 days fully load bearing	
Water permeability coefficient *1	16.29 x 10 ⁻⁵ m/s Δ approx. 1,6 l/min/m² for a joint fraction of 10 % 23.1 iph Δ approx. 0.04 gal/min/sqft for a joint fraction of 10 %	
Storage life	12 months resin/hardener components: frostfree, filler components: dry	

Consumption table in kg/m² lb/sq ft - Basis of calculation: joint depth Ø 30 mm 1 1/4"							
Joint width	Stone size	80 x 40 cm 31 1/2" x 15 3/4"	60 x 60 cm 23 1/2" x 23 1/2"	40 x 40 cm 15 3/4" x 15 3/4"	32 x 24 cm 12 1/2" x 9 1/2"	24 x 16 cm 9 1/2" x 6 1/4"	9 x 11 cm 3 1/4" x 3 3/4"
	5 mm 1/4" (min.)	0,7 kg 1.5 lbs	0,6 kg 1.4 lbs	0,9 kg 2.1 lbs	1,3 kg 3.0 lbs	1,9 kg 4.1 lbs	3,5 kg 7.7 lbs
10 mm 3/8"	1,4 kg 3.0 lbs	1,2 kg 2.7 lbs	1,8 kg 4.0 lbs	2,6 kg 5.7 lbs	3,6 kg 7.9 lbs	6,3 kg 14.0 lbs	
Polygonal slabs	approx. 4-6 kg 8-13 lbs						

* ROMEX®-Recommendation for usage category N2 as a joint sealer for unbonded construction



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*1 Water permeable according to „Leaflet on surfaces that allow for seepage“ (MVV), Issue 2013.

*2 tested in 3 point bending tensile test according to DIN EN 1015-11, Distance between supports: l = 100 mm

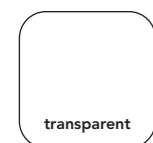
*3 in the middle of sample



ROMPOX® - JOINT STRENGTHENER

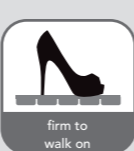
For the strengthening of sand joints

ROMPOX® - JOINT STRENGTHENER is a 1-component special liquid used to joint sand joints and especially for coated concrete and natural stone stones as well as clinker surfaces. Our joint strengthener protects against washing out, sanding off and weed growth. It has high strength and viscous elasticity which is particularly advantageous for use on unbonded construction. Because it is liquid, joints with a minimum width of 1 mm | 1/16", which have been filled with paving sands, can be easily strengthened. This product is recommended in areas with pedestrian loads.



Properties

- for joint widths from 1 mm | 1/16"
- repairs cracks in paved stone joints
- especially for coated concrete stone slabs
- easy to use
- also for DIY
- frost and de-icing salt resistant
- no cement haze / residue



APPLICATION

Construction Site Requirements: The foundation needs to be prepared according to the expected traffic loads. Regulations and leaflets regarding construction of paved stone surfaces should be heeded. Future loads must not cause the surface to settle or loosen stones. Ideally, you would use ROMEX® Trass-Bed products as well as the ROMEX® SYSTEM-GUARANTEE (RSG). For optimum application it is recommended using ROMEX® application tools.

Preparation: Clean out joints to a depth of at least 30 mm | 1 1/4". The surface to be joint-fixed should be cleaned of all impurities before work commences. Adjoining surfaces that are not to be joint-fixed are taped off. Fill joints with dry filler material (quartz sand or crushed sand/gravel mixture with grainsize grading curve 0,3–1,2 mm | 1/16" – 1/2"). Then sweep off so that the stone surface is free of any sand residue.

Pre-distribute: Fill joints with dry filler material (quartz sand or crushed sand/gravel mixture with grainsize grading curve 0.3–1.2 mm | 1/32") then sweep off so that the stone surface is free of any sand residue.

Application WITH colour enhancement:

Apply the contents of the bottle with a sprayer (tree or garden sprayer) or watering can until the joints are saturated. Immediately remove the excess thoroughly with a double-lipped rubber squeegee. Any residue on the stone surface should be removed immediately using a wet sponge or towel. During the initial period a very thin film of epoxy resin remains on the stone surface and intensifies the colour of the stone and protects it from dirt. The resin film is temporary and will disappear over time due to weathering and abrasion. In case of uncertainty, a sample surface should be tested before the entire jointing is done. Porous surfaces as well as higher surface temperatures increase consumption.

Application WITHOUT colour enhancement:

Apply the contents of the bottle with a sprayer only onto the joints until they are saturated. Any residue on the stone surface should be removed immediately using a wet sponge or towel.

Subsequent treatment: The freshly jointed surface needs to be protected against rain for the next 48 hours. The rain protection layer must not be laid directly onto the paved surface, to ensure sufficient air circulation.

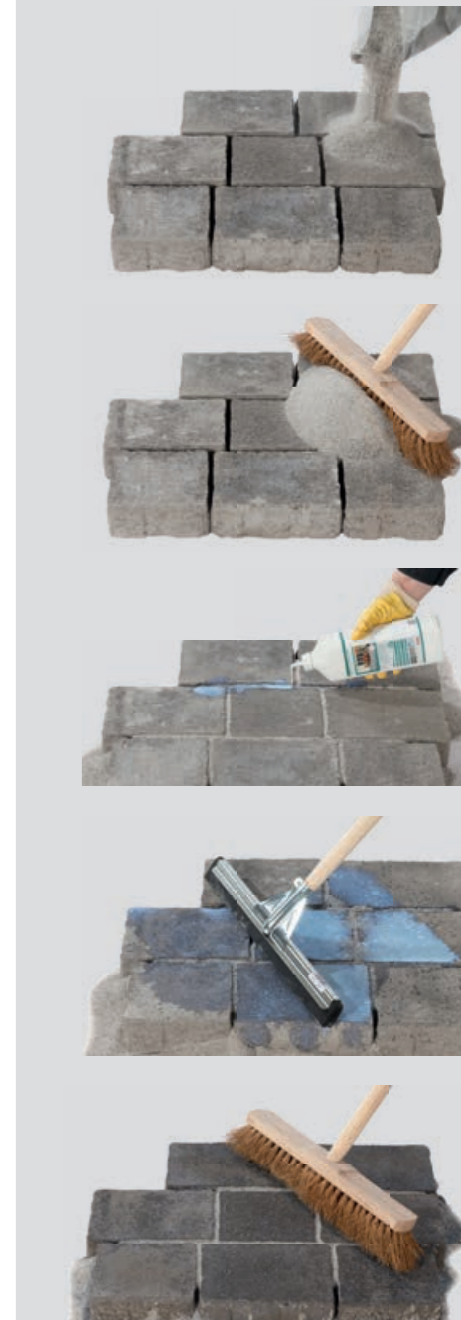
Important note: Settling of the surface as well as loose stones, especially with unbonded construction, can cause cracks in the joint. This visual defect can be eliminated simply by refilling with the product and re-applying ROMPOX® - JOINT STRENGTHENER. For coated concrete slabs and sensitive types of stone, only the joints must be worked on. Check "Application without colour enhancement"!

Technical data

System	1-component special liquid	
Application time at 20 °C 68 °F	20–30 minutes	ROMEX®-norm 04
Application temperature	> 7 °C up to max. 30 °C > 44,6 °F up to max. 86 °F At lower temperatures slow hardening, At high temperatures quick hardening	
Re-opening of surface at 20 °C 68 °F	after 48 hours can be walked on, after 6 days fully load bearing	
Storage life	12 months store the containers frostfree and protect them against direct sunlight	

Consumption table in kg/m² lb/sq ft - Basis of calculation: joint depth Ø 30 mm 1 1/4" / joint width Ø 3 mm 1/8"							
Joint width	Stone size	80 × 40 cm 31 1/2" × 15 3/4"	60 × 60 cm 23 1/2" × 23 1/2"	40 × 40 cm 15 3/4" × 15 3/4"	32 × 24 cm 12 1/2" × 9 1/2"	24 × 16 cm 9 1/2" × 6 1/4"	9 × 11 cm 3 5/8" × 3 5/8"
	3 mm 1/8"		0.1–0.2 0.02–0.04	0.1–0.2 0.02–0.04	0.1–0.2 0.02–0.04	0.2–0.4 0.04–0.08	0.25–0.5 0.05–0.10

! for light, occasional vehicle loads, on settling-free, water permeable bed



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ROMPOX® - D7000

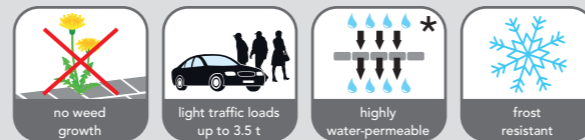
The stabilizing liquid for paving

For the quick and uncomplicated strengthening of road surfaces with sufficient fine particles (e.g. water-bound road surfaces), especially for protection against washing out, abrasion, weed growth and dust control. ROMPOX® - D7000 strengthens existing road surfaces and protects especially against erosion on downhill gradients. Through the use of ROMPOX® - D7000 the stability of the coating is greatly improved and thus the maintenance costs are reduced. The areas of application go from private areas in the garden and around the house to public areas such as park paths, foot and bike paths and tree surrounds.

THE EXTRA STRONG, FLEXIBLE POLYMER LIQUID

Properties

- for garden paths as well as public areas
- extra strong formula
- reduces surface abrasion and dust formation
- reduces maintenance costs
- minimizes weed growth
- reduces erosion on slopes with heavy rainfall



APPLICATION

Construction site requirements: The subsurface should be well compacted. The applicable regulations and information sheets are to be observed. Subsequent loads must not cause the surface to settle. When using the product with road surfaces, the FLL technical report on planning, construction and maintenance of water-bound road surfaces must be observed.

Preparation: The pathway to be strengthened should be permeable to water so that the liquid can penetrate deep enough into the surface. After application the covering basically remains just as permeable to water as before application. For topcoat strengthening ideally, broken sand / stone mixtures from ¼ to ½ mm are used.

Important: The fine / dust fraction <0.08 mm should be at least 15% so that the desired bond is achieved. Grit and gravel mixtures without sufficient fine / dust content are not bound sufficiently. Adjacent areas that cannot be strengthened are taped off.

Prewetting: Prewet the surface to be strengthened with water. Porous surfaces as well as higher surface temperatures, require more intense prewetting. Avoid puddle formation.

Application: Pour the contents of the canister into a watering can with an inclined spray attachment and pour evenly over the pre-wet surface. After about 15–20 minutes the liquid is absorbed into the surface and the white liquid is no longer visible. Then spread the covering evenly using rollers or levels, if necessary also using a vibrating plate.

Recommended consumption: approx. 2 litres / sqm

PROFESSIONAL TIP: Surfaces subject to very heavy use should after hardening, be treated again with ROMPOX® - D7000 using a sprayer (e.g. tree or garden sprayer), watering can or a fur roller as a sealant on the surface of the covering. This process gives an even better surface strength. Resealing requirements: approx. 500–750 ml / square meter. This process has to be repeated every 3 years on average or as soon as stones start to come off the surface.

Subsequent treatment: The freshly treated area must be protected against rain for 48 hours. The rain protection should not be placed directly onto the surface so that air can circulate.

Important Information: Grit and gravel mixtures without sufficient fine / dust content will not sufficiently bind. In case of doubt, we recommend creating a sample area. At work, the use of impervious and durable protective gloves, tight-fitting goggles and protective work clothing is recommended. Regularly remove water-storing moss, leaves and weeds from the surface. As with all bonded path coverings, stones can come off. This is in the nature of the matter and is not a defect.

Technical data

System	1-component special liquid	
Application time at 20 °C 68 °F	20–30 minutes	ROMEX®-norm 04
Application temperature	> 7 °C up to max. 30 °C > 44.6 °F up to max. 86 °F At lower temperatures slow hardening, at high temperatures quick hardening	
Re-opening of surface at 20 °C 68 °F	after 48 hours can be walked on, after 6 days fully load bearing	
Water permeability*	After application the covering basically remains just as permeable to water as before application.	
Storage life	min. 12 months, frostfree (protect container against direct sunlight)	

1 canister is sufficient for approx. 10 m²

Consumption: approx. 2 litres per square meter



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PAVEMENT JOINTING MORTAR

PUBLIC SECTOR

Innercity areas with traffic loads

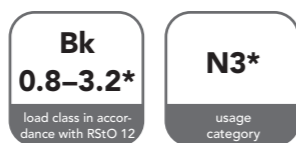
The quick and easy to apply products offer numerous advantages, especially for use in innercities. With our pavement jointing mortar for various traffic loads, it is no longer a problem to joint paving stones and slab surfaces cleanly and permanently. Put an end to frost damage of cement joints. Prevent street sweepers from sweeping out loose jointing material with high repair costs when re-filling with gravel or sand. Help prevent accidents when women in high heels get stuck in empty joints. The combination of joints and our patented displacement protection system offers towns and communities numerous solutions which are permanent and help to save costs by preventing displacement on surfaces.



ROMPOX® - FLEX-JOINT

The viscous elastic pavement jointing mortar

ROMPOX® - FLEX-JOINT is a 2-component pavement jointing mortar, suitable for surfaces with joint widths from 5 mm | 1/4" and joint depths from 30 mm | 1 1/4" and medium traffic loads. It is the first and only viscous elastic jointing mortar on the market. Based on its maximum expansion of 9.26 %, the material can be used on bonded and unbonded construction. The jointing mortar is water permeable, self compacting and water emulsifiable. ROMPOX® - FLEX-JOINT also prevents all weed growth. In order to protect areas with high traffic loads and to prevent displacement, ROMPOX® - FLEX-JOINT is used in combination with ISATEC® displacement protection devices.



Properties

- Recommended joint widths from 8 mm | 1/3", narrower joints can be jointed but with increased work
- joint depths from 30 mm | 1 1/4"
- for bonded and unbonded construction methods
- in combination with ground anchors up to 25 t loads
- can be applied during drizzle
- frost and de-icing salt resistant
- highly water permeable
- no cement haze / residue



APPLICATION

Construction site requirements: The foundation needs to be prepared according to the expected traffic loads. Regulations and leaflets regarding construction of paved stone surfaces should be heeded. Future loads must not cause the surface to settle or loosen stones. Ideally, you would use the ROMEX® SYSTEM-GUARANTEE (RSG). For optimum application it is recommended using ROMEX® application tools.

Preparation: Clean out joints to a depth of at least 30 mm | 1 1/4" (in case of traffic loads 2/3 of stone height, minimum joint width 5 mm | 1/4"). The surface to be joint-fixed should be cleaned of all impurities before work commences. Adjoining surfaces that are not to be joint-fixed are taped off.

Pre-wet: Pre-wet the surface. Porous surfaces as well as higher surface temperatures, require more intense pre-wetting.

Mixing: Open the bucket, open bottles within and pour the contents completely into the filler material component. In order to fully use the contents of the bottle, both bottles should be rinsed with water. To do this, fill up the two previously emptied resin/hardener bottles with 100 ml | 0.025 gal of water, close, shake vigorously and add the contents of the bottle to the mixture. Start the mixing process. Do not add water! Total mixing time: at least 6 minutes. Use professional agitator or rotary-drum mixer / compulsory mixer.

Application: Apply the mixed pavement jointing mortar onto the well moistened surface and work it carefully into the joints using a squeegee/rubber slider. The mortar is poured out at three or four spots within the jointing area in order to make best use of the fluidity of the pavement jointing mortar. If the ready mixed mortar is not used up straight away, before continuing with application and remaining within the stated application time, mix the remaining mortar through again briefly to ensure it has optimum flow capability. All tools as well as work shoes should be regularly cleaned with a water spray during jointing, to avoid impurities by binding agent and footprints on the stone surface.

Final cleaning: After approx. 10 minutes the excess mortar on the surface of the stones can be swept off carefully with a large, coarse broom. Then use a soft, hair broom to do a final cleaning until all residual mortar has been removed from the surface. The correct moment for sweeping, is when white smears no longer form on the stone surface during sweeping. Sweeping should be done diagonally to the joint. Do not reuse swept off material.

Subsequent treatment: Rain protection is not necessary during drizzle. In case of permanent or heavy rain, the freshly jointed surface should be protected for 12-24 hours. Do not put the rain protection directly onto the surface, to ensure air circulation.

Important note - resin film: During the initial period a very thin film of epoxy resin remains on the stone surface and intensifies the colour of the stone and protects it from dirt. The resin film is temporary and will disappear over time due to weathering and abrasion. In case of uncertainty, a sample surface should be tested before the entire jointing is done. A resin film does not constitute an "application fault" and the quality of the surface is not compromised in any way. For further information please take note of the ROMEX® compendium.

Technical data

System	2-component epoxy resin pavement jointing mortar	
Deflection at breaking load *2..3	12.6 mm 0.496" Laboratory value	DIN EN 1015-11
Bending tensile strength *2	1.2 N/mm² 174 psi Laboratory value	DIN EN 1015-11
Hard mortar raw density	1.34 kg/dm³ 0.77 oz/in³ Laboratory value	DIN EN 1015-10
Tensile strength	0.295 N/mm² 43 psi Laboratory value	DIN EN 527-1
Max. expansion ε	9.26 % Laboratory value	DIN EN 527-1
Application time at 20 °C 68 °F	20-30 minutes	ROMEX®-norm 04
Application temperature	> 7 °C up to max. 30 °C > 44,6 °F up to max. 86 °F At lower temperatures slow hardening, At high temperatures quick hardening	
Re-opening of surface at 20 °C 68 °F	after 24 hours can be walked on, after 7 days fully load bearing	
Water permeability coefficient *1	16.29 × 10 ⁻⁵ m/s Δ approx. 1,6 l/min/m² for a joint fraction of 10 % 23.1 iph Δ approx. 0.04 gal/min/sqft for a joint fraction of 10 %	
Storage life	12 months resin/hardener components: frostfree, filler components: dry	

Consumption table in kg/m² lb/sq ft - Basis of calculation: joint depth Ø 30 mm 1 1/4"							
Joint width	Stone size	80 × 40 cm 31 1/2" × 15 3/4"	60 × 60 cm 23 1/2" × 23 1/2"	40 × 40 cm 15 3/4" × 15 3/4"	32 × 24 cm 12 1/2" × 9 1/2"	24 × 16 cm 9 1/2" × 6 1/4"	9 × 11 cm 3 5/8" × 3 5/8"
	5 mm 1/4" (min.)	0,8 kg 1.7 lbs	0,7 kg 1.5 lbs	1,0 kg 2.2 lbs	1,5 kg 3.2 lbs	2,1 kg 4.5 lbs	3,8 kg 8.4 lbs
10 mm 3/8"	1,5 kg 3.3 lbs	1,3 kg 3.0 lbs	2,0 kg 4.3 lbs	2,8 kg 6.2 lbs	3,9 kg 8.6 lbs	6,9 kg 15.2 lbs	
Polygonal slabs	We recommend ROMPOX® - D1						

! joint depth in case of traffic loads 2/3 of stone height.

* ROMEX® recommendation for usage category N3 and in load class Bk 0.8-3.2 as a joint seal in the unbound construction.



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*1 Water permeable according to „Leaflet on surfaces that allow for seepage“ (MVV), Issue 2013.

*2 tested in 3 point bending tensile test according to DIN EN 1015-11, Distance between supports: l = 100 mm

*3 in the middle of sample



ROMPOX® - D2000

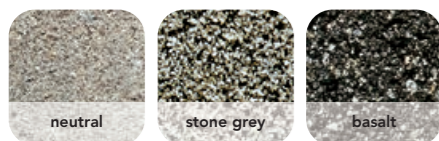
The modern pavement jointing mortar

The modern 2-component pavement jointing mortar ROMPOX® - D2000 is for public surfaces that have heavy traffic loads. Thanks to its strong pouring capacity, it can be used for joint widths from 5 mm | 1/4". D2000 is suitable for use with new jointing on squares, roads and paths as well as for the repair of existing paved stone surfaces as well as gutter mortar according to ATV DIN 18318:2006. In particular the quick re-opening to traffic makes this pavement jointing mortar special.



Properties

- joint widths from 5 mm | 1/4"
- joint depths from 30 mm | 1 1/4"
- sweeper-proof
- quick re-opening to traffic
- can be applied during drizzle
- self compacting
- water emulsifiable
- frost and de-icing salt resistant
- water permeable



APPLICATION

Construction site requirements: The foundation needs to be prepared according to the expected traffic loads. Regulations and leaflets regarding construction of paved stone surfaces should be heeded. Future loads must not cause the surface to settle or loosen stones. Ideally, you would use ROMEX® Trass-Bed products as well as the ROMEX® SYSTEM-GUARANTEE (RSG). For optimum application it is recommended using ROMEX® application tools.

Preparation: Clean out joints to a depth of at least 30 mm | 1 1/4" (in case of traffic loads 2/3 of stone height, minimum joint width 5 mm | 1/4"). The surface to be joint-fixed should be cleaned of all impurities before work commences. Adjoining surfaces that are not to be joint-fixed are taped off.

Pre-wet: Pre-wet the surface. Porous surfaces as well as higher surface temperatures, require more intense pre-wetting.

Mixing: Pour the 25 kg | 55 lbs filler components into the mixing tub and start the mixing process. Whilst mixing, slowly add the separately packaged 2.5 kg | 5.5 lbs resin/hardener component completely into the mixture. In order to fully use the contents of the bottle, both bottles should be rinsed with water. To do this, fill up the two previously emptied resin / hardener bottles with 0.5 litres | 0.13 gal of water, close, shake vigorously and add the contents of the bottle to the mixture. After mixing for 3 minutes add 2 litres | 0.53 gal of water and continue mixing well for at least 3 minutes. Use professional agitator or rotary-drum mixer / compulsory mixer.

Application: Apply the mixed pavement jointing mortar onto the well moistened surface and work it carefully into the joints using a squeegee/rubber slider. The mortar is poured out at three or four spots within the jointing area in order to make best use of the fluidity of the pavement jointing mortar. If the ready mixed mortar is not used up straight away, before continuing with application and remaining within the stated application time, mix the remaining mortar through again briefly to ensure it has optimum flow capability. All tools as well as work shoes should be regularly cleaned with a water spray during jointing, to avoid impurities by binding agent and footprints on the stone surface.

Final cleaning: After approx. 10 minutes the excess mortar on the surface of the stones can be swept off carefully with a large, coarse broom. Then use a soft, hair broom to do a final cleaning until all residual mortar has been removed from the surface. The correct moment for sweeping, is when white smears no longer form on the stone surface during sweeping. Sweeping should be done diagonally to the joint. Do not reuse swept off material.

Subsequent treatment: Rain protection is not necessary during drizzle. In case of permanent or heavy rain, the freshly jointed surface should be protected for 12-24 hours. Do not put the rain protection directly onto the surface, to ensure air circulation.

Important note - resin film: During the initial period a very thin film of epoxy resin remains on the stone surface and intensifies the colour of the stone and protects it from dirt. The resin film is temporary and will disappear over time due to weathering and abrasion. In case of uncertainty, a sample surface should be tested before the entire jointing is done. A resin film does not constitute an "application fault" and the quality of the surface is not compromised in any way. For further information please take note of the ROMEX® compendium.

Technical data

Test report no. 55-2909/04 CPH-7134-D2000, audited colour „neutral“, goods in bags.		
System	2-component epoxy resin pavement jointing mortar	
Compressive strength	51.9 N/mm ² 7 528 psi Laboratory value 24.2 N/mm ² 3 510 psi Building site value	DIN 18555 part 3
Bending tensile strength	15.4 N/mm ² 2 234 psi Laboratory value 9.0 N/mm ² 1 305 psi Building site value	DIN 18555 part 3
Static elasticity module	11 200 N/mm ² 1 624 421 psi Laboratory value 2 390 N/mm ² 346 640 psi Building site value	DIN 18555 part 4
Hard mortar raw density	1.76 kg/dm ³ 1.02 oz/in ³ Laboratory value 1.65 kg/dm ³ 0.95 oz/in ³ Building site value	DIN 18555 part 3
Application time at 20 °C 68 °F	15-20 minutes	
Application temperature	> 0 °C up to max. 30 °C > 32 °F up to max. 86 °F At lower temperatures slow hardening, At high temperatures quick hardening	
Re-opening of surface at 20 °C 68 °F	after 6 hours can be walked on, after 24 hours fully load bearing	
Water permeability coefficient*	9.06 × 10 ⁻⁶ m/s ≈ approx. 0.03 l/min/m ² for a joint fraction of 10 % 1.3 iph ≈ approx. 0.0007 gal/min/sqft for a joint fraction of 10 % (with appropriate compacting)	
Storage life	24 months resin/hardener components: frostfree, filler components: dry	

Consumption table in kg/m ² lb/sq ft - Basis of calculation: joint depth Ø 30 mm 1 1/4"							
Joint width	Stone size	80 × 40 cm 31 1/2" × 15 3/4"	60 × 60 cm 23 1/2" × 23 1/2"	40 × 40 cm 15 3/4" × 15 3/4"	32 × 24 cm 12 1/2" × 9 1/2"	24 × 16 cm 9 1/2" × 6 1/4"	9 × 11 cm 3 5/8" × 3 5/8"
	5 mm 1/4" (min.)	0,9 kg 2.1 lbs	0,8 kg 1.9 lbs	1,2 kg 2.7 lbs	1,8 kg 3.9 lbs	2,5 kg 5.6 lbs	4,7 kg 10.3 lbs
10 mm 3/8"	1,8 kg 4.1 lbs	1,6 kg 3.6 lbs	2,4 kg 5.4 lbs	3,5 kg 7.6 lbs	4,8 kg 10.6 lbs	8,5 kg 18.7 lbs	
Polygonal slabs	approx. 4-6 kg 8-13 lbs						

! joint depth in case of traffic loads 2/3 of stone height



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* Water permeable according to „Leaflet on surfaces that allow for seepage“ (MVV), Issue 2013.



Large format slabs

jointed optimally with
ROMPOX® - D2000

Leaflet for synthetic resin jointing of large format slabs

1. Bed and base course must be constructed so that settling and movement of the slabs are avoided 100 %.
2. The joint must be at least 5 mm | ¼" wide at it's narrowest point (even between movement protection / production distancers), otherwise the pavement jointing mortar ROMPOX® - D2000 can't fill up to the full stone height.
3. If the total depth to be jointed is more than 5 cm | 2", then a joint width of at least 8 mm | ⅜" must be constructed, so that the synthetic resin pavement jointing mortar can be properly worked in to the full joint height.

4. A minimum joint depth for the synthetic resin jointing mortar of ⅔ of the height of the laid slab should be adhered to, so that the slab can be filled with unbonded bedding material in the lower third of the bed, in order to avoid movement during laying and/or compacting. The unbonded jointing material is applied dry into the joint up to the determined filling level. Then wash in using some water. The unbonded jointing material must not be distributed onto the slab and washed in – de-mixing of the particle-size distribution curve and grain structure would be the result.

5. This results in the following consumption for a joint width of 8 mm | ⅜" and a joint depth of 80 mm | 3 ⅛" for the product ROMPOX® - D2000, colour neutral:

1. 40 x 40 cm slabs = approx. 5.18 kg/m²
6" x 16" slabs = approx. 1.06 lb/sq ft
2. 60 x 60 cm slabs = approx. 3.48 kg/m²
24" x 24" slabs = approx. 0.71 lb/sq ft
3. 80 x 60 cm slabs = approx. 3.07 kg/m²
32" x 24" slabs = approx. 0.63 lb/sq ft
4. 120 x 60 cm slabs = approx. 2.62 kg/m²
48" x 24" slabs = approx. 0.54 lb/sq ft

6. **At this point, we would like to point out again, what result can be expected with the ROMEX® jointing material ROMPOX® - D2000:**

The ROMPOX® - D2000 system is able to absorb all occurring horizontal forces without damage. All vertical occurring forces will be absorbed by the superstructure and subsurface, which must be constructed absolutely settle free and with 180 MPa/m² | 26.107 psi in the bed.

Concrete stone slabs in large format
120 x 120 cm, 60 x 60 cm und 120 x 60 cm



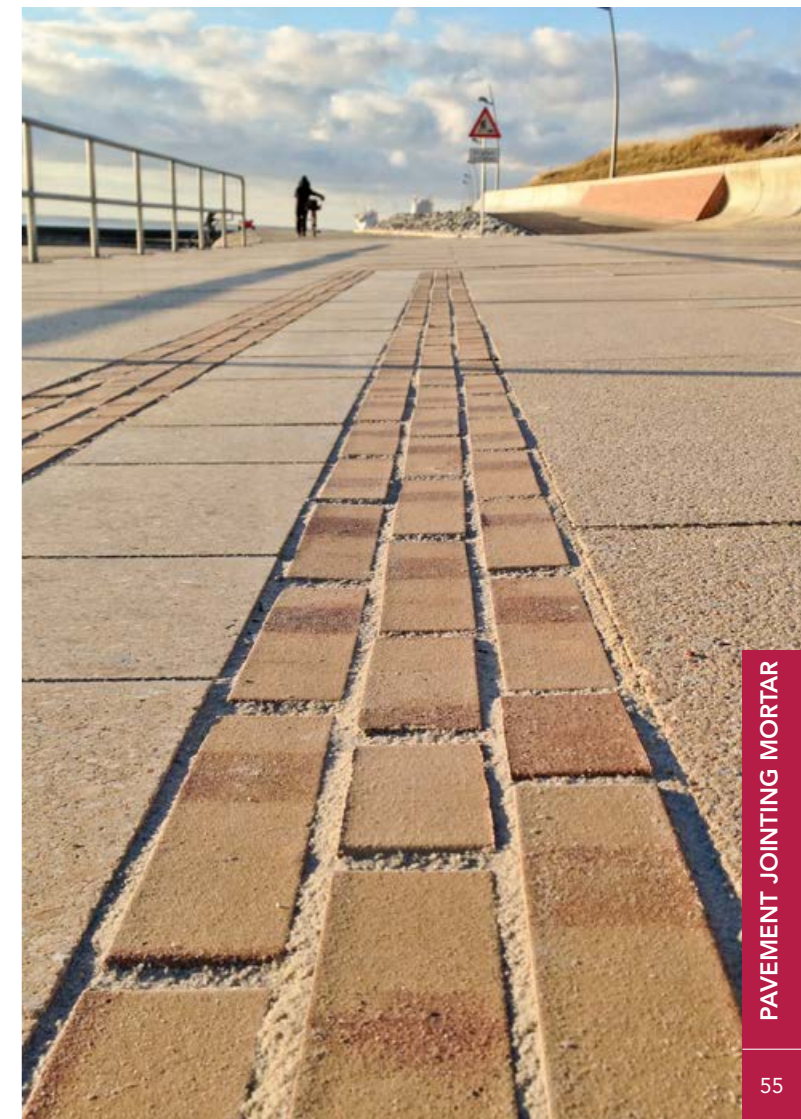
Fine hairline cracks can be expected, in areas in which settling of the paved stone surface takes place. Furthermore, if movement/expansion joints are not made (just movement joints in the subsurface and superstructure must be absorbed up to the joint) in some cases, hairline cracks may appear, which have no negative effects on the frost resistance of our paved stone joint ROMPOX® - D2000 and on the long-term durability of the entire system.

Our frost resistant jointing system ROMPOX® - D2000, is fully capable of bearing loads of standing, flooding salt and sweet water and to protect the joint from washing out. The system is resistant to street sweepers and prevents weed growth in the joints.

As opposed to most hydraulically bonded paving joint mortars, which for the most part only allow re-opening to traffic after 28 days, the pavement jointing mortar ROMPOX® - D2000 allows re-opening to traffic after just 24 hours.

Please take note of our brochure „We can expect a lot“ at www.romex-ag.de

14 000 m² of beach promenade on the North Sea
Island Borkum – jointed with ROMPOX® - D2000





ROMPOX® - D3000

The repair paving stone joint elutriant

Using paving stone joint elutriant ROMPOX® - D3000 old, damaged cement joints on paths, roads and town squares can be quickly and easily repaired. Only the damaged joints need to be cleaned out. Intact cement joints remain on the surface. The paving stone elutriant has such strong edge adhesion that it "connects" to the old joint. ROMPOX® - D3000 will not act as a preventive for any old cement on the surface becoming damaged in the future.



Bk
0.3-1.8

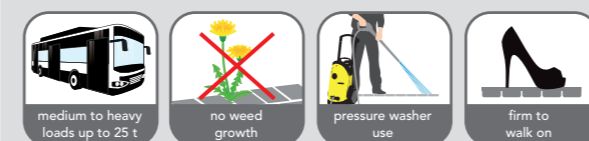
load class in accordance with RStO 12

N3

usage category

Properties

- joint crack widths from 3 mm | 1/8"
- for joint crack depths from 10 mm | 3/8"
- suitable for the repair of damaged cement surfaces
- quick re-opening to traffic
- self compacting
- water emulsifiable
- frost and de-icing salt resistant
- highly water permeable
- no cement haze / residue



APPLICATION

Construction site requirements: The foundation is prepared according to the expected traffic loads. Regulations and leaflets regarding construction of paved stone surfaces should be heeded. Must only be used on surfaces and subsurfaces that have settled and are movement free. Can otherwise lead to joint breakage and destruction of the joint. For optimum application it is recommended using ROMEX® application tools.

Preparation: Clean out joints to a depth of at least 10 mm | 3/8". Damaged joints and joint remains need to be completely removed. The surface to be joint-fixed should be cleaned of all impurities before work commences. Adjoining surfaces that are not to be joint-fixed are taped off. In case of porous surfaces, especially with cement joint repairs, it is recommended using a pre-primer. We are happy to advise you.

Pre-wet: Pre-wet the surface. Porous surfaces as well as higher surface temperatures, require more intense pre-wetting. Avoid standing water in the joints.

Mixing: Pour the 25 kg | 55 lbs filler components into the mixing tub and start the mixing process. Whilst mixing, slowly add the separately packaged 2.5 kg | 5.5 lbs resin/hardener component completely into the mixture. In order to fully use the contents of the bottle, both bottles should be rinsed with water. To do this, fill up the two previously emptied resin / hardener bottles with 0.5 litres | 0.13 gal of water, close, shake vigorously and add the contents of the bottle to the mixture. After mixing for 3 minutes add 2 litres | 0.53 gal of water and continue mixing well for at least 3 minutes. Use professional agitator or rotary-drum mixer / compulsory mixer.

Application: Apply the mixed pavement jointing mortar onto the well moistened surface and work it carefully into the joints using a squeegee/rubber slider. The mortar is poured out at three or four spots within the jointing area in order to make best use of the fluidity of the pavement jointing mortar. If the ready mixed mortar is not used up straight away, before continuing with application and remaining within the stated application time, mix the remaining mortar through again briefly to ensure it has optimum flow capability. All tools as well as work shoes should be regularly cleaned with a water spray during jointing, to avoid impurities by binding agent and footprints on the stone surface.

Final cleaning: After approx. 10 minutes the excess mortar on the surface of the stones can be swept off carefully with a large, coarse broom. Then use a soft, hair broom to do a final cleaning until all residual mortar has been removed from the surface. The correct moment for sweeping, is when white smears no longer form on the stone surface during sweeping. Sweeping should be done diagonally to the joint.

Subsequent treatment: Rain protection is not necessary during drizzle. In case of permanent or heavy rain, the freshly jointed surface should be protected for 12-24 hours. Do not put the rain protection directly onto the surface, to ensure air circulation.

Important note: During the initial period a very thin film of epoxy resin remains on the stone surface and intensifies the colour of the stone and protects it from dirt. The resin film is temporary and will disappear over time due to weathering and abrasion. In case of uncertainty, a sample surface should be tested before the entire jointing is done. A resin film does not constitute an "application fault" and the quality of the surface is not compromised in any way. For further information please take note of the ROMEX® compendium.

Technical data

Test report no. 26-1401/08 CPH-7334-D3000, audited colour „neutral“, goods in bags.		
System	2-component epoxy resin pavement jointing mortar	
Compressive strength	34.5 N/mm² 5 003 psi Laboratory value 19.4 N/mm² 2 813 psi Building site value	DIN EN 1015-11:2007-05
Bending tensile strength	12.2 N/mm² 1 769 psi Laboratory value 7.6 N/mm² 1 102 psi Building site value	DIN EN 1015-11:2007-05
Static elasticity module	7 800 N/mm² 1 131 294 psi Laboratory value 4 000 N/mm² 580 151 psi Building site value	DIN 18555 part 4
Hard mortar raw density	1.68 kg/dm³ 0.97 oz/in³ Laboratory value 1.41 kg/dm³ 0.82 oz/in³ Building site value	DIN 18555 part 3
Application time at 20 °C 68 °F	15-20 minutes ROMEX®-norm 04	
Application temperature	> 0 °C up to max. 30 °C > 32 °F up to max. 86 °F At lower temperatures slow hardening, at high temperatures quick hardening	
Re-opening of surface at 20 °C 68 °F	after 12-24 hours can be walked on, after 3 days fully load bearing	
Water permeability coefficient*	7.5 x 10 ⁻⁴ m/s ≈ approx. 2.3 l/min/m² for a joint fraction of 10 % 106.3 iph ≈ approx. 0.06 gal/min/sqft for a joint fraction of 10 % (with appropriate compacting)	
Storage life	24 months resin/hardener components: frostfree, filler components: dry	

Consumption table in kg/m² lb/sq ft - Basis of calculation: joint depth Ø 10 mm 3/8"							
Joint width	Stone size	80 x 40 cm 31 1/2" x 15 3/4"	60 x 60 cm 23 1/2" x 23 1/2"	40 x 40 cm 15 3/4" x 15 3/4"	32 x 24 cm 12 1/2" x 9 1/2"	24 x 16 cm 9 1/2" x 6 1/4"	9 x 11 cm 3 5/8" x 3 5/8"
	3 mm 1/8" (min.)	0,5 kg 1.1 lbs	0,4 kg 0.9 lbs	0,6 kg 1.4 lbs	0,9 kg 2.1 lbs	1,3 kg 2.9 lbs	2,5 kg 5.5 lbs
	10 mm 3/8"	1,6 kg 3.5 lbs	1,4 kg 3.1 lbs	2,1 kg 4.6 lbs	3,0 kg 6.5 lbs	4,1 kg 9.0 lbs	7,3 kg 16.0 lbs
	Polygonal slabs	approx. 1-3 kg 2.2-6.6 lbs					



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* Water permeable according to „Leaflet on surfaces that allow for seepage“ (MVV), Issue 2013.

Repair of broken cement and old joints



The most commonly planned regulation construction methods are carried out as unbonded or open construction methods according to DIN 18318. Due to ever increasing traffic loads, delivery traffic, weekend and christmas markets, extreme weather effects and the effect of paved stone cleaning using vacuum sweeping machines, the joints disappear and erosion of the entire paved stone surface commences. Each period of frost causes hydraulically bound joints to have weak areas which crack and break out. Longterm the result is empty joints, dislodged paving stones and a damaged surface. A major problem in this, is that the surface becomes dangerous to walk on and the risk of accidents for residents and tourists increases.

This means that maintenance and repair costs for towns and communities are significant. Until now, the possibilities for repairing old paved stone surfaces were limited. Depending on use and degree of damage on the paved stone surface, usually the only way was a cost intensive new

laying of the surface. Communities are often faced with maintenance work that is almost impossible to manage on yearly budgets of just 30–70 cents per m² (3–7 cents per sq ft) and year. Another potential problem, is the liability that communities may face in case of accidents caused by non-jointed and unsafe paved stone surfaces. In addition the surfaces are affected by the intense loads of delivery vehicles and sweeping machines, a situation which was never taken into consideration at the time of planning these surfaces. As soon as weak areas have formed, action needs to be taken quickly because shear forces create a “domino effect” which destroys adjoining, still intact paved stones. Damaged joints must be repaired as quickly as possible.

Old joints can be repaired without taking up and re-laying the existing paving stones, if the paved stone surface is still suitable for walking and driving on, if the contractor is satisfied with the current state of the surface and the purpose of the repairs is to stabilise the paving stones.

Are the existing superstructure and substructure's suitable for repair?

“Fixed substructure – fixed superstructure” is a basic principle for jointing. Many years of practical experience have shown, that surfaces constructed in an unbonded way, that have been subjected to loads for at least four years, have finished with all settling processes. ROMEX® systems can be used on foundations made of sand, gravel or other filler materials. It is important that a) permanent loads existed which contributed to the settling process, b) there will be no change in the degree of loads expected on the surface and c) the entire setup was laid in a frost resistant manner.

In case of doubt regarding settling of the surface, a test surface should be laid. In order to get results that are reliable, choose an area of the surface that is subjected to high shear forces. A surface area of 100–200 m² | 1076.39–2152.78 sqft is usually sufficient. If the repaired surface remains intact over a period of at least 6 months, then work with ROMEX® systems can be carried out. If the joint doesn't hold and cracks and breakages appear, then ROMEX® would recommend against carrying out repairs.

Are the paving stones suitable for jointing?

In general, it is possible to joint all paving stone and slab joints that have joint widths of at least 3 mm | 1/8” with ROMEX® systems. Jointing will only close the joint, any unevenness in the surface will be not rectified. If the contractor is not happy with the existing state of the paved stone surface, then this needs to be re-laid until the surface is as desired. The paved stone and slab surface needs to have been laying for at least two years and show that the superstructure and substructure have completely settled. If settling or movements of the surface are to be expected, then jointing using ROMEX® pavement jointing mortars is not recommended. If there is no information available regarding the foundation of the paved stone surface, then it is recommended laying a test surface in an area of the surface that is highly trafficked and to observe it over a period of six months (whereby this time period should include a frost period). If during this test phase cracks and breakages appear on the sample surface, then it is recommended not carrying out repairs.



Village square in Vussem (NRW) before – after



ROMPOX® - D2000 Pedestrian area Frankfurt, DE



ROMPOX® - D2000 Horse market Güstrow, DE

Repair with ROMPOX® - D3000 and ROMPOX® - D2000

Repair of old paving stones

What needs to be heeded with regard to movement joints?

Existing expansion joints, laid during construction of the superstructure and substructure, should be incorporated into the joint fixing.

What needs to be heeded during cleaning of the joints and preparation?

When repairing existing paved stone joints, preparation consists of using a high pressure water jet or air pressure to achieve the required 30 mm | 1 ¼" joint depth (highly load bearing areas, at least ⅔ of the height of the stone). There is specialist equipment for removing old joints quickly,

evenly and without spraying, your ROMEX®- Team is happy to advise you. After the joints have been blown clean, any litter, stone or cement residue that has got stuck, is removed by hand. Furthermore, the stones to be jointed should be free of all soiling such as oils, grease and paint. Any left over weeds or roots need to be removed completely with tools or with flame/gas burners.

In case individual paving stones wobble when walked on, then this means the joints have been cleared out too deeply. The paving stones need to be completely fixed or full joint bonded before jointing is carried out. Alternatively, the stone can be laid into a synthetic resin bed (wait 24 hrs until jointing) or cement foundation (wait 28 days until jointing). If the stone is not stabilised, this can lead to edge cracking, which in turn leads to further damage.

Repair of joints

From 5 mm | ¼" width and 30 mm | 1 ¼" depth using ROMPOX® - D2000

The width of the joint must be at least 5 mm | ¼", the depth at least 30 mm | 1 ¼". In case of traffic loads, the joint must be at least ⅔ of the height of the stone. In general, the deeper the joint mortar is laid, the more stable the entire construction will be. Please take note of the product data regarding application and technical properties.

Repair of damaged cement and old joints

Paving stone joint elutriant ROMPOX® - D3000 for repairs is suitable for the repair of joint cracks from 3 mm | ⅛" wide and 10 mm | ⅜" deep.

Using ROMPOX® - D3000 old cement joints can be re-worked and repaired. It can also be used to repair the narrowest joints and cracks in paved stone surfaces and with paving stones. The width of the joints must be at least 3 mm | ⅛", the depth at least 10 mm | ⅜". The requirement for permanent longevity of the system, is a superstructure and substructure that has completely settled. Please take note of the product data regarding application and technical properties.

What guarantee does ROMEX® give for the repair of old paving stones?

For the systems ROMPOX® - D2000 and ROMPOX® - D3000, ROMEX® will guarantee the longevity for five years, as long as the repairs were carried out according to ROMEX® construction regulations and a sample surface was laid beforehand which survived at least one winter without damage. Fine expansion cracks in the joint or on the edges of the stones can always occur but this has no negative effects on the usage properties and frost resistance of the surface.

ROMPOX® - D3000 Košice, SK





OBJECT REPORT

ROMEX®- repair of old paved stones in Košice, Slovakia

Repair of old paved stones and new design

of public and historic surfaces

Cleaning of old paved stone surfaces presents towns with an almost unsolvable problem. Due to heavy traffic loads, extreme weathering effects and cleaning of the paved stones using street sweepers, the jointing material disappears and erosion of the whole paved stone surface increases. Ensuing costs for the maintenance and repair of these surfaces can become very high for towns and communities.

Another problem is the risk of accidents for pedestrians on damaged surfaces. Lack of stability in the joints, causes paved stones to dislodge and destroys the visual aspect of the whole surface. The building authorities are obligated to take matters into hand. Over the years, each paved stone and slab surface becomes less attractive if regular cleaning and repair work is not carried out.

- Grass and moss grow out of the sand joints
- Cement joints wear out due to weathering
- Joints crack and break out due to frost effects
- Risk of accidents due to tripping on broken joints increases

Cost factor – cleaning with street sweepers:

After the first cleaning of the surface, the joints are brushed out up to 2 cm | ¾". After the second cleaning, it is almost 3,5 cm | 1 ¾".

If the surface is cleaned regularly, the joints will need to be refilled approx. every two months. Re-filling costs are between 0,40 and 1 € per square metre, calculated yearly that comes to between 2,40 and 6 € – an expensive endeavour.

Košice is a town by the river Hornád in the east of Slovakia near to the border with Hungary. With around 250 000 inhabitants, after Bratislava, it is the second largest town in the country. The old cement joints were causing more and more problems for the town's authorities, especially from frost damage and breaking out of the joints. Thanks to new jointing carried out using ROMEX® paving stone joint elutriant ROMPOX® - D3000, those problems are a thing of the past.



Old cement joints



Cleaning of joints



10 mm | ¾" joint depth



Wash in



ROMPOX® - TRAFFIC V2

The hardest pavement jointing mortar

ROMPOX® - TRAFFIC V2 is the strongest ROMEX® pavement jointing mortar for heaviest traffic loads in the public sector. V2 is used to carry out new jointing in road and town square construction, that is subject to heavy loads, but also as gutter mortar according to ATV DIN 18318:2006.



Bk
1.8-3.2
load class in accordance with RStO 12

N3
usage category



Properties

- joint widths from 8 mm | 3/8"
- joint depths from 30 mm | 1 1/4"
- high strength
- frost and de-icing salt resistant
- water permeable
- no cement haze / residue

APPLICATION

Construction site requirements: The surface should be prepared according to the expected traffic loads. The regulations and leaflets for the manufacture of paved surfaces should be heeded. Future loads must not cause the surface to settle or loosen stones. Ideally, you would use ROMEX® Trass-Bed products as well as the ROMEX® SYSTEM-GUARANTEE (RSG). For optimum application it is recommended using ROMEX® application tools.

Preparation: Clean out joints to a depth of at least 30 mm | 1 1/4" (in case of traffic loads 2/3 of stone height, minimum joint width 8 mm | 3/8"). The surface to be jointed should be cleaned of all impurities before work commences. Adjacent surfaces that are not to be jointed must be taped off to avoid resin contact.

Mixing: Pour the 25 kg | 55 lbs filler components into the mixing tub and start the mixing process. Whilst mixing, slowly add the separately packaged 3.0 kg | 6.6 lbs resin/hardener component completely into the mixture. Do not add water! Total mixing time: at least 6 minutes. Use professional agitator or rotary-drum mixer / compulsory mixer.

Application: Apply the mixed pavement jointing mortar onto the surface and roughly distribute it using a spade or metal slider. Subsequently, work the pavement jointing mortar into the joints using a rubber squeegee, ensuring it compacts deep into the joints and fills them completely. All tools as well as work shoes should be regularly cleaned with a water spray during jointing, to avoid impurities by binding agent and footprints on the stone surface.

Final cleaning: Immediately after application sweep the stone surface carefully with a coarse street broom. Then use a soft hair broom to do a final cleaning until all residual mortar has been removed from the surface. Sweeping should be done diagonally to the joint. Do not reuse swept off material.

Subsequent treatment: Rain protection is not necessary during drizzle. In case of permanent or heavy rain, the freshly jointed surface should be protected for 12-24 hours. Do not put the rain protection directly onto the surface, to ensure air circulation.

Important note - resin film: During the initial period a very thin film of epoxy resin remains on the stone surface and intensifies the colour of the stone and protects it from dirt. The resin film is temporary and will disappear over time due to weathering and abrasion. In case of uncertainty, a sample surface should be tested before the entire jointing is done. A resin film does not constitute an „application fault“ and the quality of the surface is not compromised in any way. For further information please take note of the ROMEX® compendium.

Technical data

Test report no. 55-2909/04 CPH-7134, audited colour "neutral", goods in bags.		
System	2-component epoxy resin pavement jointing mortar	
Compressive strength	76.8 N/mm ² 11 139 psi Laboratory value 52.5 N/mm ² 7 615 psi Building site value	DIN 18555 part 3
Bending tensile strength	22.2 N/mm ² 3 220 psi Laboratory value 13.6 N/mm ² 1 973 psi Building site value	DIN 18555 part 3
Static elasticity module	12 200 N/mm ² 1 769 461 psi Laboratory value 9 800 N/mm ² 1 421 370 psi Building site value	DIN 18555 part 4
Hard mortar raw density	1.83 kg/dm ³ 1.06 oz/in ³ Laboratory value 1.71 kg/dm ³ 0.99 oz/in ³ Building site value	DIN 18555 part 3
Application time at 20 °C 68 °F	15-20 minutes	ROMEX®-norm 04
Application temperature	> 0 °C up to max. 30 °C > 32 °F up to max. 86 °F At lower temperatures slow hardening, at high temperatures quick hardening	
Re-opening of surface at 20 °C 68 °F	after 12-24 hours can be walked on, after 3 days fully load bearing	
Water permeability coefficient*	4.78 x 10 ⁻⁶ m/s Δ approx. 0,015 l/min/m ² for a joint fraction of 10 % 0.7 iph Δ approx. 0.0004 gal/min/sqft for a joint fraction of 10 % (with appropriate compacting)	
Storage life	24 months resin/hardener components: frostfree, filler components: dry	

Consumption table in kg/m ² lb/sq ft - Basis of calculation: joint depth Ø 30 mm 1 1/4"							
Joint width	Stone size	80 x 40 cm 31 1/2" x 15 3/4"	60 x 60 cm 23 1/2" x 23 1/2"	40 x 40 cm 15 3/4" x 15 3/4"	32 x 24 cm 12 1/2" x 9 1/2"	24 x 16 cm 9 1/2" x 6 1/4"	9 x 11 cm 3 5/8" x 3 5/8"
	8 mm 3/8" (min.)	1,5 kg 3.4 lbs	1,4 kg 3.0 lbs	2,0 kg 4.5 lbs	2,9 kg 6.4 lbs	4,1 kg 9.0 lbs	7,3 kg 16.1 lbs
	10 mm 3/8"	1,9 kg 4.2 lbs	1,7 kg 3.7 lbs	2,5 kg 5.5 lbs	3,6 kg 7.9 lbs	5,0 kg 11.0 lbs	8,8 kg 19.4 lbs
	Polygonal slabs	approx. 4-6 kg 8-13 lbs					



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* Water permeable according to „Leaflet on surfaces that allow for seepage“ (MVV), Issue 2013.



Using ROMPOX® - D2000
and ROMPOX® - TRAFFIC V2

Paved stone gutters

Gutters made of natural stone or concrete stone paving stones direct surface water into the drainage system. Acc. to ATV DIN 18318:2006 the joint widths for gutters should be between 8–12 mm | 3/8"–1/2", the paving stone should be set „fresh on fresh“ and jointed using bonded pavement jointing mortar.

ROMEX®- synthetic resin pavement jointing mortars have the following advantages:

1. no breaking out of joints from frost or de-icing salt
2. high strength even with heavy traffic loads
3. quick and clean jointing with low consumption

Consumption: approx. 5 kg/m | 11 lbs/m
(i.e. for paved stone gutter with 3 rows large stone 14 x 16 cm | 5 5/16" x 6 1/4", with Ø 10 mm | 3/8" joint width and 50 mm | 2" joint depth)

Application potential: up to 1 000 m | 40 000"/day
(i.e. with a group of 3–4 workers)

Re-opening of surface: can be driven on after 24 hours
(at Ø +20 °C | 68 °F surface temperature;
at lower temperatures: slower hardening;
at high temperatures: faster hardening)



Joint repair on roundabouts

Working with the road maintenance depot, ROMEX® was able to present a permanent and cost effective solution against weedgrowth on roundabouts to the federal department for roads NRW. The federal department is particularly concerned, amongst other things, about the surface being environmentally friendly and de-icing salt resistant. Both roundabouts were cleaned and re-jointed within two hours. Consumption for this project was approx. 2,5 kg/m² (100 kg for 40 m²), whereby the edge stones incl. the joint to the asphalted road was also jointed. That equals a square metre price of approx. 10 € incl. labour (three people).





PAVEMENT JOINTING MORTAR
SYSTEM SOLUTIONS

Guaranteed security!



**System specialist
pavement jointing mortar**

Basis for permanent paved stone coverings

As a system specialist for pavement jointing mortars, ROMEX® stands for guaranteed reliability and optimum results with suitable solutions as the basis for permanent paved stone coverings.



The correct setup

Basics of permanent paved stone covering built using a bonded method

Introduction

Traffic routes that are built using paving stones are part of the road construction sector. Road construction consists of calculation, building and maintenance of the road network for vehicles, bicycles and pedestrians. The main requirements of the users of traffic routes are safety and user comfort. This means that those that carry out road construction, need to make sure that the traffic routes are correctly constructed and maintained. The main properties that such traffic routes need to have are, strength, load-bearing capacity, frost resistance and to be level and nonslip – irrespective of the type of use and construction.

In order to achieve this, good planning, thorough work preparation, careful carrying out of construction as well as adherence to standard applicable regulations are a necessity. Paved stone coverings can be laid in a loose/unbonded way or as bonded construction. Unbonded laying is the general way of laying paved stones.

Bonded paved stone coverings are used for special areas and have a number of advantages compared to unbonded paved stone coverings:

- pedestrians can safely walk on the paved stone surface
- weeds don't grow through the joints
- joints are not washed away by erosion
- good absorption of shear force without dislocation of paved stones
- resistant to street sweepers and high pressure cleaners

The technical applicable regulations have also been modified to reflect this development. In August 2007 the following paper was published: FGSV Work Paper "Surface coverings using paving stones and slabs in bonded construction" (Surface strengthening using bonded paved stone coverings and slab surfaces.) This ROMEX® publication aims to show in detail how the jointing and fixing of paved stones outdoors can be done using synthetic resin pavement jointing mortars, and to inform you of this still relatively young, only 30 year old, method of jointing.

Bed/subsurface/substructure

The existing ground/floor (bed) needs to be prepared expertly for the paved stone construction – the so-called superstructure – that will be laid on top. It needs to be built so that it can take profiles, is even and loadbearing. The same applies to any kind of substructure that may be built due to certain local conditions. The expertly built surface of the bed/subsurface is called the planum. In general, the planum needs to have the same degree of slope and direction of slope as the subsequent paved stone covering (correct for profiles). In general this should be a slope of 2.5 %, 3.0 % or 3.5 %, depending on the type of paving stones used. If the existing floor is at risk of frost, then the planum needs to have a slope of at least 4 %, so that any water from the superstructure can drain more quickly. All layers above the planum, including the paved stone covering, can be laid according to the degree of slope recommended for such paved stone coverings.

The planum needs to be made as level as possible, so that any water seeping through the superstructure, does not stay standing in any pits and endanger the loadbearing capacity and frost resistance of the paved stone construction. Deviations from the target height should not be more than $\pm 3 \text{ cm} \mid 1 \frac{1}{4}''$.

General

Bonded paved stone coverings are made using building material mixtures containing binding agents for the bed and the joint filling (bed and jointing mortar). Mixed building methods, whereby only the bed or the joint filling uses a building material with binding agents are not generally used, but depending on site circumstances, can be used successfully.

Bonded paved stone coverings require particular care and well-founded expert knowledge during planning, bid for tenders, selection of building materials and execution. Paved stones for bonded paved stone coverings should not exceed the usual size (maximum edge length 320 mm \mid 13"). There is currently insufficient experience to comment on bonded paved stone coverings using larger stones. A bonded paved stone covering, as opposed to the unbonded type, has similar properties to a rigid base such as concrete covering construction (that is why it is often called "rigid construction method"). This needs to be taken into consideration when planning the surrounds, installation and type of expansion joints.

Bedding and jointing mortars should be made up, manufactured and applied in such a way, so that they have the required material properties when the construction is completed. It is particularly important to achieve sufficient adhesion strength between the paving stones and the bedding mortar on the one hand and between the paving stones and the jointing mortar on the other. The following all affect the adhesion strength – weather conditions, application conditions, type, geometry and surface texture of

the paving stones, as well as the composition of the mortar. When trying to determine the suitability of bedding and jointing mortars, the following should be taken into consideration – product properties determined in the laboratory as well as those determined on the building site i.e. in a completed construction project. This is particularly important with regard to values for adhesion strength.

Bed

The requirements of the bed are as follows – to conduct any loads on the above paved stone covering into the ground without deforming and with sufficient resistance, as well as providing equalising between any left over unevenness on the upper base course and the paved stone surface above.

Various types of mortar can be used for the manufacture of a bonded bed:

- hydraulically bound mortar
- hydraulically bound mortar modified with plastic or
- synthetic resin bound mortar (quickest end hardening ($\geq 24 \text{ hrs}$), good adhesion and bending tensile values.)

The raw materials for any type of bedding mortar must always correspond to the technical regulations / norms. To estimate the basic suitability of a bedding mortar, certain product properties are determined under defined laboratory conditions. Bedding mortars must fulfill certain requirements with regard to compressive strength, resistance to frost/thaw changes and water permeability. These are described in the FGSV work paper "Bonded fixings of surfaces using paved stone coverings and slabs" (issue 2007). The work paper also gives recommendations of how to fulfill requirements within the finished construction. Laying bedding mortar requires certain temperatures for the air and the surface as well as the materials to be used. This should be at least $+ 5 \text{ }^\circ\text{C} \mid 41 \text{ }^\circ\text{F}$ for hydraulically bound bedding mortar and at least $+ 1 \text{ }^\circ\text{C} \mid 33.8 \text{ }^\circ\text{F}$ for synthetic resin bound bedding mortar (see manufacturer's instructions). When using special bedding mortar, application may be possible at lower ambient temperatures. At lower temperatures, the hardening time will be increased. Bedding mortars should not be used on frozen surfaces ($< 0 \text{ }^\circ\text{C} \mid < 32 \text{ }^\circ\text{F}$). When using hydraulically and synthetic resin bound bedding mortar, the carrying out of the work should be coordinated so that the hardening of the bedding mortar does not begin until paving stones have been laid at the correct height.





ZTV-Wegebau (path construction)

Additional technical contractual conditions

With the publication of "ZTV-Wegebau (path construction) – Additional Technical Contractual Conditions for the Construction of Paths and Squares outside of surfaces for road traffic", the varying and proven construction methods for landscaping construction as set out in ATV DIN 18318, which in part have been used as a standard for decades, are now being compiled into a single set of regulations.

Jointing using synthetic resin pavement jointing mortars now belong to the standard methods of paved stone jointing, along with the traditional jointing methods of sand/gravel and cement.

"ZTV-Wegebau (path construction)" thus represents the current state of technology and can be used as part of the contractual terms and conditions. ROMEX® pavement jointing mortars fulfill the requirements of the ZTV.

Background and content of the regulations:

Additional technical contract conditions (ZTV) supplement the General technical contract conditions (ATV) in part C of the allocation and contract regulations for construction services. Acc. to § 8 Abs. 5 VOB/A certain agreements may also be included in the additional technical contract conditions, if for certain construction services, similar requirements are present.

The additional technical contract conditions for path construction, offers contractual partners, with the inclusion – but without special agreement – of the VOB/B a contractual basis, which fulfills the requirements of paved stone surfaces and slab surfaces with less traffic loads. Furthermore, it contains the requirements and regulations for the so called "bonded construction methods".

With regard to the use of bonded construction methods, additional, brand new and supplementary requirements, especially for the manufacture and laying of bed and jointing materials, are defined.

Reasons for the additional technical contract conditions for path construction:

- DIN 18318 takes into consideration only surfaces subjected to traffic and heavy traffic
 - > There is a gap in the system for landscape construction and surfaces with light loads
- Bonded construction methods are not taken into consideration
 - > Manufacture of bed
 - > Manufacture of joint
 - > Requirement of materials to be used

The following "loadbearing classifications" are used to differentiate:

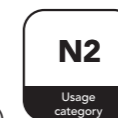
Usage category N 1:

Surfaces that are walked on and that have no vehicle traffic, away from road traffic surfaces (i.e. patios, garden paths, paths in garden areas, seating areas in parks)



Usage category N 2:

Surfaces that are driven on, up to 3.5 t allowable total weight, away from road traffic surfaces (i.e. garage driveways, car parking spaces)



Usage category N 3:

Surfaces that are driven on the same as category 2, but with occasional traffic from vehicles up to 20 t allowable total weight, away from road traffic surfaces (i.e. roads used for maintenance or emergency vehicles as well as entrances for fire engines, garages and building entryways.)



The following construction methods will be discussed in depth:

1. Unbonded construction method

Bed and joint unbonded on bonded/unbonded base course

2. Fully bonded construction method

With the fully bonded construction method, the bed, joint and upper base course are bonded

3. Mixture of construction methods with bonded bed

The base course is unbonded, the joints and bed are bonded

4. Mixture of construction methods with unbonded bed

The base course and bed are unbonded, the joints are bonded

5. Water permeable surface coverings

Surfaces covered with paving stones or slabs as well as honeycomb and lattice elements, where the joints, openings or structure allow increased water permeability.

6. Green spaces

Surfaces covered with paving stones or slabs as well as honeycomb and lattice elements, where the joints or openings are used for green spaces.



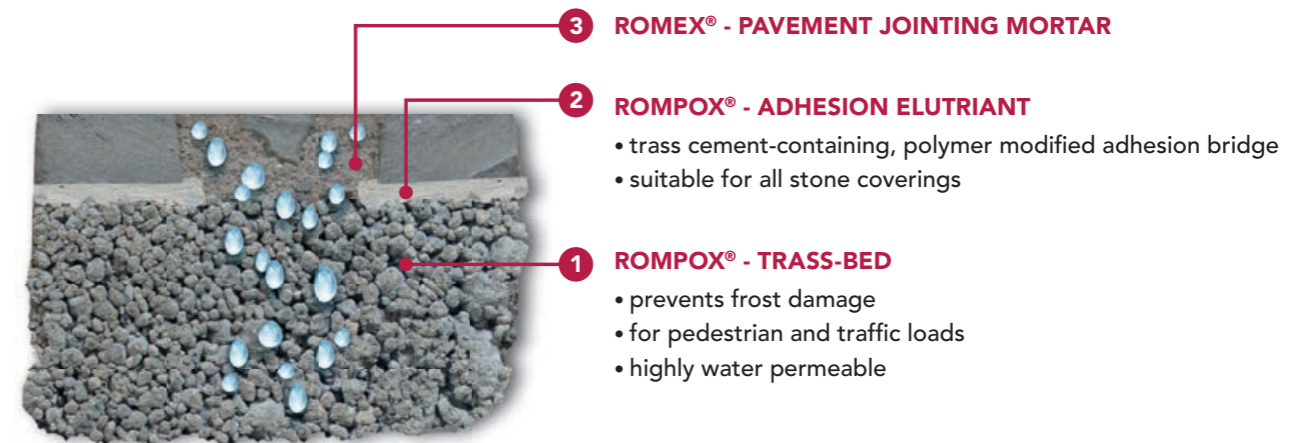
The following binding agents are suitable for bonded jointing materials:

- Cement
- Epoxy resin based reactive resins
 - ROMPOX® - DRAIN
 - ROMPOX® - DRAIN plus
 - ROMPOX® - D1
 - ROMPOX® - D2000
 - ROMPOX® - D3000
 - ROMPOX® - FLEX-LIGHT
 - ROMPOX® - FLEX-JOINT
 - ROMPOX® - TRAFFIC V2
- Polyurethane based reactive resins
 - ROMPOX® - PATIO
- Polybutadien
 - ROMPOX® - EASY
 - ROMPOX® - POWER JOINT

Water permeable bonded joints should be made using binding agents made of reactive resins or polybutadien.



The ROMEX® - solution: bonded construction (for all paving and slab coverings made of natural and concrete stones as well as ceramics)



ROMPOX® - TRASS-BED and ROMPOX® - TRASS-BED-COMPOUND

High quality and partially polymer modified Portland/Trass cement mixes are exclusively used for our bonded ROMEX® SYSTEMS because the trass mineral connects with the lime particles of Portland cement and neutralizes them.

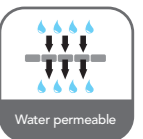
The big advantage is the greatly reduced risk of water-logging, efflorescence and discoloration. In conventional Portland cement products, without trass, the lime particles migrate through joint and stone covering to the surface and react there with the CO₂ of the air.

The result: a lime layer forms on the rock surface, which is called "efflorescence".



SEEP AWAY INSTEAD OF SEALING

Despite the high strengths of ROMEX® bedding and pavement jointing mortars, the surfaces remain water permeable! Thus by using surface coverings that allow water seepage, we avoid having to later de-seal surfaces and allow natural rainwater management, thus making a sustainable contribution to the environmental impact without compromising on functionality and attractive surface design.



With the ROMEX® SYSTEM GUARANTEE, or RSG for short, ROMEX® is the first manufacturer of paving bed & jointing systems to offer laying companies an additional guarantee beyond the statutory GUARANTEE.

i Talk to us about the guarantee conditions!

ROMEX® SYSTEM GUARANTEE (RSG)

The ROMEX® SYSTEM GUARANTEE is a truly competitive advantage for every customer. ROMEX® is the first and only manufacturer in the field of paving stone and slab construction to offer such a guarantee to its customers. ROMEX® means security, especially for specialist companies, which today often provide a five-year guarantee on their construction services to their end customers according to the Civil Code (BGB).

The ROMEX® - BEDDING & JOINTING SYSTEMS have been used successfully in private as well as public areas for decades. When laid correctly, ROMEX® offers a SYSTEM GUARANTEE of up to 10 years, with a normative life expectancy (average life expectancy) of up to 50 years.



ROMEX® SYSTEM GUARANTEE

PRIVATE AREAS

(Driveways/patio)

The private area includes paving and slab flooring around the house. These are primarily patios, paths and driveways. The compliant structure is subject to the requirements of the VOB and the ZTV road construction.

The use categories subdivide loads into three categories (N1 to N3) from pedestrian to car to occasional vehicle loads of up to 20 t gross vehicle weight.

Loads and weather conditions, especially frost and de-icing salt, are the challenges that the superstructure, stone and joint must face. ROMEX® provides its customers with the ROMEX® SYSTEM GUARANTEE the necessary safety assurance for a long-lasting, functional and beautiful paved surface.

YOUR ADVANTAGES

- Lasting good system compatibility of the joint and bedding
- No weed growth through the joints
- 100% frost and de-icing salt resistant
- UV and weather resistance
- Permanent durability
- Prevents settling



**bonded
construction**



**unbonded
construction**



TESTED SYSTEM

Rollover tests at the TU Munich

The partial surface with concrete paving showed no damage even after the completion of phase 3 ("small transporter") or any significant deformations.

The area with natural stone paving also showed after completion of phase 5 ("heavy truck") no damage or significant deformations.

SOURCE:
Research Report No. 2724 Chair and Testing Office
for traffic route construction of the TU Munich



Research and development: We have the proof!



ROMEX® SYSTEM BONDED-1-PRIVATE

For the **bonded construction** of paving and slab coverings within the usage categories 1–3 (N1/N2/N3) according to ZTV-Wegebau. For private areas (driveway, patio).

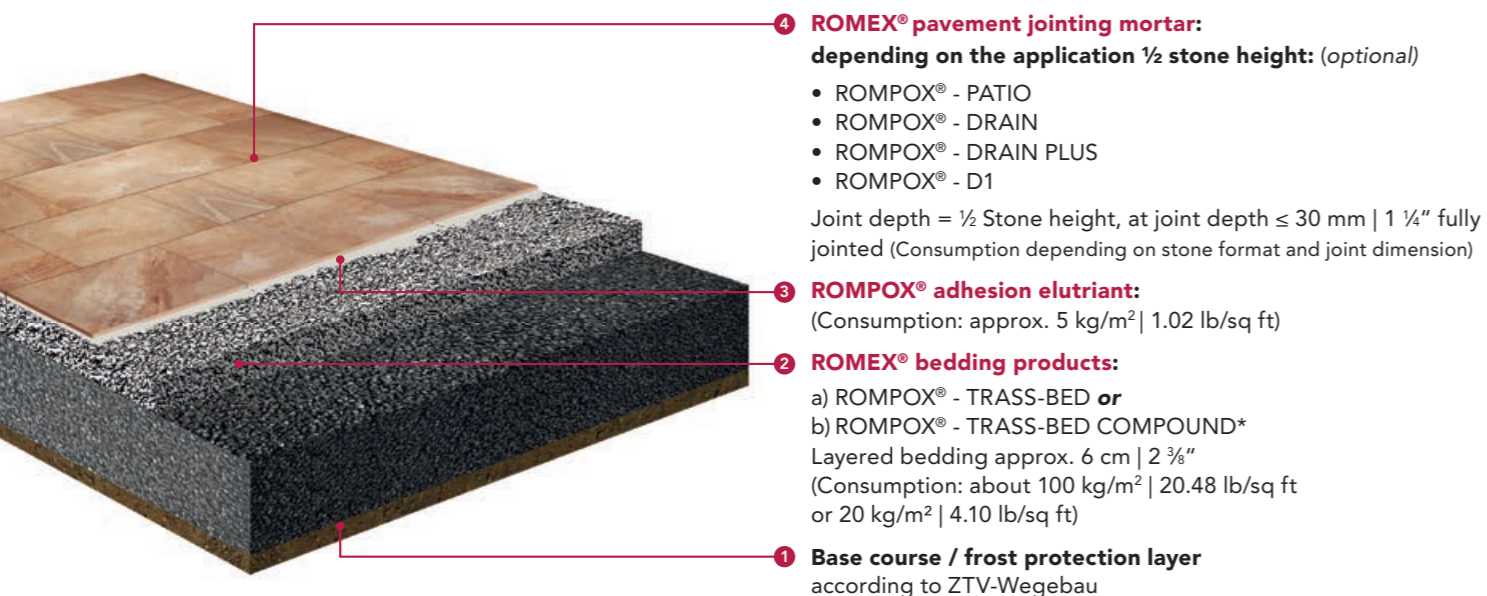


Usage category N1:

Accessible non-motor vehicle pavers outside areas of road traffic (eg. patios, garden paths, paths in the home garden area, seats in parks).



Minimum requirement for fastenings/surface covering: Minimum nominal thickness (stone height) = 20 mm | ¾"



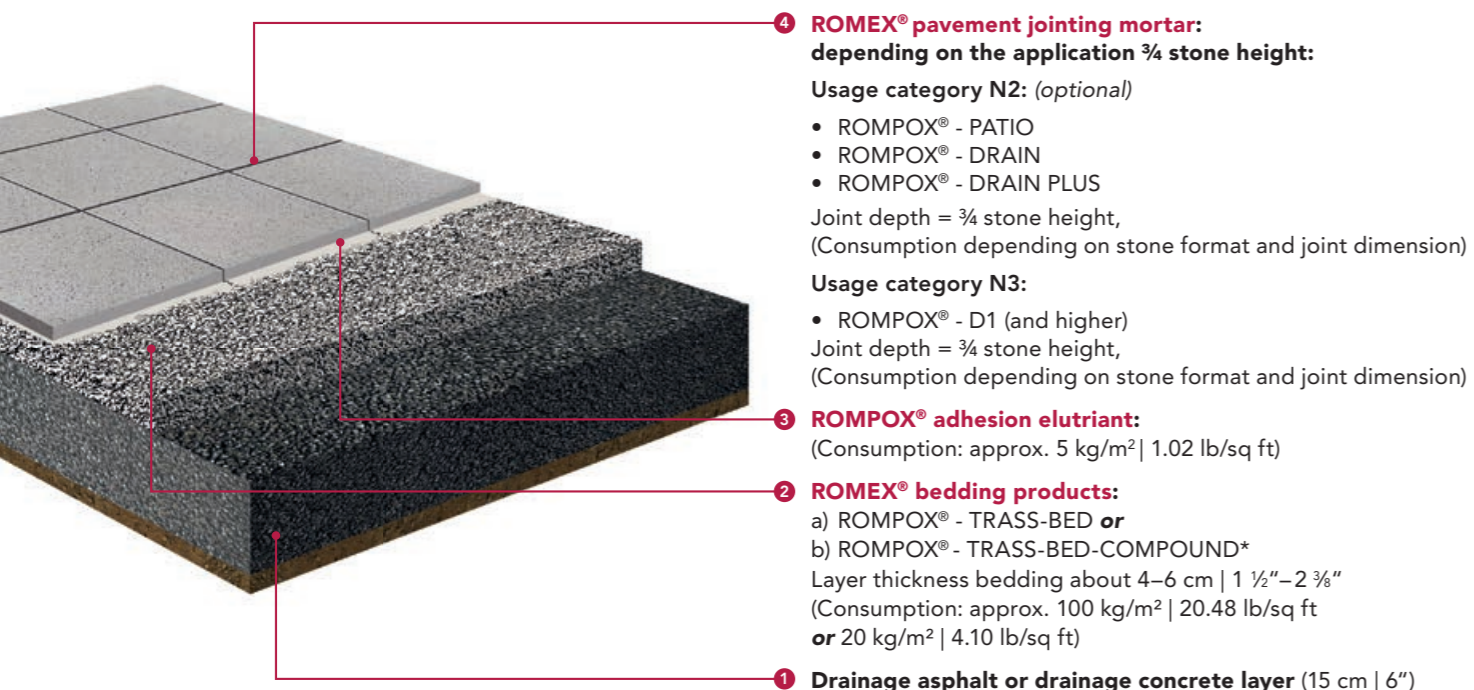
* When using ROMPOX® - TRASS BED COMPOUND aggregates with grainsizes 2–5 mm, 2–8 mm, 4–8 mm or 5–8 mm (usually rolled gravel/grit), which are tested and certified by the ROMEX® laboratory before use can be used.

Usage category N2 & N3:

Accessible surface coverings for vehicles up to 3.5 t permissible gross weight outside areas of road traffic (eg. garage access, car parking spaces) as well as occasional vehicle traffic up to 20 t permissible total weight with wheel loads ≤ 5 t outside of road traffic areas (eg. care, maintenance and emergency routes as well as fire brigade, garage and building driveways).



Minimum requirement for fastenings/surface covering: Minimum nominal thickness (stone height) = 80 mm | 3 ⅛"



* When using ROMPOX® - TRASS BED COMPOUND aggregates with grainsizes 2–5 mm, 2–8 mm, 4–8 mm or 5–8 mm (usually rolled gravel/grit), which are tested and certified by the ROMEX® laboratory before use can be used.

ROMEX® SYSTEM UNBONDED-1-PRIVATE

For the **unbonded construction** of paving stone and slab coverings within the usage categories 1–3 (N1/N2/N3) according to ZTV-Wegebau. For private areas (driveway, patio).

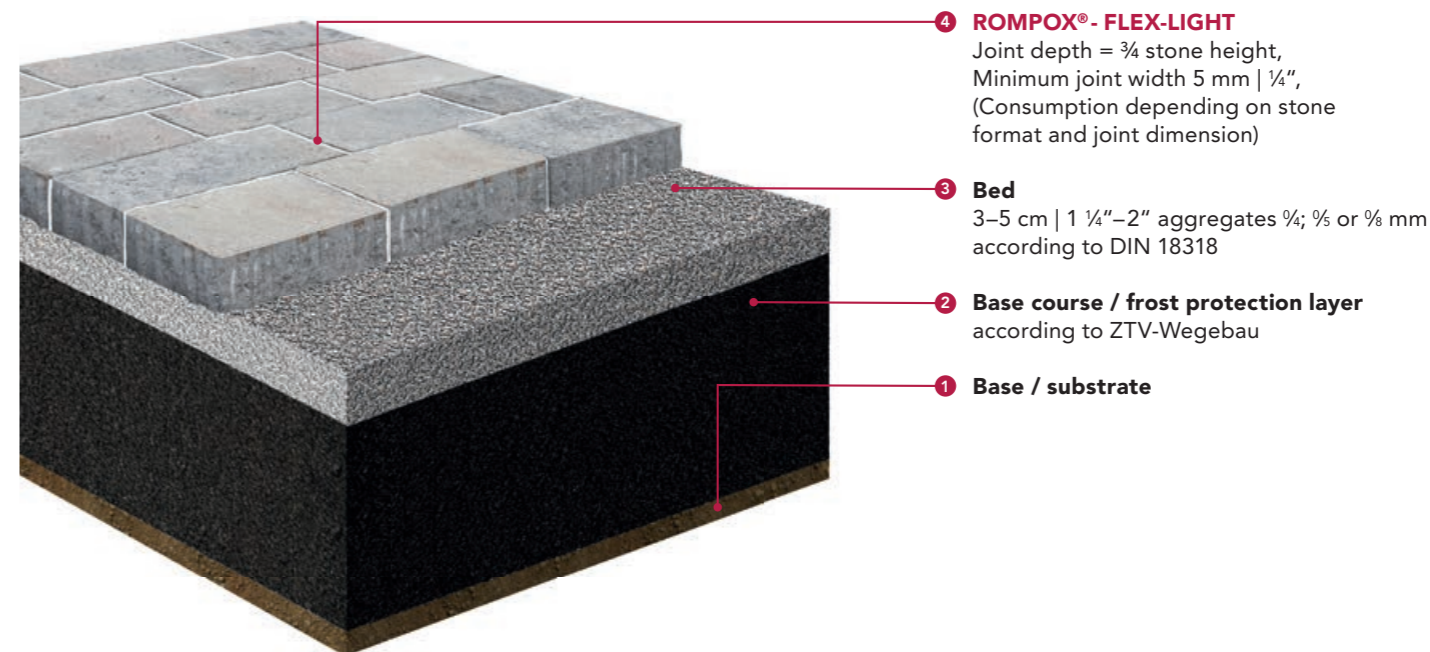


Usage category N1:

Accessible non-motor vehicle pavers outside areas of road traffic (eg. patios, garden paths, paths in the home garden area, seats in parks).



Minimum requirement for fastenings/surface covering: Minimum nominal thickness (stone height) = 50 mm | 2"



Usage category N2 & N3:

Accessible surface fastenings for vehicles up to 3.5 t permissible gross weight outside areas of road traffic (eg. garage access, car parking spaces) as well as occasional vehicle traffic up to 20 t permissible total weight with wheel loads ≤ 5 t outside of road traffic areas (eg. care, maintenance and emergency routes as well as fire brigade, garage and building driveways).

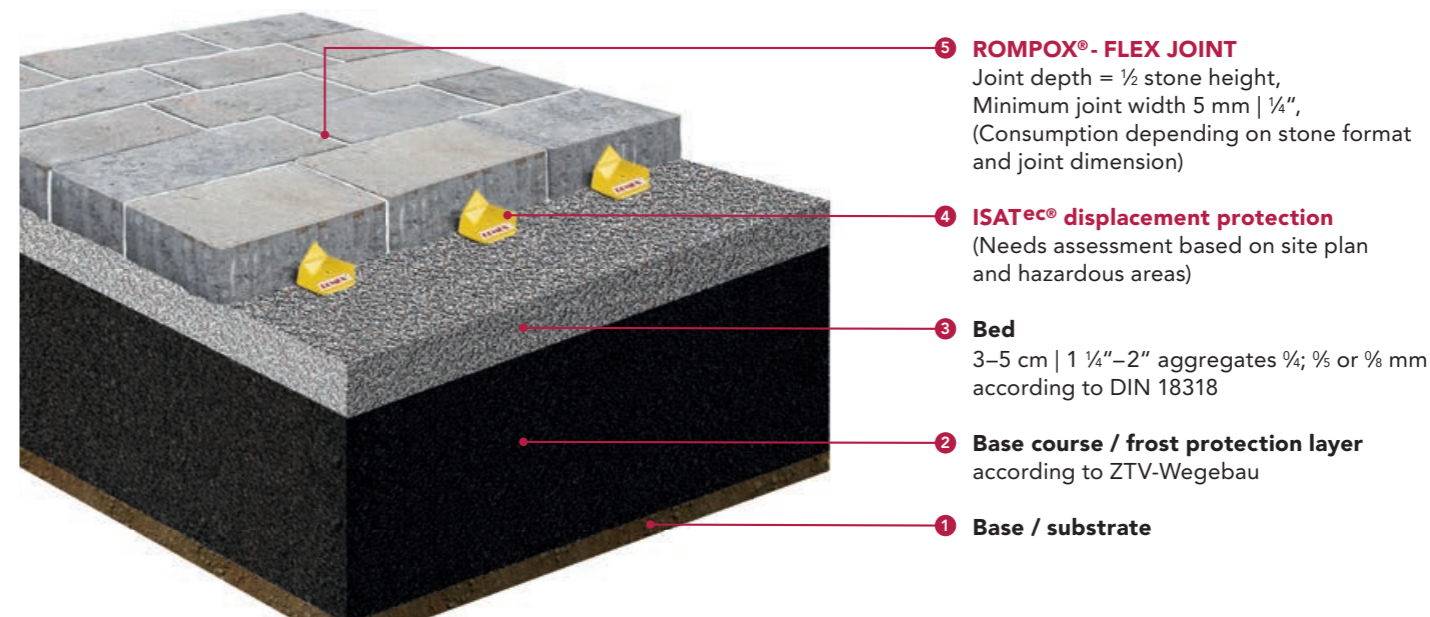


Usage category N2:

Minimum requirement for fastenings/surface covering: Minimum nominal thickness (stone height) = 60 mm | 2 ¾"

Usage category N3:

Minimum requirement for fastenings/surface covering: Minimum nominal thickness (stone height) = 80 mm | 3 ⅛"



ROMEX® SYSTEM GUARANTEE

PUBLIC AREAS

(Streets/paths/squares)

Public areas include paving stone and slab surfaces on roads, paths and squares. The compliant design is subject to the requirements of the VOB and the RStO 12. The load classes are subdivided according to loads, in equivalent 10-t axis transitions during the normative period of use. Starting with Bk 0.3 (300 000 equivalent 10-t axle transitions) to Bk 3.2 (3 200 000 equivalent 10-t axle transitions). In addition, exceptional situations are considered separately, such as bus stops, bus stations or roundabouts.

External influences from frost and de-icing salt, permanently high loads from torsional and shear forces, as well as from the use of sweeping machines or urban events, present major challenges that the superstructure, covering and joint have to withstand. We want to give architects, planners and builders the required assurance of a long-lasting surface.

With professional execution, according to the valid regulations, we guarantee with the systems ROMEX® SYSTEM BONDED-2-PUBLIC (bonded construction) and ROMEX® SYSTEM UNBONDED-2-PUBLIC (unbonded construction) a long-lasting covering, which can easily withstand all occurring influences and loads.

YOUR ADVANTAGES

- Lasting good system compatibility of the joint and bedding
- No weed growth through the joints
- 100% frost and de-icing salt resistant
- UV and weather resistance
- Permanent durability
- Prevents settling



i Talk to us about the guarantee conditions!

* Preparation of the subsoil/superstructure:

The ground planum must have the appropriate stability (at least 45 MPa). The following structural layers must be sufficiently load-bearing, water permeable, resistant to deformation and frost proof. The mineral mixtures (base courses/bedding joint) in unbonded design must comply with the requirements of each type of execution. The relevant additional current contract conditions for road construction (ZTV) must be complied with. A deviation should only be made with sufficiently positive regional experience. The applicable regulations and leaflets such as ZTVT, ZTVE, RStO 12, ATV DIN 18318, MFG 2015, MFG and TLPflaster - Stb, must be observed.



TESTED SYSTEM

Horizontal deformation behavior by the Technical University of Dresden:

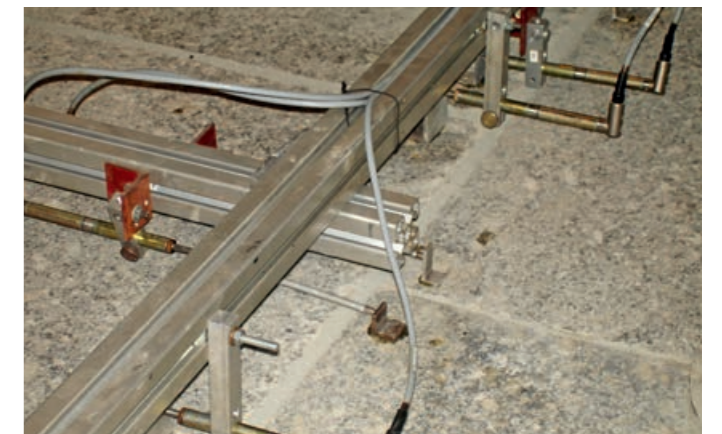
After 1 million load changes it can be summarized that in the first joint after the loadbearing slab, the direction of action of the horizontal force in the tests with ROMEX® - ISAT^{ec} anti-slip devices, there was much less horizontal shift than without them.

SOURCE:

Final report of the investigation on horizontal deformation behavior of slab surfaces with ground anchors 10/2008
Technical University Dresden; Faculty Civil Engineering; Chair of Road Construction.



Research and development: We have the proof!



ROMEX® SYSTEM BONDED-2-PUBLIC

For the **bonded construction** of paving stone and slab coverings from load class 0.3 in accordance with RStO 12. For public areas (roads, paths, squares).

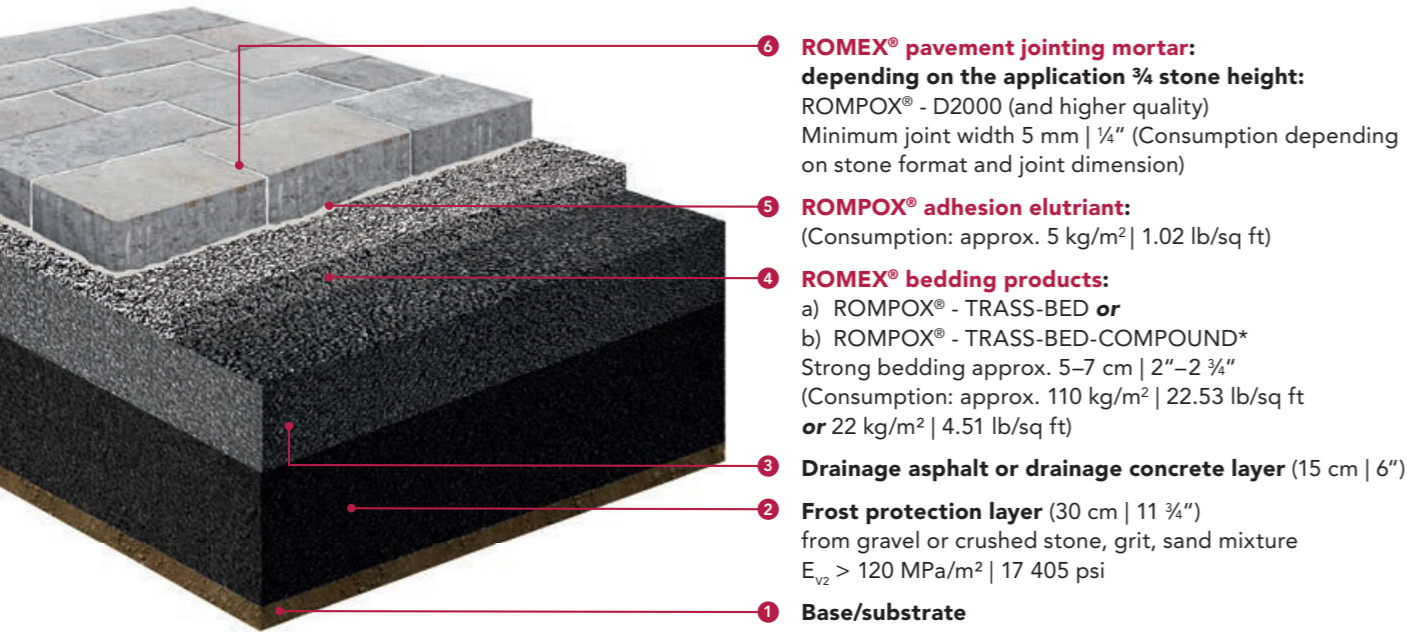


Load class Bk 0.3 to 1.8:

Passenger car traffic including occasional heavy traffic, through traffic by vehicles of the entertainment industry, eg residential and residential roads, village main street, district and collection roads.



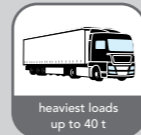
Minimum requirement for fastenings/surface covering: Minimum nominal thickness (stone height) = 80 mm | 3 1/8"



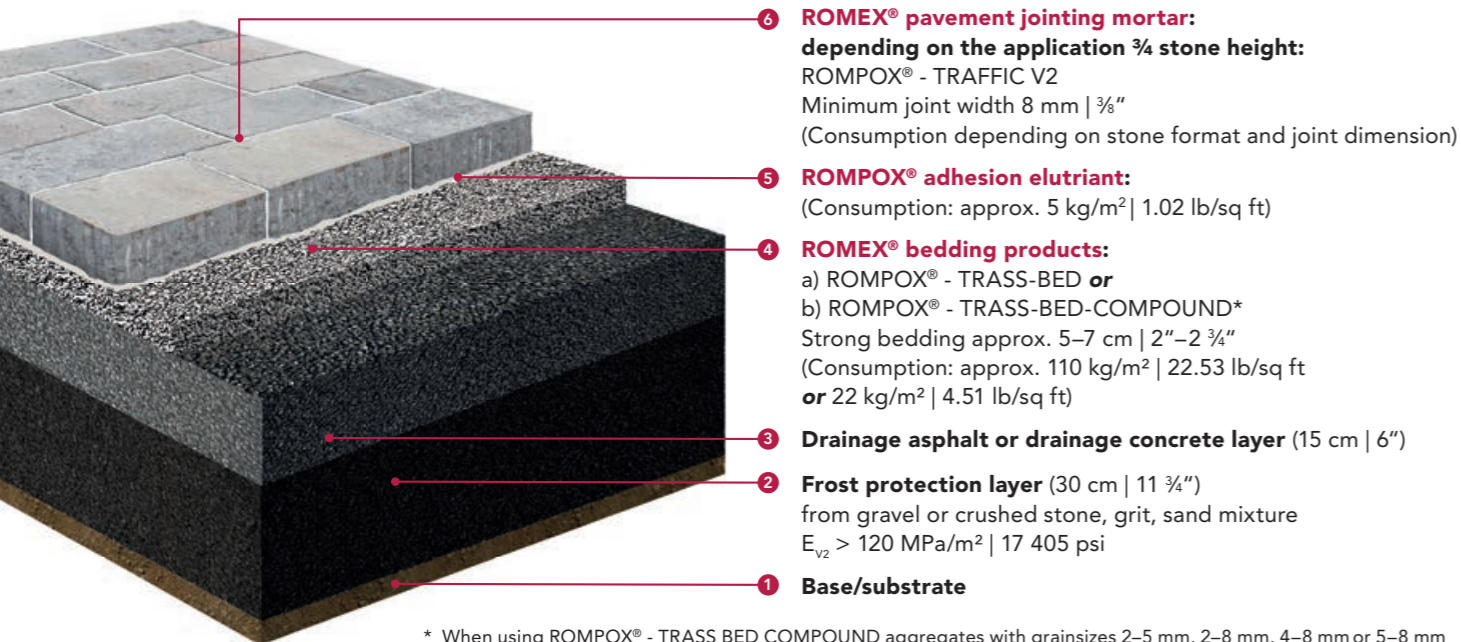
- 6 **ROMEX® pavement jointing mortar:** depending on the application 3/4 stone height: ROMPOX® - D2000 (and higher quality) Minimum joint width 5 mm | 1/4" (Consumption depending on stone format and joint dimension)
- 5 **ROMPOX® adhesion elutriant:** (Consumption: approx. 5 kg/m² | 1.02 lb/sq ft)
- 4 **ROMEX® bedding products:** a) ROMPOX® - TRASS-BED **or** b) ROMPOX® - TRASS-BED-COMPOUND* Strong bedding approx. 5–7 cm | 2"-2 3/4" (Consumption: approx. 110 kg/m² | 22.53 lb/sq ft **or** 22 kg/m² | 4.51 lb/sq ft)
- 3 **Drainage asphalt or drainage concrete layer** (15 cm | 6")
- 2 **Frost protection layer** (30 cm | 11 3/4") from gravel or crushed stone, grit, sand mixture E_{v2} > 120 MPa/m² | 17 405 psi
- 1 **Base/substrate**

Load class Bk 1.8 to 3.2 & special cases such as bus stations and bus stops as well as roundabouts:

Passenger car traffic including occasional heavy traffic up to 65 buses/day, eg. commercial street, main shopping street, local commercial street and heavy traffic up to 130 buses/day, eg. local access roads, commercial street, main shopping street, local commercial street.



Minimum requirement for fastenings/surface covering: Minimum nominal thickness (stone height) = 100 mm | 4"



- 6 **ROMEX® pavement jointing mortar:** depending on the application 3/4 stone height: ROMPOX® - TRAFFIC V2 Minimum joint width 8 mm | 3/8" (Consumption depending on stone format and joint dimension)
- 5 **ROMPOX® adhesion elutriant:** (Consumption: approx. 5 kg/m² | 1.02 lb/sq ft)
- 4 **ROMEX® bedding products:** a) ROMPOX® - TRASS-BED **or** b) ROMPOX® - TRASS-BED-COMPOUND* Strong bedding approx. 5–7 cm | 2"-2 3/4" (Consumption: approx. 110 kg/m² | 22.53 lb/sq ft **or** 22 kg/m² | 4.51 lb/sq ft)
- 3 **Drainage asphalt or drainage concrete layer** (15 cm | 6")
- 2 **Frost protection layer** (30 cm | 11 3/4") from gravel or crushed stone, grit, sand mixture E_{v2} > 120 MPa/m² | 17 405 psi
- 1 **Base/substrate**

* When using ROMPOX® - TRASS BED COMPOUND aggregates with grainsizes 2–5 mm, 2–8 mm, 4–8 mm or 5–8 mm (usually rolled gravel/grit), which are tested and certified by the ROMEX® laboratory before use can be used.

ROMEX® SYSTEM UNBONDED-2-PUBLIC

For the **unbonded construction** of paving and slab coverings from load class 0.3 in accordance with RStO 12. For public areas (roads, paths, squares).



Load class Bk 0.3 to 3.2 & special cases such as bus stations and bus stops as well as roundabouts:

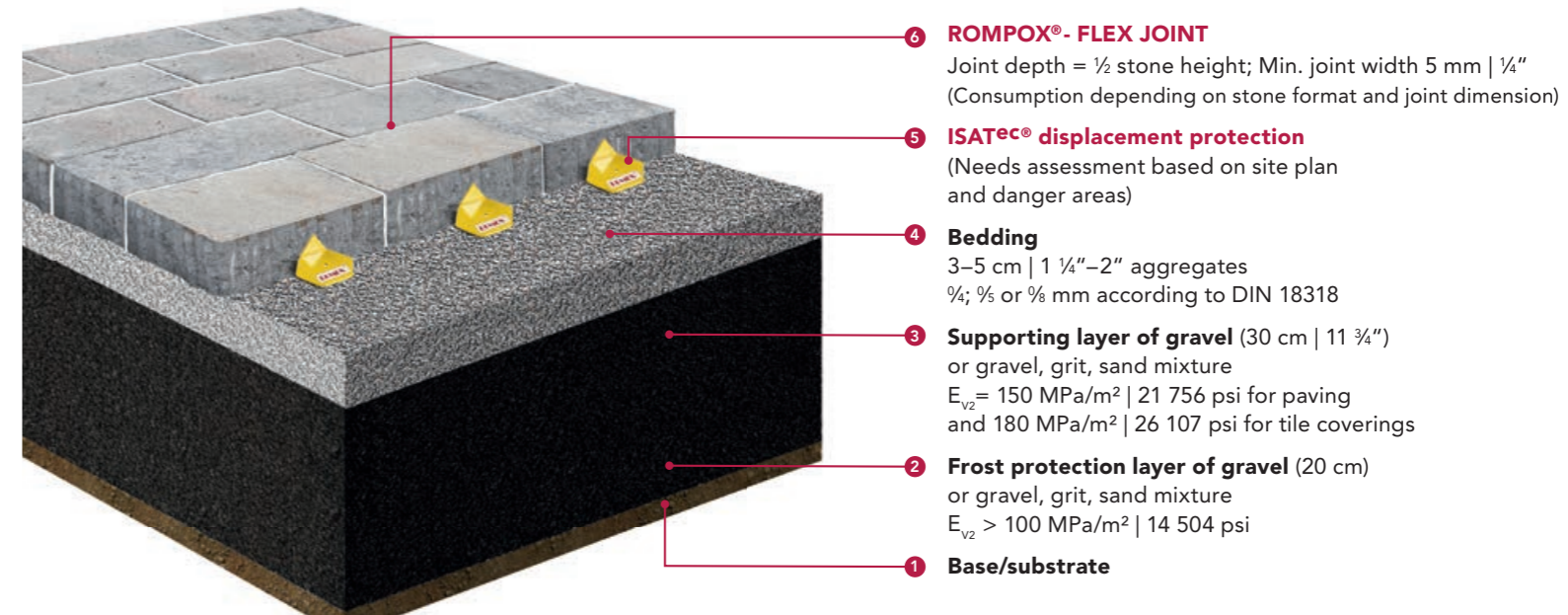
Passenger car traffic including occasional heavy traffic up to 65 buses/day, eg. commercial street, main shopping street, local business street as well as heavy traffic up to 130 buses/day, eg. local access roads.



Minimum requirement for fastenings/surface covering: Minimum nominal thickness (stone height) = 100 mm | 4"

Special cases such as bus stations and bus stops as well as roundabouts:

Minimum requirement for fastenings/surface covering: Minimum nominal thickness (stone height) = 120 mm | 5"



- 6 **ROMPOX® - FLEX JOINT** Joint depth = 1/2 stone height; Min. joint width 5 mm | 1/4" (Consumption depending on stone format and joint dimension)
- 5 **ISATec® displacement protection** (Needs assessment based on site plan and danger areas)
- 4 **Bedding** 3–5 cm | 1 1/4"-2" aggregates 3/4, 5/8 or 3/8 mm according to DIN 18318
- 3 **Supporting layer of gravel** (30 cm | 11 3/4") or gravel, grit, sand mixture E_{v2} = 150 MPa/m² | 21 756 psi for paving and 180 MPa/m² | 26 107 psi for tile coverings
- 2 **Frost protection layer of gravel** (20 cm) or gravel, grit, sand mixture E_{v2} > 100 MPa/m² | 14 504 psi
- 1 **Base/substrate**



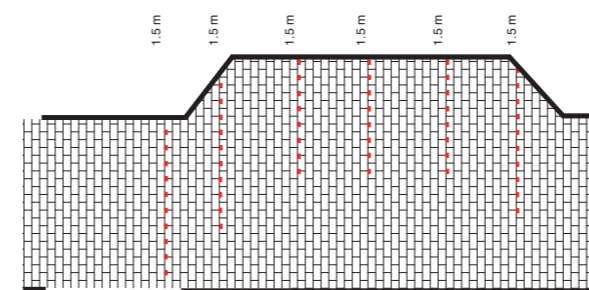
ISATec® displacement protection

ISATec® displacement protection devices are the most **cost effective** way to prevent damage caused by shifts in paving stones and thus to fulfill the "current technology R2", as described in the leaflet for surface fastenings with large formats (MFG 2013).

The ISATec® displacement protection system was awarded the innovation medal 2014 at the GaLaBau tradefair in Nuremberg.



The ISATec® products are protected by patent.



ROMEX®-Service:

Simply send us the blueprint/tender as a PDF file and our technicians will calculate where the respective anchors should be positioned and create a detailed order list.

In a few steps to the guarantee!

The **ROMEX® SYSTEM GUARANTEE (RSG)** is a real competitive advantage for every customer and at the same time means a high degree of security.



And this is how it works:

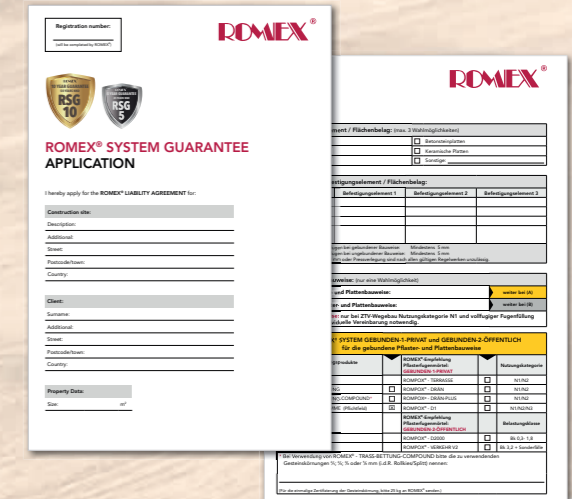
1. Applying to register the project

Request and complete the **ROMEX® SYSTEM GUARANTEE APPLICATION**.

Your ROMEX® team and contacts will be happy to help with this.

Simply send ROMEX® the completed application by e-mail to: info@romex-ag.de

Alternatively you can of course also print out the application, complete it by hand and fax us: 02225 70954-19



1

2. Registration of the project

The application will be promptly registered and checked by the ROMEX® TechService, any open questions will be clarified immediately. The registration number will be entered by ROMEX® in the application and sent signed to your e-mail address.

Registration number:

(will be completed by ROMEX®)

2

3. After completion of the project

For the guarantee to become effective and the certificate to be issued, please send the following documents and photographs to ROMEX® filled out and signed (by e-mail or post):

- Photo of completed area (If beautiful photos were taken before and during the work, you could create a project flyer with us (please contact your ROMEX® contact person).
- acceptance report
- Copies of the dealer invoice of the purchased ROMEX® products, as well as the fastenings (paving stone covering)



3

4. Sending/handing over the certificate

As soon as all conditions for the fulfillment of the guarantee are met, we will send you the guarantee certificate.



4



RSG 5 - ROMEX® bedding and jointing system was used successfully

After full project consultation in the spring of 2017, the paving work in the courtyard of the newly built Historical Museum on Frankfurt Römerberg was completed. A special feature in the planning was a weight restriction with a volume load of 19 kN/m³ due to a vaulted cellar below the paved stone surface. The proven ROMEX® bedding and grouting system was used "RSG 5" (ROMEX® 5-year system guarantee) including the products ROMPOX® - TRASS-BED and ROMPOX® - ADHESION ELUTRIANT. Grouting was done using the more than 25 years proven synthetic resin pavement jointing mortar ROMPOX® - D1 in the color basalt.

New look for the tourist hotspot

The "Canada Place" is one of the most popular places of the City of Vancouver in British Columbia. In 2016, when the owners decided to renovate the surface covering at "The North Point" the decision was made to use ROMPOX® - TRASS-BED and a resin grouting system that has the ROMEX® long-term guarantee!

Because of using the high-quality, water-permeable and trass containing paving bedding materials together with pavement jointing mortar (RSG = ROMEX® SYSTEM GUARANTEE), the safe and permanent use of the area can be 100 % guaranteed - and that despite the millions of annual visitors.



Issuance of the guarantee certificate



Use of ground anchors at the airport Berlin

Use of the Airport Plaza - also able to withstand heavy traffic.

Forecourt: Berlin-Schönefeld Airport (BER)
Large formats 1 200 mm | 47 ¼" x 600 mm |
23 ½" x 160 mm | 6 ¼"

- Concrete with high quality gravel
- Surface was sanded and blasted

The total area with access roads is about 30 000 m² | 320 000 sq ft. Safety in the bends is guaranteed by using EAP1a and EAP2a ground anchors.

Final acceptance: run of joints, laying and anchor positioning

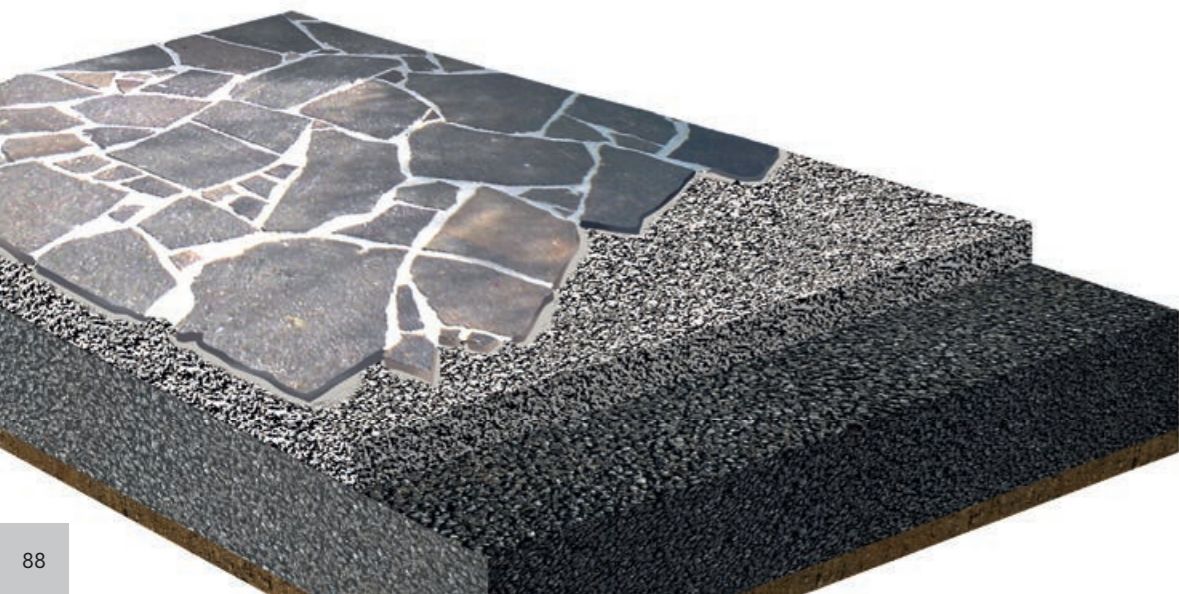


POLYGONAL SLABS

Polygonal slabs have been very popular for years. Their natural, rustic form ensures a welcoming, Mediterranean flair in the garden. The special features of irregular shapes and broken edges require special care when laying. One reason for this is the different slab thicknesses between 2–6 cm | ¾–2 ¾" and the usually conical gradient form, which means bonded laying construction with the right system is a basic requirement for a durable, stable surface. For lasting outdoor use, the polygonal slabs need to be laid on a bonded construction that is water permeable and jointed with strong jointing mortar.

As an optimal system we recommend:

- ROMPOX® - TRASS-BED-COMPOUND with ADHESION ELUTRIANT
- ROMPOX® - D1



COATED STONE SURFACES

Many concrete blocks as well as more and more natural stone coverings are factory coated. These coatings are supposed to protect the stone surface against dirt and color fading and prevent algae / moss formation. Depending on the type of coating, this can react in rare cases with some synthetic resins and lead to stains or sandy surfaces. Preliminary tests are therefore always advisable. When choosing the paving mortar, make sure it doesn't leave a synthetic resin film and that it harmonizes with the coating. We guarantee that our recommended products for coated stone coverings can be used without hesitation.

As an optimal system we recommend:

- ROMPOX® - TRASS-BED | COMPOUND with ADHESION ELUTRIANT
- ROMPOX® - EASY, ROMPOX® - POWER JOINT or ROMPOX® - PATIO
- ROMPOX® - JOINTING SAND NP (in unbonded construction)



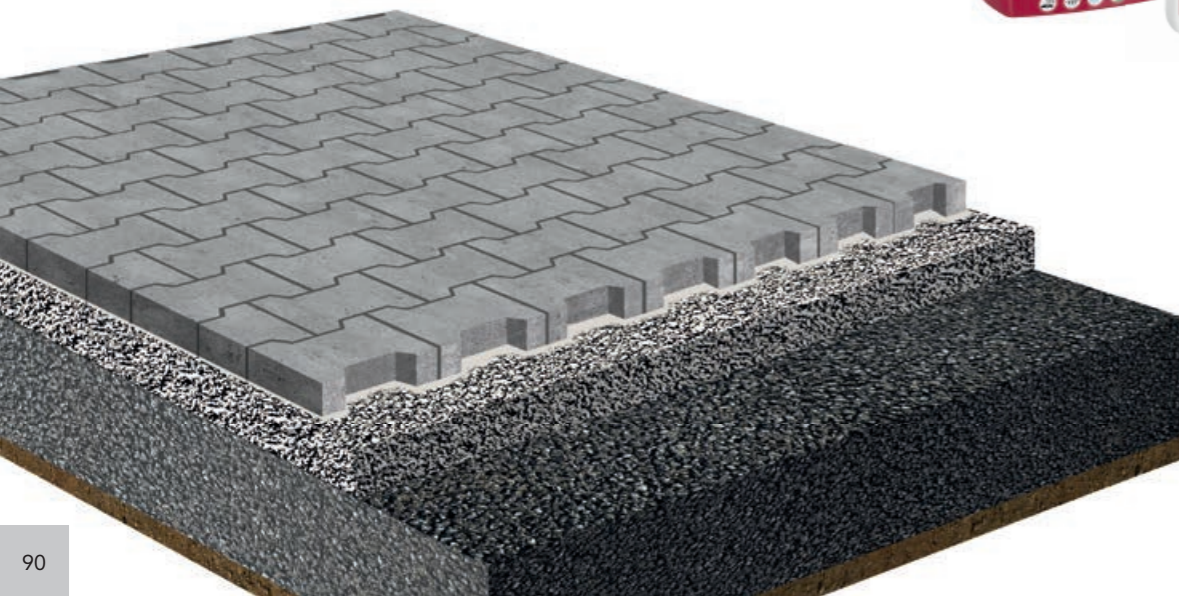


INTERLOCKING STONE PAVING STONES

Interlocking stone paving stones are often laid in unbonded form in driveways. But also on house parking spaces, garden paths and terraces you can see this sturdy, durable paving stone surface. Not least because of its timeless design. There is one disadvantage, however: The narrow joints are not ideal for use with conventional pavement jointing mortars, so that weeds often grow through the joint. To prevent this and to ensure a permanently weed-free area, there is only one efficient way which is to incorporate unbonded ROMPOX® - JOINTING SAND NP and for areas with heavy loads (drip edges, slopes) also use ROMPOX® JOINT STRENGTHENER. The combination of both products combine their respective advantages. The weed-inhibiting joint sand can already be used from 1 mm | 1/16", so that the joints are completely filled. The JOINT STRENGTHENER ensures the necessary and lasting stability.

As an optimal system we recommend:

- ROMPOX® - JOINTING SAND NP combined with ROMPOX® - JOINT STRENGTHENER



CERAMIC TILES

Ceramic tiles, tiles in natural stone or wood look and high quality natural stone coverings are fully on trend. Because ceramics are, in contrast to concrete and natural stone, colorfast, scratch resistant and less sensitive to dirt. Professional, bonded laying with the right system is the basic requirement for a durable covering that withstands all weather conditions. Because ceramic tiles are on average 2 cm | 3/4" thick, these are laid for permanent outdoor use and are water permeable. In addition movement joints should be laid.

As an optimal system we recommend:

- ROMPOX® - TRASS-BED | COMPOUND with ADHESION ELUTRIANT

ROMEX® joint sealer according to the joint width:

- For joint widths less than 3 mm | 1/8" ROMPOX® - JOINTING SAND NP combined with the ROMPOX® - JOINT STRENGTHENER
- For joint widths from 3 mm | 1/8" ROMPOX® - D1
- For joint widths over 5 mm | 1/4" ROMPOX® - EASY and ROMPOX® - PATIO





PAVEMENT JOINTING MORTAR

TECHNICAL INFORMATION

Synthetic resin based pavement jointing mortars are modern, high quality building materials. The following instructions and application tips will help to prevent damage by providing good planning and correct application.



TECHNICAL INFORMATION

Avoid damage during planning and execution

Planning is the be all and end all

The most common cause of damage of paved surfaces with loose foundation and jointing materials e.g. sand or gravel, is heavy truck, car or bus traffic as well as cleaning using aggressive street cleaning machines.

Damage such as grooves, loose upended stones and movement of the paved surface are the result. Paving joint mortars are not able to compensate for any settling of the subsoil. Contraction joints need to be laid according to the relevant construction guidelines. Any existing contraction joints in the foundation need to be incorporated into the surface to be paved. The foundation needs to be sized according to the expected traffic loads. Please take note of the construction variations as set out on this page. These can aid you during the planning and laying of long lasting paved stone surfaces. The following statement always applies: "The joint is only as strong as it's sub- and superstructure. That is why it is imperative that during planning, the correct foundation for the paved stone surface is determined. Construction variations and guidelines as well as bedding products are on the following pages."



Checking suitability of stones

Almost all types of stone are suitable (natural, concrete stone, clinker stones). In case of very rough and/ or porous stone surfaces, it should be tested, how well any residue is able to be swept off. Take a handful of wet quartz sand and put it on the stone surface. Sweep off the wet sand with a broom and this gives an indication of how well residue can be swept off.

Nowadays, many stones, especially terrace slabs, are coated, it is imperative, that before jointing is done, the manufacturer is contacted, to find out whether jointing using synthetic resin pavement jointing mortar is possible. Good preparation is vital for paved stone jointing. In order to avoid unpleasantness, both laying companies and do-it-yourself enthusiasts should take note of a few important instructions!



Preparation tips

- All application films are available on the internet at www.romex-ag.de.
- In order to work most effectively, the correct tools are required. To apply the jointing mortar, a good sponge rubber squeegee should be used.
- Especially during the the bad weather seasons, attention should be paid to weather reports, so as not to be surprised by rain. Precipitation such as dew or rain can cause the following damage, if the surface is not sufficiently protected during jointing and subsequent hardening of certain systems (DRAIN, D1, TRAFFIC V2):
 - ➔ The paving jointing mortar does not harden properly and the end strength is not achieved
 - ➔ The binding agent is washed out and the joint loses sand over time
 - ➔ Grey or white discolouration may appear on the stone surface

* Results of bad preparation (see photos)



Synthetic resin marks on surrounds



Cement residue



TECHNICAL INFORMATION

Avoid damage during planning and execution

Because you are working with natural materials, it is recommended to always use material from the same delivery / batch on each construction site. If jointing is carried out on a site after work has been interrupted for an extended period of time, then you should always lay a test surface first. Longterm, the new surface will adapt to the old surface due to weathering.

Before jointing

- For the repair of old paved surfaces, clean the gaps with compressed air or water jet (high-pressure cleaner) so that the minimum joint depth of 30 mm | 1 1/4" is reached, any residual mortar sticking to the stones needs to be removed completely. The joint width must be at least 3 mm | 1/8", in order to ensure a stable, longlasting result. For joint widths from 15 mm | 1/2", the joint depth needs to be at least double the joint width, in case of medium traffic loads, at least 2/3 of the height of the stone.
- The stone surface needs to be cleaned of all soiling such as cement residue, dust, bedding material, oil etc. as these may otherwise become sealed under the synthetic resin film. Tape-off adjacent surfaces which are not going to be jointed. Taping off the edges of the surface to be jointed, means that adjacent areas such as curbstones, curb surrounds, house walls etc. will not be at risk of being marked by the synthetic resin.

During jointing

- During application suitable protective gloves and goggles should be worn. Avoid skin contact with jointing mortar, especially the binding agent. When using in sealed rooms, ensure sufficient ventilation.
- Mortar that has already hardened should not be mixed with water or fresh mortar to try and make it usable again.



OVERVIEW OF THE MOST IMPORTANT TIPS:

- ☒ Plan with care.
- ☒ Inform yourself about the most suitable mortar.
- ☒ Be aware of the weather.
- ☒ Clean the surface before jointing.
- ☒ Tape off edge areas.
- ☒ Use suitable, clean tools.
- ☒ Take note of the application instructions.
- ☒ Take note of the safety instructions.

After jointing

- The pavement jointing mortar should be spread over the entire surface. If the mix is poured out onto one spot, in order to spread the material from there, then it is possible that dark synthetic resin marks will be left on this spot. These marks will disappear in time and through weathering.
- At higher temperatures the pavement jointing mortar will harden more quickly. At temperatures above 20 °C | 68 °F, small areas should be jointed and brushed off at a time before starting on the next area, in order to prevent hardening and sticking of mortar residue on the stone surface.
- Individual grains of sand on the stone surface will disappear during the weathering phase and through abrasion.
- If the surface needs to be protected against rain, the plastic covering sheet must not be laid directly on the surface, as this can cause grey or white discolouration. Air must be able to circulate between the surface and sheet. Fine expansion cracks in the joint or at the stone edges, can always occur; these have no negative effects on the usage properties or frost resistance of the surface. Expansion cracks do not affect walking on the surface or use of sweeping machines.





Expansion joints can be manufactured according to the ROMEX® system and the ZTV Fug-StB:

- The lower joint filling is prepared using joint tape/joint round cord/non water absorbant round foam profiles. These are fixed at 10–20 mm | $\frac{3}{8}$ – $\frac{3}{4}$ " below the stone surface.
- Onto this a permanent elastic joint grout is compacted and then levelled off.
- In order to match the expansion joints visual appearance with the overall jointing, grab „a handful“ of jointing sand, before it is mixed with the synthetic resins and sprinkle it over the compacted jointing mass. Lightly press the sprinkled sand into the joint and carefully brush off any excess. Slight, product-related color deviations will even out over time.
- Any cracks that may occur over the course of time can be repaired using the same method.

In general, connection and expansion joints should be filled using an elastic grout material according to DIN 18540. The color of the elastic grout material should be matched as far as possible to the selected ROMEX® paving mortar. For natural stones please check compatibility beforehand. Please take note of the jointing mass manufacturer's instructions.

According to DIN 52460 the jointing mass used in expansion joints should be regularly checked and renewed if necessary to avoid subsequent damage. This is not part of the guarantee.

Expansion joints in paving stone and slab coverings:



Expansion joints in areas strengthened with grit or gravel (ROMPOX® - DEKO / ROMPOX® - PROFI-DEKO):



Expansion joints

For bonded construction

Bonded construction requires expansion joints. These joints are designed to absorb temperature stresses on the surface and to reduce the amount of cracks. The emergence of cracks in the joint area as well as within fastening elements caused by thermal stresses cannot be completely avoided with expansion joints.

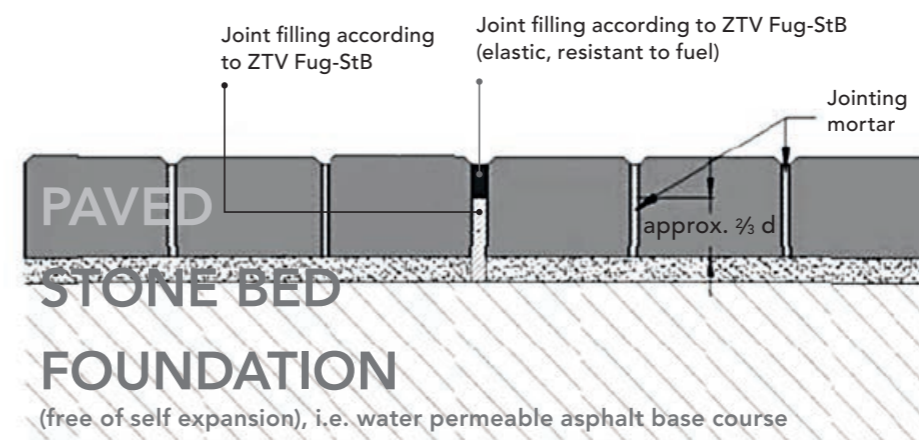
The arrangement of the expansion joints depends on the stone formats as well the geometry of the surface and usually has a distance of between 4 and 8 meters | 4.4–8.8 yd. The larger the stone formats, the less space between the expansion joints. The minimum joint width of the expansion joints is 10 mm | $\frac{3}{8}$ ".

Expansion joints from the substructure and superstructure need to be incorporated right up the joint. Regardless of the joint arrangement, expansion joints are required in all areas adjacent to buildings or towering components.

"Swiss Method":



The Swiss society for road and traffic experts (VSS) recommends in its guidelines (Swiss Norm SN-640480A "Paving") above all, to avoid incorporating movement joints into trafficked areas. If cracks appear after temperature changes, then it is recommended removing the cracked joints and to then re-install them as expansion joints.



PROFESSIONAL-TIP expansion joints:

As described above for pre-treated expansion joints, before all jointing is carried out, joint tape/joint round cord or non water absorbant round foam profiles (or similar) are laid level with the stone surface and approx. 15–20 minutes after jointing has been done, at the latest before fully hardened, removed. The joint is then immediately cleaned carefully with a fine spray and hair brush. The next day the stone edges to the left and right of the expansion joint are taped off using fabric adhesive tape and processed as described above.

Enhances and refines your stone

The synthetic resin film



Note should be taken, that after nearly all jointing using synthetic resin pavement jointing mortars, a very thin synthetic resin film remains on the stone surface and intensifies the color of the stone, resulting in a gloss effect (wet look).

Depending on the type of product used, more or less colour enhancement is given. The synthetic resin film disappears from the surface in open weather and through abrasion in the coming months.

The facts about synthetic resin film:

- Jointing leads to a natural intensifying of the stone colour.
- The synthetic resin film acts as a high quality stone surface sealant, that protects the paving stone from dirt.
- For light coloured types of stone (e.g. light, broken granite), clinker stones and items made to order, the synthetic resin film can lead to colour intensifying.

- For the jointing of large format slabs, the synthetic resin pavement jointing mortar is spread over the whole surface. This is to ensure an even synthetic resin surface appearance after the jointing is finished.
- Through uneven usage, loads or weathering, the stone surface can sometimes show discolouration in various places.
- During the weathering phase, the impression may occur, that the stones become discoloured by looking white/grey. This is due to light refractions within the synthetic resin film as it breaks up. This phenomenon can be avoided by lightly cleaning the surface or treating the stones with colour enhancing products.
- A resin film does not constitute an "application fault" and the quality of the surface is not compromised in any way.

This aspect of synthetic resin jointing of paved stones should be discussed with the client in detail before jointing is carried out.

The synthetic resin film makes the stones look wet. In order to show this effect, wet the stones beforehand to see what they will look like after jointing. In case of doubt, always lay a sample surface first, that can be used as a reference surface.

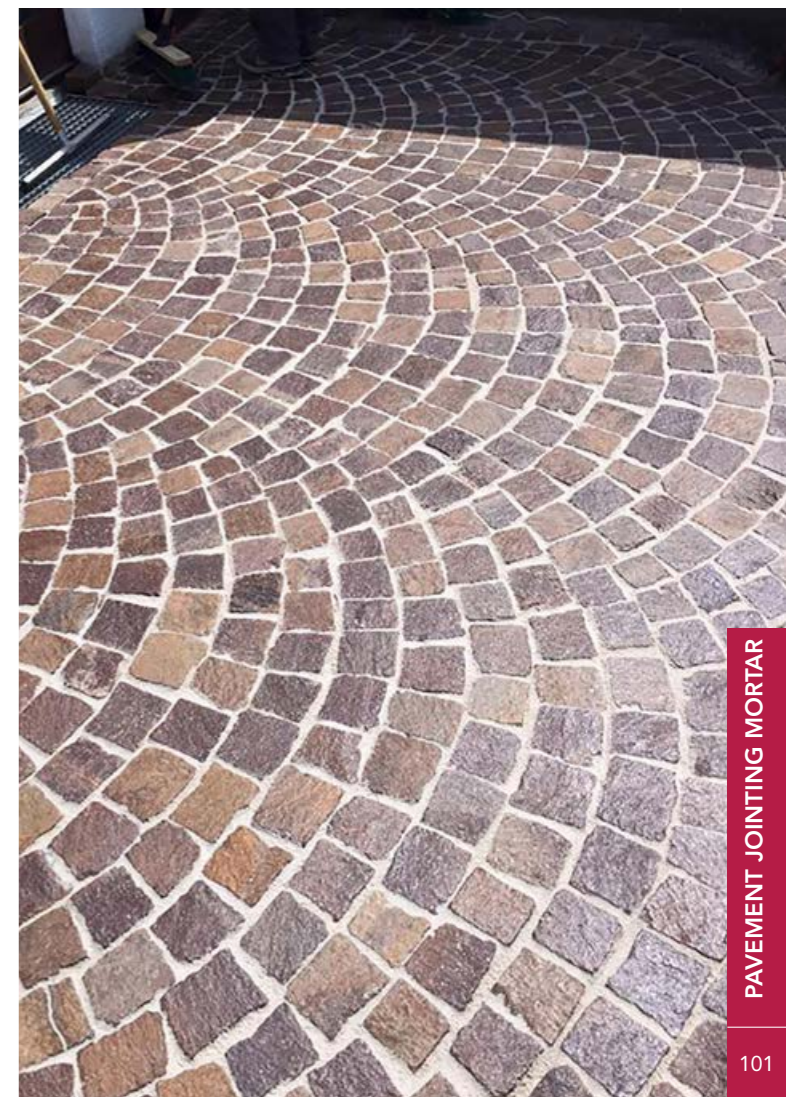
The synthetic resin film disappears through mechanical loads and weathering over time.

On heavily trafficked surfaces (roads, car parks) and public surfaces (market squares, train stations), the synthetic resin film usually disappears within a few weeks. This is due to natural weathering such as sun, rain and snow, as well as from the heavy mechanical loads and abrasion.

The disappearance of the synthetic resin film can take varying times. Surfaces that are level and that generally have heavier loads and stronger weathering effects, will lose the synthetic resin film quicker than on edges, that generally lie lower and are not affected so much by loads or weathering.

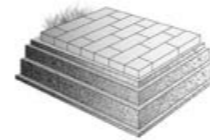
The intensity of the colour enhancement depends on the product used. The intensity of the synthetic resin film can be reduced, when pre- and subsequent wetting is carried out before jointing.

Before – after: convinces!





Basic rules for Laying of concrete stone paving stones



1. PLANUM

"Planum" describes the surface resulting from the compacted foundation or subsurface. It needs to be built so that it can take profiles, is even and load bearing. The same applies to any kind of substructure that may be built due to certain local conditions. The expertly built surface of the bed/subsurface is called the planum. Due to structural reasons, the required horizontal and lateral tilt on the paved stone surface, is carried out on all the surface layers as well as the planum. Minimum lateral tilt 2,5 %, on water sensitive floors 4 %.

2,5 or 4%



2. BASE COURSES

They must be load bearing, resistant to de-forming and sufficiently water permeable. Base courses are usually made of unbonded stones (base courses without binding agent). They should be made thick enough, able to take profiles, even and load bearing. The required slope results from the slope of the paved stone surface (minimum lateral tilt 2.5 %). The frost protection layer is also counted as a base course without binding agent.

3. CHECK DELIVERED BUILDING MATERIALS

Check delivery note against order. With concrete paving stones, check format, colour, surface and quantity. Compare delivered goods with previously agreed samples. In case of deviation, clarify situation with contractual partner/supplier before construction begins.



4. SURROUNDS

Paved stone coverings need a stable surround! The distance to the surround is determined according to the agreed upon laying width, by laying out single lines of stones before construction begins. Elements for surrounds i.e. curbstones or edging stones, should be set on a foundation made of concrete with a rear support made of concrete too. Foundation and rear support are made "fresh on fresh".

5. DRAINAGE GUTTERS

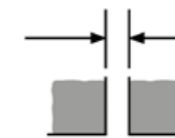
Any precipitation falling onto the surface must be able to drain away as quickly as possible. Drainage gutter should have a lateral tilt of at least 0.5 %. The elements i.e. trough stones, gutter slabs or paving stones should be laid on a concrete foundation with correct vertical and horizontal alignment and then jointed using bonded jointing material. Drainage gutters should have expansion joints.



6. PAVED STONE BED

It needs to be built of even thickness, be vertically aligned so it can take profiles. Thickness after compacting: 3 to 5 cm | 1 1/4" to 2". In general, for trafficked surfaces, the bed material should have a grainsize of at least 4 mm | 1/8". The bedding material must be filter stable with the base course material! Bedding material should be supplied mixed evenly and evenly damp and applied quickly. After smoothing, the bed must not be walked or driven on.

3-5 mm | 1/8"- 1/4"



7. LAYING

Concrete stone paving stones should be laid in the agreed upon distance and with a joint width of 3-5 mm | 1/8"- 1/4" (from 12 cm | 5" stone thickness with a joint width of 5-8 mm | 1/4"- 3/8"). Distancers between the stones, do not give the measurement of the joint width, pressing laying should be avoided. The joint axis must run evenly. Straight joints are achieved using sufficient lengths of cord, length and crosswise. To avoid concentrations of colour, the stones should be taken from several different packets. Pass stones must not be smaller than half of the starting stone and not too pointed. Additional work should be carried out with wet cutting.



8. JOINTING

Jointing is done using ROMEX® pavement jointing mortar.





TECHNICAL INFORMATION

Cleaning and maintenance

- It is recommended using algae and moss removers, impregnators and colour enhancers, which are available from DIY/building material stores. These will not damage the ROMEX® products!
- With red/brown types of stone and porphyry paving stones, there is a possibility that the stone surface becomes grey/white during the initial phase. This discolouration will disappear within a few months. This is due to light refractions within the synthetic resin film as it breaks up. In order to minimise this apparent discolouration, it is recommended using a colour enhancer, which will restore the colour intensity achieved by the synthetic resin film. Alternatively, you can use an agent for removing resin film/marks.
- Joints that have been jointed using high pressure cleaner resistant ROMEX® pavement jointing mortar, can be regularly cleaned, in order to ensure permanent water permeability –but be aware that the joints should not be cleaned using machines with more than 125 bar | 1.813 psi. Also ensure that there is a minimum distance of 30 cm | 1 ¼" between the joint and cleaner. With paving joint mortars meant only for pedestrian loads, that have less strength, a minimum distance of 40–60 cm | 15 ¾"–23 ⅝" – depending on type of high pressure cleaner used – should be ensured.

Tip: At this point, we would like to state that manufacturers of natural and in particular concrete stones, advise against cleaning using high pressure cleaners, so that the structure and colour of the stone is not negatively affected.

Cleaning of tools and disposal of packaging and mortar remains

- Tools should be cleaned immediately after use with water. Hardened pavement jointing mortar remains can be cleaned using the special cleaning agent ROMPOX® - POWERclean.
- Filler material bags can be dropped off at REPASACK acceptance points (www.interseroh.com).
- Metal buckets can be taken to scrapyards (www.stadt-branchen.de/schrottplaetze.html).
- Rinse plastic bottles with water after emptying and dispose of via dual system. More information on www.noventiz.de.
- ROMEX® packaging material can be returned to ROMEX® for disposal.



General instructions

We have no direct influence on the correct and thus successful application of our products. We can only guarantee the high quality of our products within the scope of our general terms and conditions. The instructions in our technical leaflets are based on years of experience and we advise you to the best of our knowledge. Liability cannot be taken from this. If individual cases have a more complex problem, then we would ask you to contact us immediately. We are always happy to support you in finding a solution to your problem.

Many ROMEX® pavement jointing mortars can be applied from 0 °C | 32 °F, some from 5 °C | 41 °F (pay attention to the technical data sheets). The highest temperatures for the application of synthetic resin pavement jointing mortars lies between 25 °C | 77 °F and 30 °C | 86 °F. Higher temperatures result in quicker binding and sticking of mortar residue on the stone surface. It is best to carry out jointing work in the early morning or late afternoon. More intense pre-wetting with water can cool the surface to be jointed until a temperature is reached which will allow jointing (applies only to water emulsifiable pavement jointing mortars).

Pavement jointing mortars with the "RPS-Logo" (RPS stands for ROMEX®-Protection System) can be applied during drizzle and surface protection during drizzle is not necessary.

The pavement jointing mortar is not suitable for jointing fountains. With permanent water loads, it may start to slowly disintegrate in the coming weeks and months.



Research and Development

Testing by Technical University Munich



Stability of bonded paved stone surfaces

The TU Munich Test Centre for transport infrastructure construction was given the assignment by the companies OBS, Unna and ROMEX® PFM GmbH, Euskirchen, to test the stability of bonded paved stone surfaces. For this purpose, ROMEX® constructed two different test surfaces, test surface 1 using concrete stone paving stones and test surface 2 natural stone paving stones.

It was planned to subject both test surfaces to a total of 100 000 rollovers in both rolling directions with phased increases in wheel loads of

- 5 kN | 1 124 lbf ("heavy cars"),
- 10 kN | 2 249 lbf ("small transporters"),
- 25 kN | 5 622 lbf ("light trucks") and
- 50 kN | 11 244 lbf ("heavy trucks")

In order to do this, the rolling test station was fitted with two truck tyres in order to guarantee simultaneous loads on both test surfaces.

Finally, on part of the surface laid with natural stone paving stones, a further test phase was carried out to simulate heavy, overloaded trucks (simulation of 60 kN | 13 490 lbf wheel load). The tests were carried out under constant, climatic fringe conditions, i.e. at room temperature (approx. 20 °C | 68 °F) and without precipitation.

One test surface was made of 8 cm | 3 1/8" concrete stone paving stones, the other of 12 cm | 5" natural stone paving stones. The paving stones were pre-treated with ROMPOX® - ADHESION ELUTRIANT, an adhesion bridge. The pre-treated paving stone was then laid onto 6 cm / 15 cm | 2 3/8" / 6" ROMPOX® - TRASS-BED, a specially designed, frost resistant drainage mortar by ROMEX®.

Finally, the whole surface was jointed using the modern and proven pavement jointing mortar ROMPOX® - D2000, colour neutral. With a compressive strength greater than 51 N/mm² | 7 397 lbf and a static elasticity module of 2.390 N/mm² | 346 640 psi (more flexible than cement bound pavement jointing mortar with Ø 20 000 N/mm² | 2 900 760 psi), ROMPOX® - D2000 displays much better resistance to deformation and is thus ideally suited to the jointing of heavily load bearing paved stone surfaces.

A total of 100 000 rollovers in both rolling directions, on each test surface was carried out, with phased increases in wheel loads of 5 kN | 1 124 lbf ("heavy cars"), 10 kN | 2 249 lbf ("small transporters"), 25 kN | 5 622 lbf ("light trucks") and 50 kN | 11 244 lbf ("heavy trucks").

Result:

The part surface made of concrete stone paving stones, showed no damage or significant deformation, even after completion of Phase 3 ("small transporters").

The part surface made of natural stone paving stones, showed no damage or significant deformation, even after completion of Phase 5 ("heavy trucks").

At the end of the test, the jointing of the slab surface as well as the sticking of the slabs, showed no signs of damage in the form of break-offs, unsticking, cracks etc.



All further information and the full test report can be downloaded at www.romex-ag.de

Test reports

Tested and rated good!



Frost and de-icing salt resistance

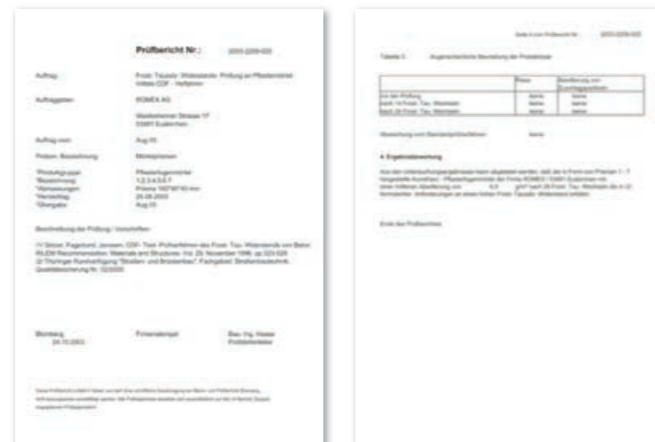
The supplied test object made of the product system ROMPOX® - DRAIN stonегrey and ROMPOX® - EASY neutral, proved to be resistant to the effects of the frost-thaw change in accordance with the test parameters as set out by the contractor and with practical relevance.

These results can be explained, by the fact that the aforementioned ROMEX® pavement jointing mortars have a composition with a high number of pores of a particular size, which not only allow high water permeability, but also allow for enough expansion when ice forms during frost. If this requirement is permanently met, then there is no reason to not use this product outdoors.



On 04.08.2004 we were given the task by ROMEX® AG, to carry out tests for frost resistance on a supplied test object ...

... as described in item 4, a 25 time frost-thaw change was carried out. At the end of the test, the jointing of the slab surface as well as the sticking of the slabs, showed no signs of damage in the form of break-offs, unsticking, cracks etc.



The results of testing have shown, that the sample prisms 1-7 made of synthetic resin pavement jointing mortar, made by ROMEX® show average weathering of 6.9 g/m² | 1.52 lb/sq ft after 28 frost-thaw changes and thus meet with the in /2/ named requirements for a high frost-de-icing salt resistance.

Safety instructions

when using synthetic resins

What does work protection look like?



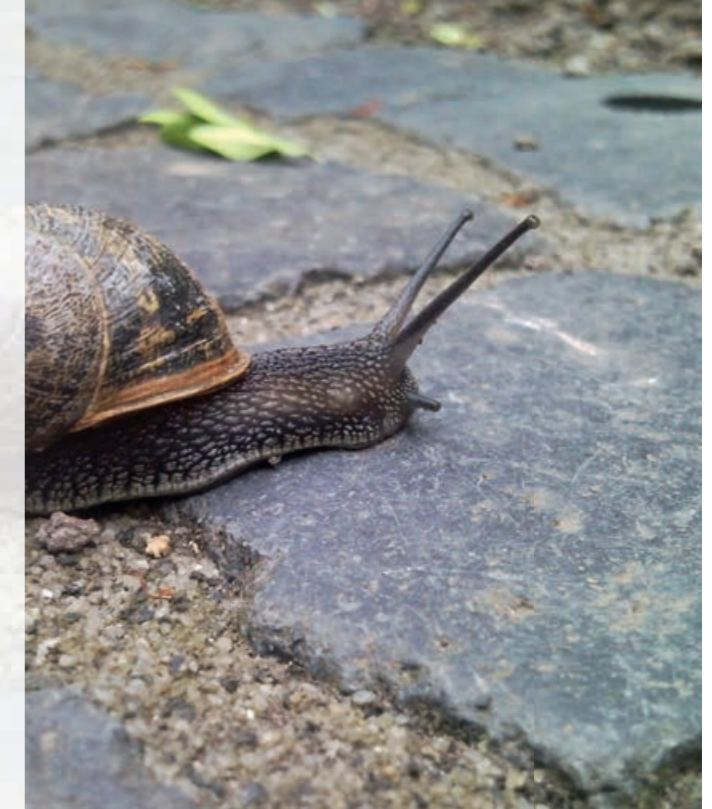
Protective gloves should be used to protect hands. When handling the protective gloves, avoid direct contact with the material. This is particularly the case when taking off the gloves. When putting gloves back on, avoid contact with the soiled surface of the gloves.



To protect the entire body, always wear clothing that is done up, whatever the weather. This includes shoes that are done up and long gloves that reach up the sleeves.



To protect the eyes, always wear tightly closing protective glasses.



Synthetic resins and health

Hardened synthetic resin systems are chemically inert building materials. Materials are described as chemically inert (latin for "inactive, detached, dull"), when they do not or only slightly react under the given conditions with possible reactive partners (i.e. air and water).

At the same time, non hardened individual components may cause physiological effects due to their reactive capability.

That is why the technical specifications and safety data sheets by ROMEX® should be heeded as well as the application guidelines by trade associations (see: <http://www.bgbau.de>).

After the reactive resin has hardened, possible risks are no longer evident as the reactive capability is no longer given. By using simple protective measures, direct contact and thus undesired physiological effects can be avoided.

European Chemical Regulation (REACH)

REACH is a European Union regulation concerning the Registration, Evaluation, Authorisation and restriction of Chemicals which came into force on 1st June 2007. All companies must guarantee safe manufacture and usage of chemical substances. The ROMEX® company group fully complies with this regulation.

The manufacturers of epoxy resin products need to reassure themselves, that their suppliers have pre-registered or registered their products accordingly, so that future products will be manufactured properly. The expanded safety data sheet needs to take into consideration the expected applications.

The information is important for evaluating possible risks to humans and the environment. The goal is safe handling of the product for the enduser.

Conclusion: When handled correctly and sticking to the recommendations and guidelines, working with epoxy resins and polyurethanes poses no risks. The products have been proven for years and have continuously been developed and are thus excellent for the jointing of paving stones. They fulfill all the requirements for hygiene and environmental protection. We do continuous research and development to ensure that application is even more reliable and simple!



ROMEX® in Project

SOLUTIONS BASED

PAVEMENT JOINTING MORTAR

The following exquisite selection of projects should illustrate the diversity of national and international first class references which are realized with ROMEX®.

Request our reference brochure for more information
or visit our website to check out more projects and inform yourself about
our portfolio and the service we offer.



55 000 m² | 65 780 sq yd of slabs and paved stones jointed with ROMPOX® - D2000 - Hungarian Parliament

Lajos-Kossuth-Square, 5th region, Budapest centre, is a historically-significant area in which the Hungarian Parliament building stands. The whole Kossuth-Square was repaired between June 2013 – March 2014 and then jointed with with ROMPOX® - D2000, a total of 55 000 m² | 65 780 sq yd.

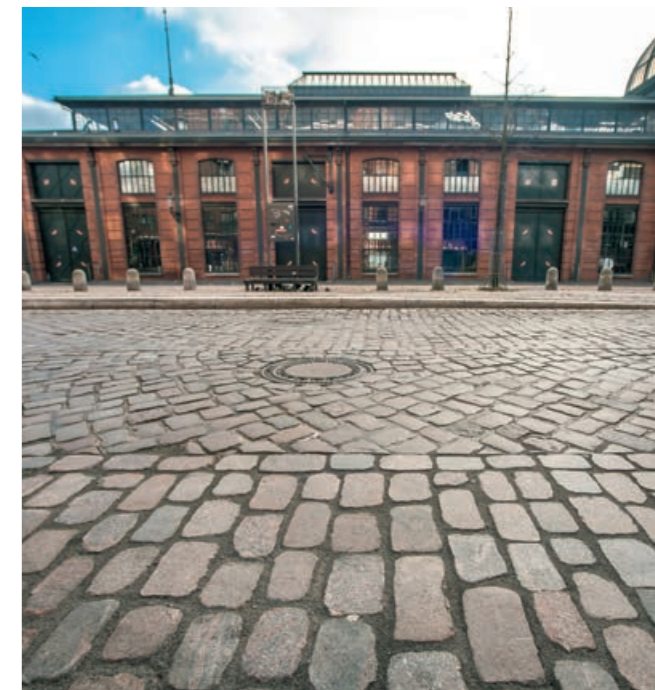


LEFT Jointing was carried out all around the platforms of the metro station

RIGHT Detailed photo of embossed stones

LEFT ABOVE
7 000 m² | 8 370 sq yd of granite paving stones with ROMPOX® - D2000 in Soest

LEFT BELOW
2 500 m² | 2 990 sq yd of high quality natural stones jointed all around the FIFA headquarter



RIGHT ABOVE
2 000 m² | 2 390 sq yd jointed in Hamburg St. Pauli and Altona using ROMPOX® - FLEX-JOINT

RIGHT BELOW
Hamburg, fish market: paving stones that are traditionally laid in sand, are subjected to extremely heavy loads, i. e. from flooding



Repair in the pedestrian zone Frankfurt using ROMPOX® - D2000

In the city centre of Frankfurt, close to the financial district and the old Opera, the paved stone surface on the "Alte Rothofstraße" and the "Große Bockenheimer Straße" was renewed and jointed using ROMEX® pavement jointing mortar.



Before – after

Frankfurt



Historic Museum: RSG5 – ROMEX® Bedding and jointing system used successfully

After thorough consulting, in the spring of 2017, paving stone work was completed in the courtyard of the newly built Historic Museum at Frankfurter Römerberg. A special feature of the planning was a weight restriction with a volume load of 19 kN/m³ | 121 lbf/ft³, due to a vaulted basement extending below the paved surface.



ABOVE
ROMPOX® - D1 jointing

BELOW
ROMPOX® - TRASS-ADHESION ELUTRIANT
being used

Frankfurt-Alt-Sachsenhausen: Repair of paved stone joints in the apple wine quarter using ROMPOX® - D2000



ROMEX® carried out joint repairs in perhaps one of the most well known parts of Frankfurt "Alt-Sachsenhausen", where there are many wells and apple wine pubs including the famous "Klappergasse". This centuries old lane was repaired using ROMPOX® - D2000, in order for it to be able to withstand the loads caused by delivery vehicles and the yearly occurring well festival and parade.



The frost-resistant drainage mortar is the perfect combination to our pavement jointing mortars. The duo with the **5 year system guarantee**.



ROMPOX® - TRASS-BED-COMPOUND

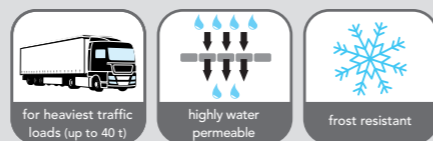
Frost resistant drainage mortar

ROMPOX® - TRASS-BED-COMPOUND is a binding agent with trass minerals for the production of a highly water permeable bedding mortar. The compound reduces efflorescence during the laying of natural stone cobbles, natural and concrete stone slabs as well as brick stones and ceramic tiles on a frost resistant base course outdoors. The compound is mixed earth-moist in the volume ratio 1:4 with filler, e.g. rolling gravel or grit. To use our system guarantee (RSG), the filler to be used can be sent to ROMEX® for a single certification.



Properties

- prevents frost damage
- lessens efflorescence
- up to 10-years system guarantee
- ready to use mixture or COMPOUND



APPLICATION

Construction site requirements: The subsurface needs to be made load bearing, firm and water permeable. Water impermeable load distribution layers (screeds), such as areas with house utility connections as well as any slab coverings that are laid, need to have a slope of at least 1,5–3,0%. Any water that gathers needs to be drained with corresponding drainage measures. In case of any watertight outdoor areas and levels where water flows and partial puddles form, it is recommended installing a suitable capillary-breaking drainage mat.

Recommended mixing ratio:

1 volume part ROMPOX® - TRASS-BED-COMPOUND Example: 10 litres | 2.6 gal
 4 volume parts filler material (i.e. rolled grit/gravel 4–8 mm) | 1/8" - 3/8" Example: 40 litres | 10.6 gal

Mixing: Mix ROMPOX® - TRASS-BED-COMPOUND in a ratio of 1:4 with filler material (i.e. rolled grit/gravel 4–8 mm | 1/8" - 3/8") so that it is earth damp, mixing time 2–3 minutes. Water requirement approx. 11 litres | 2.9 gal of cool, clean water per used 25 kg ROMPOX® - TRASS-BED-COMPOUND. To do this, mix ROMPOX® - TRASS-BED-COMPOUND with filler material and first add approx. 9 litres | 2.4 gal of water. Keep adding water to the mix until the mortar mixture is slightly shiny and can be rolled into a firm ball. Mix using a pug mill mixer or gravity mixer. For smaller amounts, mixing can be done in a wheelbarrow or mortar tub. After mixing, the mortar is ready for immediate use. Where possible, use the entire container, otherwise weigh the exact amounts needed.

Application: The thickness of the bedding mortar, should generally be 4–10 cm | 1 1/2" - 4" deep depending on expected loads (load classification / usage category) and stone. (Exception is mixed construction method for usage category N2 of ZTV path construction with a thickness of ≥ 10 cm | ≥ 4".) Lay the ready mixed bedding mortar loosely. The connection elements to be used are pre-treated with ROMPOX® - ADHESION ELUTRIANT and laid at the correct height and hammer-hard into their final position. When filling the joints, at least 3 cm | 1 1/4" joint depth from the top edge of the stone is required, in case of traffic loads at least 2/3 the height of the stone.

Subsequent treatment: After laying, protect the surface with a sheet. After 24 hours lightly spray with water and cover again for 48 hours. Until the bedding mortar has reached its full strength, the surface should not be used. In case of bad weather conditions, this may take a longer time.

Important information: After 48-72 hours, depending on weather and mortar consistency, jointing using ROMPOX® paving joint mortar can be carried out. After 7 days the surface can be walked on, after 14 days it can be driven on by vehicles up to 3,5t (private surface), after 28 days it is fully load bearing. In general all connecting elements should be treated with ROMPOX® - ADHESION ELUTRIANT before laying onto the bedding mortar.

Technical data

Application time	approx. 1 hour at 20 °C 68 °F application temperature
Application temperature	5–25 °C 41–77 °F, do not lay onto frozen ground
Material requirement	approx. 18,5 kg 40.8 lbs of ready mixed bedding mortar per cm layer thickness/m ² ▲ approx. 3,7 kg 8.2 lbs ROMPOX® - TRASS-BED-COMPOUND
Water addition	approx. 11 litres 42.9 gal of water per 25 kg 55 lbs bag/mortar mixture
Compressive strength	> 15–25 N/mm ² 2 175–3 626 psi after 28 days (dependent on filler material)
Water permeability coefficient*	≥ 14,2 x 10 ⁻⁵ m/sec 20.1 iph (dependent on filler material)
Low chromate	yes
Storage life	12 months, dry and in original sealed container



Volume



The volume (V) is the spatial content of a geometric body. The simplest method of volume determination is the so-called "leaching" method: the body is filled with sand or water, the amount of which is then determined in a known vessel; thus, the volume of their interior can be determined in vessels. In practice, fill the 25 kg bag ROMPOX® - TRASS-BED-COMPOUND into a bucket and mark the fill level with a marker. Rolled gravel / grit is then filled up to this mark and you have achieved equal volume of the materials.



All filler materials are natural products which are subject to natural colour deviations. The information printed in this brochure is based on experiential values and the current levels of knowledge in science and practice, however they are not binding and have no legal force. All previous information becomes invalid with the issue of this brochure. Images similar. Effective June 2020. We reserve the right to make changes.

* Water permeable according to "Leaflet on surfaces that allow for seepage" (MVV), Issue 2013.



ROMPOX® - ADHESION ELUTRIANT

The secure bond bridge for slab surfaces

ROMPOX® - ADHESION ELUTRIANT contains trass cement and is tempered with polymers. It is used as an adhesion bridge for the laying of natural stone cobbles, natural and concrete stone slabs as well as brick stones and ceramic tiles on bonded ROMPOX® - TRAS-BED. It provides like a kind of glue for the optimal connection between bedding and stone. As a link between stone and bedding, ROMPOX® - ADHESION ELUTRIANT is an important part of our system guarantee (RSG).



Properties

- contains trass cement
- polymer-modified
- bond bridge for the laying of natural and concrete stone slabs on bonded ROMPOX® - TRASS-BED (COMPOUND)



APPLICATION

Construction Site Requirements: The foundation needs to be prepared according to the expected traffic loads. Regulations and leaflets regarding construction of paved stone surfaces should be heeded. Future loads must not cause the surface to settle or loosen stones. Ideally, you would use ROMEX® Trass-Bed products as well as the ROMEX® SYSTEM-GUARANTEE (RSG). For optimum application it is recommended using ROMEX® application tools.

Preparation: In order to ensure optimum adhesion between the connecting element and adhesion elutriant, it should be ensured that the connecting element is thoroughly cleaned to remove dust and sawing residue, before applying adhesion elutriant. Loose particles and other dirt must be removed.

Mixing: To achieve a consistency that is plastic and can be spread, pour 8 litres | 2.1 gal of cool, clean water into a container. Then add 25 kg | 55.1 lbs of ROMPOX® - ADHESION ELUTRIANT and stir for 3 minutes. After 3 minutes of maturing time stir through again briefly. Depending on reason for use, adjust consistency by adding more water. Always use up the entire container!

Application:

1st variation:

When laying slabs, ROMPOX® - ADHESION ELUTRIANT is applied to the slightly moist slab underside with a layer thickness of approx. 3–5 mm | 1/8"– 1/4" using a broad brush/notched trowel and then hammered into the freshly laid drainage mortar. When using ROMPOX® - ADHESION ELUTRIANT, care should be taken that the product on the underside of the stone/slab does not squeeze out, as this will seal the joint in this area. To avoid this, scrape off the adhesion elutriant approx. 5 cm from the edge of the stone/slab, i.e. using a trowel.

2nd variation:

Dip the slab or cobble stone 2–3 cm | 3/4" – 1 1/4" deep into a tub of ROMPOX® - ADHESION ELUTRIANT then immediately hammer into the freshly laid drainage mortar.

Important instruction:

- Bonded paved stone and slab coverings may have cracks appear as a result of weather influence, temperature swings and traffic loads.
- Base courses/bed that have no drainage capacity may get damaged when moisture penetrates.
- Sawed stones should be roughened on the underside and stone edges before using with ROMPOX® - ADHESION ELUTRIANT.
- Paved stone work is done by hand, not using a vibratory plate or similar compacting machinery.
- Expansion joints should be laid according to relevant guidelines.
- On impermeable surfaces, measures need to be taken to drain seeping water. Standing water on the impermeable layer needs to be diverted using filter layers and slope.

Technical data

Application time	approx. 2 hours at 20 °C 68 °F
Application temperature	5–25 °C 41–77 °F do not use on frozen ground
Material consumption	25 kg 55.1 lbs = 19 litres 86 gal of fresh mortar approx. 1,3 kg 2.86 lbs per mm layer thickness/m ² For layer thickness 3–5 mm = 3,9–6,5 kg/m ² = Ø 5 kg/m ² 55.1 lbs = 5 gal of fresh mortar approx. 2.86 lbs per 1/16" layer thickness/sqft For layer thickness 1/8" – 3/16" = 0.80–1.33 lb/sqft = Ø 1.02 lb/sqft
Addition of water	approx. 8 litres 2.1 gal of water per 25 kg 55.1 lbs Elutriant
Dry density	1,5 kg/dm ³ 0,87 oz/in ³
Low in chromate	yes
Storage life	12 months, dry and in originally sealed containers

Information

It should always be avoided, that during laying of the stone/slab, the ROMPOX® - ADHESION ELUTRIANT does not „squeeze out the edges“ because this could cause the joint to become sealed in that area. To avoid this, scrape off the ADHESION ELUTRIANT about 5 cm | 2" from the edge of the stone/slab i.e. using a trowel.



All filler materials are natural products which are subject to natural colour deviations. The information printed in this brochure is based on experimental values and the current levels of knowledge in science and practice, however they are not binding and have no legal force. All previous information becomes invalid with the issue of this brochure. Images similar. Effective June 2020. We reserve the right to make changes.

Construction variations

Preparation of subsurface and jointing:

pavement jointing mortars cannot withstand settling of the subsurface. Any expansion joints present in the substructure should be incorporated into the paved stone surface. Expansion joints should be laid according to construction principles. The subsurface should be dimensioned according to the expected traffic loads and be water permeable. Valid regulations should be heeded. ZTVT, ZTVE, RStO, DIN 18318, MFP1 and TL, DNV leaflet, work paper FGSV etc.

Minimum joint depth: ≥ 30 mm | 1 1/4" with pedestrian loads, $\geq 2/3$ of the height of the stone for traffic loads.

Depending on type of paving stone, a gap remains between joint and bed. For cost reasons, this can be filled with a filter stable, water permeable, firm and shrinkage free filler material, i.e. a high quality sand-gravel mixture or if the joints are wide enough, with ROMPOX® - TRASS-BED (sweep it dry into the joints to the minimum jointing depth and then immediately clean the paved stone surface with a fine water jet spray). Alternatively, ROMEX® pavement jointing mortar can be worked into the joint completely.

Minimum joint width: 3–8 mm | 1/8"–3/8" depending on ROMEX® pavement jointing mortar. For joint widths larger than 15 mm | 1/2", the joint depth must be at least double the joint width.

Preparation of stone surface:

Before jointing, the stone surface should be cleaned thoroughly of all soiling such as dirt, oil, rubber residue or rust. Old paving stones: Remove any mortar residue on sides of stones completely.

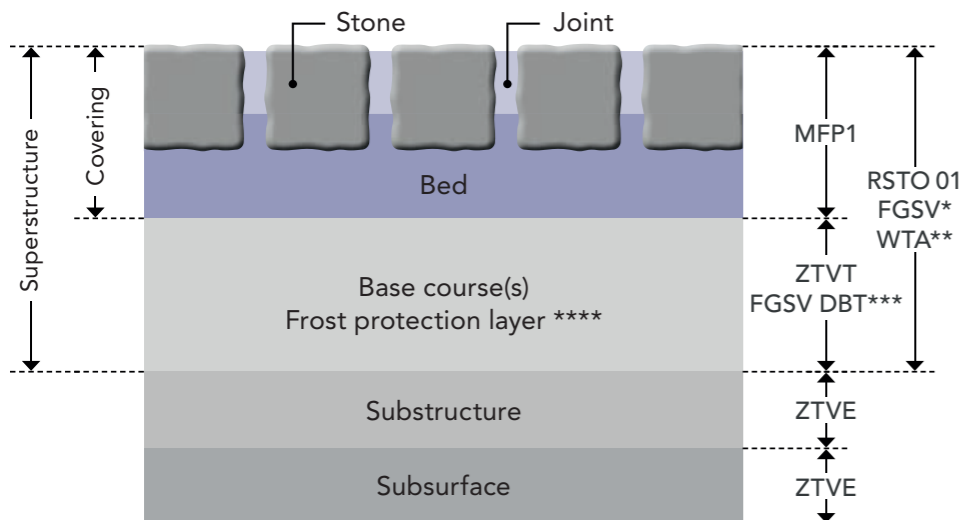
Construction variants for paving:

Basics: The joint is only as strong as it's substructure. Faults in the substructure result in breakage/ cracks, which in turn can lead to damage to intact edge surfaces when subjected to traffic loads.

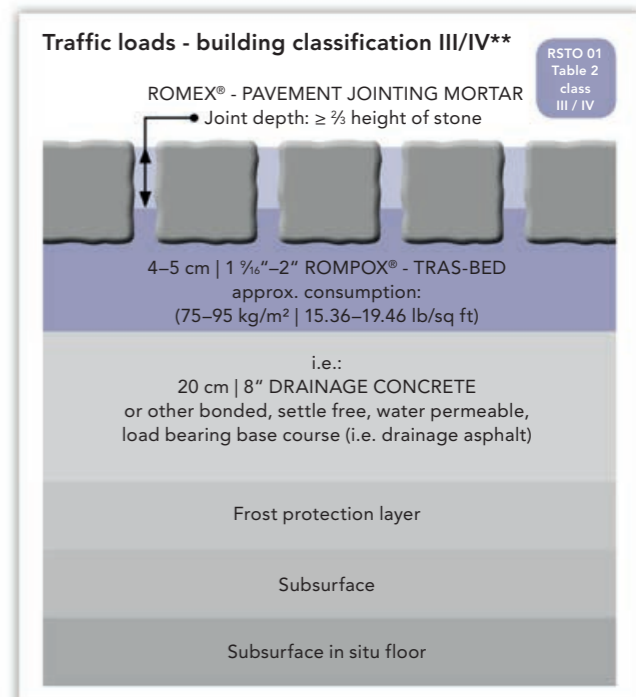
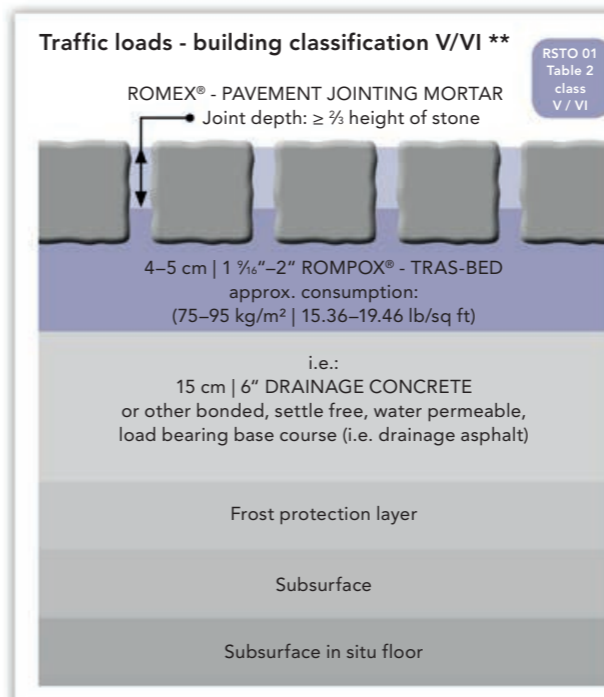
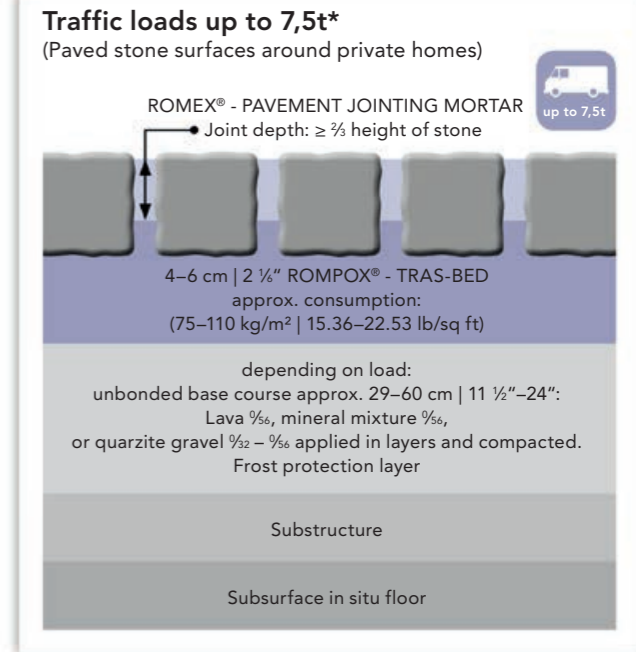
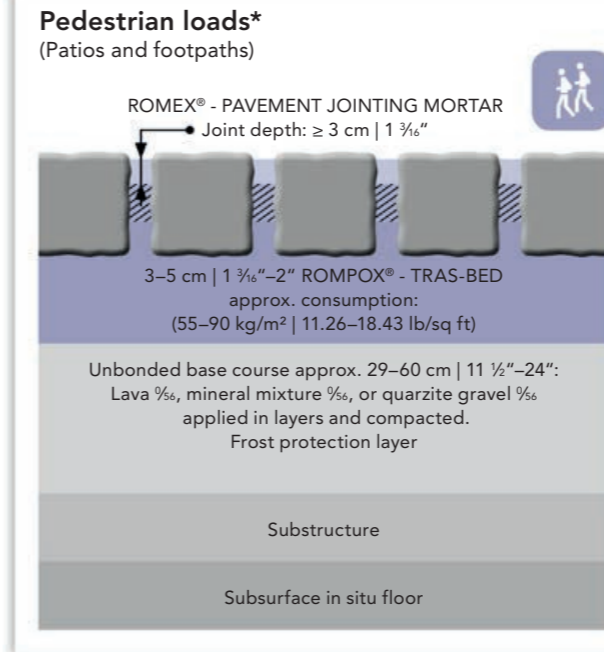
This applies in general for newbuilds:

- If the paved surface will only be subjected to pedestrian traffic, then the laying of the paving stones/slabs can be done on firm and settled gravel/sand mixtures, grain size 1/4 – 3/8". Alternatively: the use of ROMPOX® - TRASS-BED guarantees a non-settling bed.
- Paved surfaces subjected to vehicle loads, are laid on the ROMPOX® - TRASS-BED, according to the expected loads. Please take note of the following sketches.

Setup of bonded construction method



* FGSV Work paper surface fixing with paved stone coverings, bonded construction - Issue 2007 (no.: 618/2)
 ** WTA Leaflet – Bonded construction method historical paving stones (no.: E 5/21: Issue 01/2009/D)
 *** FGSV Leaflet for drainage concrete base courses Issue 1996 (no.: 827)
 **** Frost protection classifications Germany



Pedestrian loads: Depending on type of paving stone, a gap remains between joint and bed. For cost reasons, this can be filled with a filter stable, water permeable, firm and shrinkage free filler material, i.e. a high quality sand-gravel mixture or if the joints are wide enough, with ROMPOX® - TRASS-BED (sweep it dry into the joints to the minimum jointing depth and then immediately clean the paved stone surface with a fine water jet spray). Alternatively, ROMEX® pavement jointing mortar can be worked into the joint completely.

* The construction variations are based on ROMEX® experiential values and the current level of ROMEX® Technology. These contain the ROMEX® system guarantee RSG-5. Please ask us for our detailed system guarantee conditions!
 ** The construction variations are based on the current issues of the valid leaflets and guidelines for bonded construction methods. Issue 03/2010 – We reserve the right to make changes.



AUXILLIARY PRODUCTS

GRIT AND GRAVEL STRENGTHENING

Many sided. High quality.
The decorative grit and gravel strengtheners offer numerous ways of use for areas in private and public sectors.



Areas of application of our auxilliary products



Decorative surfaces

- On public spaces
- On private areas
- Tree surrounds
- Parking spaces
- Cemetary paths
- Light shafts





„Golden Tree“ on Marine Drive and Cambie Street, Vancouver, BC – Canada

ROMPOX® - DEKO ROMPOX® - PROFI-DEKO

Thanks to our research and development department, we are always able to improve conventional products and working methods in order to offer reasonable alternatives. The decorative grit and gravel strengtheners ROMPOX® - DEKO and ROMPOX® - PROFI-DEKO. They represent the modern solution for tree surrounds, walkways and representative surfaces and have replaced the classic tree surrounds made of metal thanks to their numerous advantages. In addition, these products can be used to create barrier-free surfaces. The public sector - such as footpaths - is seeing an improvement in quality in a variety of ways.



The difference: ROMPOX® - DEKO vs. ROMPOX® - PROFI-DEKO

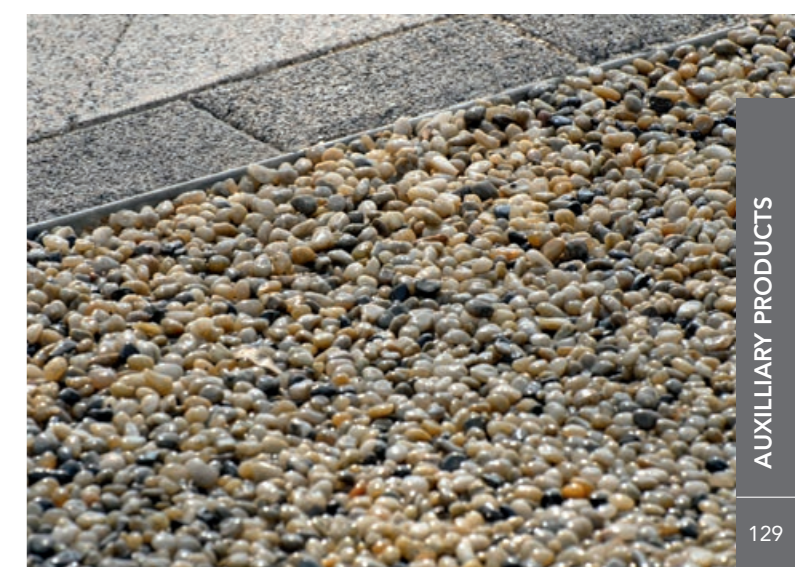
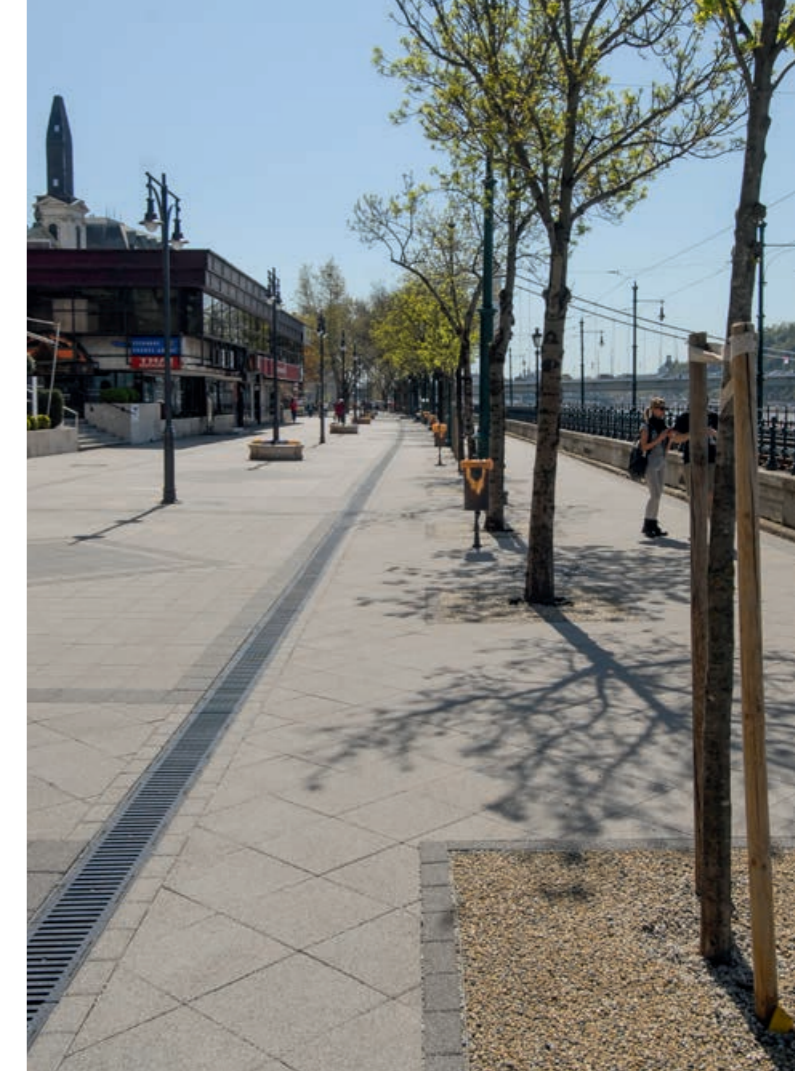
The difference between the two products already begins with the raw material base. ROMPOX® - DEKO is a 1-component PU resin, while ROMPOX® - PROFI-DEKO is a 2-component EP resin. This makes DEKO significantly more resistant to UV rays, which makes it particularly suitable for light coloured gravel and grit. PROFI-DEKO, as the term suggests, is designed for the professional user in public areas. Thanks to its strong adhesive power it is ideal for tree surrounds or footpaths subjected to permanent loads.

ROMPOX® - PROFI-DEKO vs. metal tree surrounds

The advantages are obvious: a conventional metal tree surround is expensive in material, processing and maintenance. ROMPOX® - PROFI-DEKO, on the other hand, convinces with a shorter processing time, significantly lower costs and, in principle, higher environmental friendliness. Good arguments for municipalities, where sustainability is important.

Calculation example: A conventional metal tree surround costs between 700 and 800 euros, the substructure a little more than 400 euros, the bed foundation around 600 euros. With the tree surround, expert fitting and operating costs, total costs of more than 2.700 euros are quickly reached. Fitting takes up to eight hours. The installation has to be cleaned again and again, which can lead to high maintenance costs.

The opposite is true for ROMPOX® - PROFI-DEKO, because the modern solution for tree surrounds saves time and money: the product costs approx. 55 euros per package, and in general two containers are required. In addition, there are four bags of gravel / grit of 25 kg | 55.1 lbs for a maximum of 30 euros. Expert laying costs 40 euros, the operating costs for the installation are quoted as 5 euros. Overall, the cost is 175 euros - a fraction of what the classic tree surround costs. In addition, the solution from the Euskirchen company is clean and environmentally friendly: ROMPOX® - PROFI-DEKO is water-permeable and even grows with the tree. Since it can be used flexibly, there are various possibilities of design. And since the cleaning is so easy and simple, the follow-up costs are limited.



ROMPOX® - PROFI-DEKO
400 m² | 4 305 sq ft of tree surrounds/tree pits
on the Budapest promenade Duna-korzó



ROMPOX® - DEKO

The decorative grit and gravel hardener

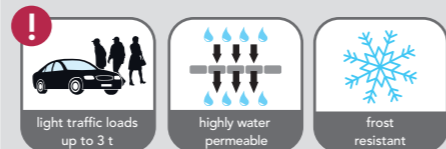
No more loose stones landing on the lawn, the patio or even in the house. With ROMPOX® - DEKO, grit and gravel can be bonded together to create a sure-footed, visually appealing surface. Whether light wells around the house, decorative surfaces, tree surrounds or garden paths, with the 1 component resin binder for washed, dried and dust-free grit / gravel all garden projects can be achieved. The light stability makes ROMPOX® - DEKO especially suitable for light stones. The surfaces are water permeable and easy to clean.



Colour examples for separately bought grit/gravel

Properties

- surface depths from 30 mm | 1 ¼"
- no offensive odour
- frost and de-icing salt resistant
- UV and water resistant
- suitable for light grit/gravel



APPLICATION

Construction site requirements: The foundation needs to be prepared according to the expected traffic loads. Superstructure and substructure must be water permeable. Regulations and leaflets regarding construction of paved stone surfaces should be heeded. Future loads must not cause the surface to settle or loosen stones. Ideally, you would use ROMEX® Trass-Bed products. For optimum application it is recommended using ROMEX® application tools.

Preparation: Prepare surface for hardening by making sure it is compact and stable to a depth of at least 30 mm | 1 ¼". Adjoining surfaces that are not to be joint-fixed are taped off. Not all grit/gravel bought from the construction trade or DIY shop is clean and dry, therefore it is important to carry out cleaning and drying before using ROMPOX® - DEKO.

Here two types of cleaning:

1. Pour gravel or grit into a concrete mixer, add enough clean water and mix well for at least 1 minute. After completing the mixing process carefully pour the cloudy water out of the mixer. Repeat the process until the emptied water is almost clear and the grit/gravel is clean. Spread the washed gravel in a thin layer on a fleece or mat and allow to dry completely (ideally under direct sunlight).

2. Fill a clean mortar trough with clean water, pour the grit/gravel into a metal basket or similar, dip the metal basket into the mortar trough, and move it up and down until the gravel is cleaned. Then let the grit/gravel dry as described above.

Mixing: See mixing ration in the consumption table !

Pour the clean and dry grit/gravel into the pug mill mixer or free fall mixer and start the mixing process. Open the tin within and pour the contents completely into the grit/gravel. In order to fully use the container content, the tin should be scraped out. Total mixing time: at least 6 minutes. Note: Store the tin in a warmer environment before use to facilitate emptying since the contents of the tin will flow more easily. Storage of the tin in a cooler environment makes emptying difficult, since the contents of the tin are then somewhat more viscous. In this case, special care must be taken to ensure that the tin is completely emptied. Basically: the more tin content is used, the better the end result.

Application: Pour the ready to use mix onto the prepared surface; if necessary, disperse it with a shovel and draw off on the same level in a coat height of at least 30 mm | 1 ¼" with a level rod. Using a mason's trowel, work it in well so it is deep and compact. Trowel surface. Good compacting is essential for a durable end product! Take care to avoid impurities by binding agent and footprints on the stone surface.

Subsequent treatment: The freshly jointed surface needs to be protected against rain for the next 12–24 hours. The rain protection layer must not be laid directly onto the paved surface, to ensure sufficient air circulation. Particularly heavy used surfaces (e.g. public tree pits) have to install with a surface depth of min. 5 cm. Immediately after the surface has hardened, ROMPOX® - DEKO is painted over the stone surface undiluted using a paintbrush or fur roller as a sealant. This ensures an even better surface strength. Consumption for subsequent sealing: approx. 200-300 ml/m² | 0.05-0.08 gal/sq ft. This process is repeated on average every 3 years.

Important notes: In case of uncertainty, a sample surface should be tested before the entire jointing is done. Washed grit/gravel must be completely dry. In connection with dampness it can lead to loss of strength!

Technical data

System	1-component PU	
Compressive strength	6.3 N/mm² 914 psi Building site value	DIN 1164 part 7
Bending tensile strength	1.75 N/mm² 254 psi Building site value	DIN 1164 part 7
Hard mortar raw density	1.65 kg/dm³ 0.95 oz/in³ Building site value	DIN 1164 part 7
Application time at 20 °C 68 °F	20–30 minutes	ROMEX®-norm 04
Application temperature	> 7 °C up to max. 30 °C > 44.6 °F up to max. 86 °F At lower temperatures slow hardening, at high temperatures quick hardening	
Re-opening of surface at 20 °C 68 °F	after 24 hours can be walked on, after 6 days fully load bearing	
Water permeability	very high permeable depending on grain size	
Storage life	12 months, frostfree, dry	

Approx. consumption per 1 m² at Ø 30 mm surface depth:
Pedestrian loads:
 1 kg ROMPOX® - DEKO + 50 kg grit/gravel grainsize of approx. 2–5 to 8–11 mm | ¼"–¼" to ¾"

Examples: Consumption binding agent grit strengthening per m²*

Material	Density	Minimum depth	Quantity of grit/gravel	Quantity of binder
2–5 mm Granite grit	1 720 kg/m³	3 cm	52 kg	1,0 kg
4–8 mm Grit	1 360 kg/m³	3 cm	41 kg	0,8 kg
8–11 mm Grit	1 420 kg/m³	3 cm	43 kg	0,9 kg
12–16 mm Round gravel	1 580 kg/m³	5 cm	79 kg	1,6 kg
16–22 mm Grit	1 480 kg/m³	7 cm	104 kg	2,1 kg
32–45 mm Round gravel	1 620 kg/m³	15 cm	243 kg	4,9 kg

Approx. consumption per 0,25 m² at Ø 50 mm surface depth:
Light traffic loads up to 3 t:
 1 kg ROMPOX® - DEKO + 25 kg grainsize of approx. 2–5 mm to 4–8 mm | ¼"–¼" to ¾"

Only with settlement-free, water permeable bedding and base course. We recommend ROMPOX® - TRASS-BED as bedding mortar. Immediately after hardening of the surface, the ROMPOX® - DEKO binding agent that was used is applied undiluted with a brush or fur roller to the stone surface to act as sealant. This process ensures an even better surface strength. Consumption for subsequent sealing: approx. 200–300 ml/m² | 0,05–0,08 gal/sq ft.

Examples: Consumption binding agent grit strengthening per m²*

Material	Density	Minimum depth	Quantity of grit/gravel	Quantity of binder
2–5 mm Granite grit	1 720 kg/m³	5 cm	86 kg	3,4 kg
4–8 mm Grit	1 360 kg/m³	5 cm	68 kg	2,7 kg



* Please note that the calculation of the weight for the grit/gravel is only an approximation. The materials used are natural building materials and are therefore subject to natural fluctuations. When compacted, the volume decreases, by what the demand/quantity increases.

Note on the surface depth: The surface should be three times as deep as the largest grain of the grit/gravel used to obtain a homogeneous and stable surface. Only washed and dry fillers are to be used.

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ROMPOX® - DEKOFIX

The easiest and self-hardening decorative gravel covering

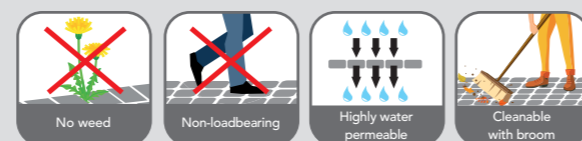
World's first: The first ready to use and pre-mixed decorative grit!
No more loose stones on adjacent surfaces, with the new decorative grit in four attractive trend colours. With ROMPOX® - DEKOFIX, lay decorative, non loadbearing decorative surfaces all around the house. There are no limits to your creativity. Ideally suited for lightwells, and spray strips, the filling of grass pavers or ground/grit grids as well as filling of joints of eco paved surfaces with at least 20 mm joint width. The surfaces are water permeable and easy to clean.



EXTREMELY QUICK PROCESSING!

Properties

- surface depths from 20 mm
- for visually attractive gravel surfaces, for light wells, spray strips, private tree surrounds, non loadbearing decorative surfaces, graves and unused surfaces
- already mixed – ready to use
- sufficient for up to 1 square meter (depending on layer thickness)



APPLICATION

Construction site requirements: The surface should be well compacted. The foundation needs to be prepared according to the expected traffic loads. Regulations and leaflets regarding construction of paved stone surfaces should be heeded. Loads that later go over the surface must not cause the surface to sink. Ideally, you would use ROMEX® Trass-Bed products. For optimum application it is recommended using ROMEX® application tools. Do not use in "permanently wet areas" (swimming pools, fountains, drains, drip edges etc.) Only use with water permeable superstructures (bed and base course) or on a slope of at least 2 %.

Preparation: Prepare surface for hardening by making sure it is compact and stable to a depth of at least 20 mm | ¾". Adjoining surfaces that are not to be joint-fixed are taped off.

Application: Open the bucket, take out vacuum bag, cut open and pour the ready to use mix onto the prepared surface; if necessary, disperse it with a shovel and draw off on the same level in a coat height of at least 20 mm | ¾" with a level rod. Using a mason's trowel, work it in well so it is deep and compact. Trowel surface. Good compacting is essential for a durable end product! Take care to avoid impurities by binding agent and footprints on the stone surface.

Subsequent treatment: The freshly jointed surface needs to be protected against rain for the next 72 hours. The rain protection layer must not be laid directly onto the paved surface, to ensure sufficient air circulation.

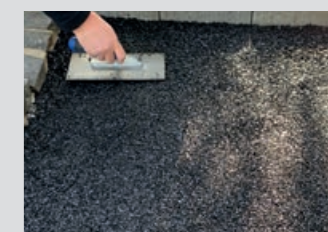
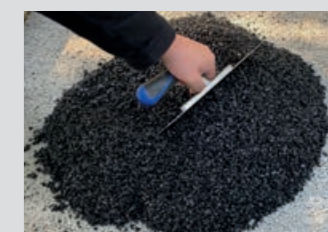
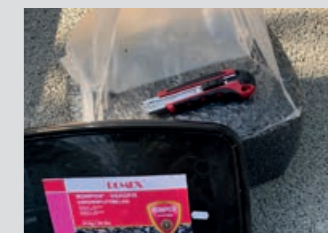
Important information: ROMPOX® - DEKOFIX has a unique odour. This will disappear after time as the product fully hardens. We thus recommend only using the product in well-ventilated areas outdoors. With application without pre-wetting, a gloss film is formed which changes the colour of the stone and protects it from dirt. This will disappear over time from weathering. In case of doubt, please lay a sample surface before commencing entire jointing. Work tools can be cleaned with a general solvent (i.e. ethanol, methylated spirits) after application. During work, it is recommended that impermeable and resistant protective gloves, tightly closed protective glasses and protective work clothing are worn. Moss, leaves and weeds that can store water should be removed from the jointed surface regularly. Due to raw materials, particular stones can come off. All filler materials are natural products which are subject to natural colour deviations.

Technical data

Hard mortar raw density	Ø 1.53 kg/dm³ 0.88 oz/in³ Building site value	DIN EN 1015, part 6
Application time at 20 °C 68 °F	20–30 minutes	
Application temperature	5 °C up to max. 30 °C 41 °F up to max. 86 °F At lower temperatures slow hardening, at high temperatures quick hardening (up to 4 weeks until completely dry)	
Re-opening of surface at 20 °C 68 °F	at least 72 hours, 14–30 days fully hardened/cured (depending on temperature and air humidity)	
Water permeability	highly water permeable	
Storage life	24 months dry, frostfree (Protect container against direct sunlight, do not stack pallets)	

1 bucket is sufficient for approx. 1 m²

Consumption: 25 kg reaches up to 1 m² with a layer thickness of approx. 2 cm



strong and durable water permeable

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ROMPOX® - PROFI-DEKO

The professional grit and gravel hardener

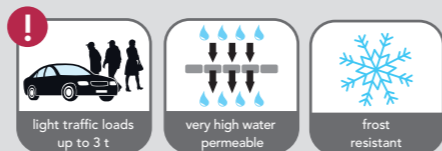
Your gravel has rolled out. Loose stones on paths or lawns does not have to be. With ROMPOX® - PROFI-DEKO, grit and gravel can be bonded together to create a sure-footed, visually appealing surface. Especially for tree surrounds, on cemetery paths or playgrounds, around benches or for decorative purposes, with the 2-component synthetic resin binder for washed, dried and dust-free grit / gravel all projects can be achieved in public areas. The surfaces are permeable to water and easy to clean.



Colour examples for separately bought grit/gravel

Properties

- surface depths from 30 mm | 1 1/4"
- ideal for pathway construction and tree pits
- for professional use
- high strength



APPLICATION

Construction site requirements: The foundation needs to be prepared according to the expected traffic loads. Superstructure and substructure must be water permeable. Regulations and leaflets regarding construction of paved stone surfaces should be heeded. Future loads must not cause the surface to settle or loosen stones. Ideally, you would use ROMEX® Trass-Bed products. For optimum application it is recommended using ROMEX® application tools.

Preparation: Prepare surface for hardening by making sure it is compact and stable to a depth of at least 30 mm | 1 1/4". Adjoining surfaces that are not to be joint-fixed are taped off. Not all grit/gravel bought from the construction trade or DIY shop is clean and dry, therefore it is important to carry out cleaning and drying before using ROMPOX® - PROFI-DEKO.

Here two types of cleaning:

1. Pour gravel or grit into a concrete mixer, add enough clean water and mix well for at least 1 minute. After completing the mixing process carefully pour the cloudy water out of the mixer. Repeat the process until the emptied water is almost clear and the grit/gravel is clean. Spread the washed gravel in a thin layer on a fleece or mat and allow to dry completely (ideally under direct sunlight).
2. Fill a clean mortar trough with clean water, pour the grit/gravel into a metal basket or similar, dip the metal basket into the mortar trough, and move it up and down until the gravel is cleaned. Then let the grit/gravel dry as described above.

Mixing: See mixing ration in the consumption table

Pour the clean and dry grit/gravel into the pug mill mixer or free fall mixer and start the mixing process. Whilst mixing, slowly add the separately packaged 3 kg | 6.6 lbs resin/hardener component completely into the mixture. Total mixing time: at least 6 minutes. Basically: the more tin content is used, the better the end result.

Professional tip: First mix the two components in a clean container for 2 minutes. Afterwards mix the binder with the grit/gravel in the forced or tumble mixer for 1 minute until all the stones are evenly wetted. Total mixing time: at least 3 minutes.

Application: Pour the ready to use mix onto the prepared surface; if necessary, disperse it with a shovel and draw off on the same level in a coat height of at least 30 mm | 1 1/4" with a level rod. Compact the mixture using a light vibratory plate or smoothing trowel and then smooth off the surface. Good compacting is essential for a durable end product! Take care to avoid impurities by binding agent and footprints on the stone surface.

Subsequent treatment: The freshly jointed surface needs to be protected against rain for the next 12–24 hours. The rain protection layer must not be laid directly onto the paved surface, to ensure sufficient air circulation. Particularly heavy used surfaces (e.g. public tree pits) have to install with a surface depth of min. 5 cm. Immediately after the surface has hardened, ROMPOX® - PROFI-DEKO is painted over the stone surface undiluted using a paintbrush or fur roller as a sealant. This ensures an even better surface strength. Consumption for subsequent sealing: approx. 200-300 ml/m² | 0.05-0.08 gal/sq ft. This process is repeated on average every 3 years.

Important notes: In case of uncertainty, a sample surface should be tested before the entire jointing is done. Washed grit/gravel must be completely dry. In connection with dampness it can lead to loss of strength!

Technical data

Test report no. 53-1607/12 CPH-13478 (Technical datas depend on used grit/gravel)		
System	2-component epoxy resin system	
Compressive strength	13.9 N/mm² 2 016 psi Building site value	DIN 18555 part 3
Bending tensile strength	4.8 N/mm² 696 psi Building site value	DIN 18555 part 3
Hard mortar raw density	1.58 kg/dm³ 0.91 oz/in³ Building site value	DIN 18555 part 3
Application time at 20 °C 68 °F	20–30 minutes	ROMEX®-norm 04
Application temperature	> 0 °C up to max. 30 °C > 32 °F up to max. 86 °F At lower temperatures slow hardening, at high temperatures quick hardening	
Re-opening of surface at 20 °C 68 °F	after 24 hours can be walked on, after 6 days fully load bearing	
Water permeability	very high permeable depending on grain size	
Storage life	24 months, frostfree, dry	

Approx. consumption per 1,5 m² at Ø 30 mm surface depth:
 Pedestrian loads: e. g. garden paths, flower beds, Spray protection strip or tree pits
 3 kg resin/hardener component ROMPOX® - PROFI-DEKO + 75 kg | 165 lbs
 (3 x 25 kg | 3 x 55.1 lbs) grit/gravel (grainsize of approx. 2–5 mm | 3/16–1/4")

Examples: Consumption binding agent grit strengthening per m²*

Material	Density	Minimum depth	Quantity of grit/gravel	Quantity of binder
2–5 mm Granite grit	1 720 kg/m³	3 cm	52 kg	2,1 kg
4–8 mm Grit	1 360 kg/m³	3 cm	41 kg	1,6 kg
8–11 mm Grit	1 420 kg/m³	3 cm	43 kg	1,7 kg
12–16 mm Round gravel	1 580 kg/m³	5 cm	79 kg	2,4 kg
16–22 mm Grit	1 480 kg/m³	7 cm	104 kg	3,1 kg
32–45 mm Round gravel	1 620 kg/m³	15 cm	243 kg	7,3 kg

Approx. consumption per 0,7 m² at Ø 50 mm surface depth:
 Light traffic loads up to 3 t: i.e. Privately used driveways or car parking spaces
 3 kg resin/hardener component ROMPOX® - PROFI-DEKO + 50 kg | 110 lbs
 grit/gravel grainsize from approx. 2–5 mm to 4–8 mm | 3/16–1/4" to 5/16–3/8"

Only with settlement-free, water permeable bedding and base course. We recommend ROMPOX® - TRASS-BED as bedding mortar. Immediately after hardening of the surface, the ROMPOX® - PROFI-DEKO binding agent that was used is applied undiluted with a brush or fur roller to the stone surface to act as sealant. This process ensures an even better surface strength. Consumption for subsequent sealing: approx. 200–300 ml/m² | 0,05–0,08 gal/sq ft.

Examples: Consumption binding agent grit strengthening per m²*

Material	Density	Minimum depth	Quantity of grit/gravel	Quantity of binder
2–5 mm Granite grit	1 720 kg/m³	5 cm	86 kg	5,2 kg
4–8 mm Grit	1 360 kg/m³	5 cm	68 kg	4,1 kg



* Please note that the calculation of the weight for the grit/gravel is only an approximation. The materials used are natural building materials and are therefore subject to natural fluctuations. When compacted, the volume decreases, by what the demand/quantity increases.

Note on the surface depth: The surface should be three times as deep as the largest grain of the grit/gravel used to obtain a homogeneous and stable surface.

Only washed and dry fillers are to be used.

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Barrier free surfaces

A subject that is dismissed far too frequently!



People with difficulty walking should be able to use public areas without outside help. The needs of these people should be taken into consideration with regard to road and pathway laws as well as in construction. Freedom from barriers is the key idea.

This means, that amongst other things, public areas should be made in such a way, that even if people have a disability, they are able to use these areas without hindrance (Law for the equality of disabled persons BBG §8 or §4 of the disabled persons equality law NRW).

By using ROMEX® grit and gravel strengthener, paths, surfaces and tree pits can be made barrier free and water permeable.

The product fulfills the requirements for de-sealing and water permeability 100 %!



Smooth with sharp edge



Smooth



AFTER



The perfect solution for tree surrounds

Save time and money!



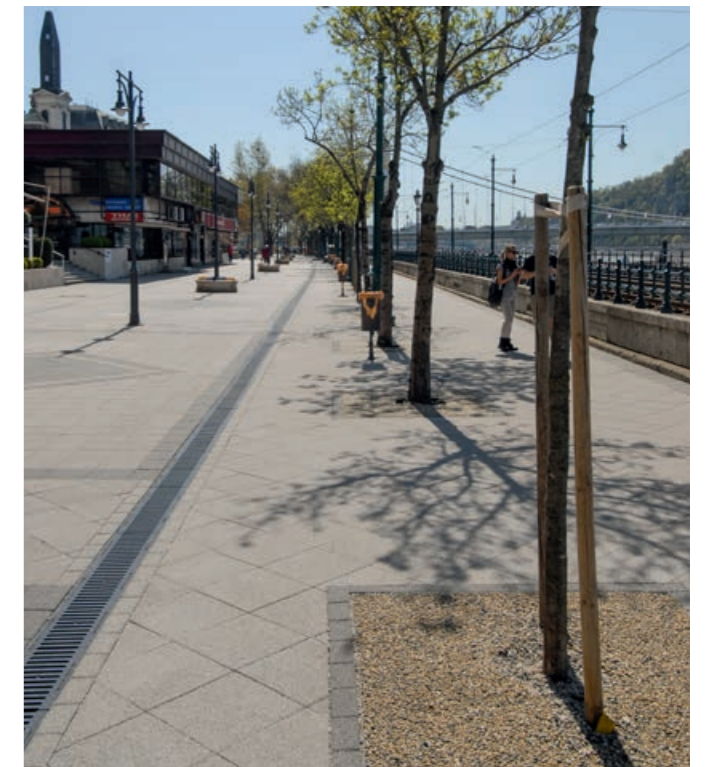
400 m² | 4 300 sq ft of tree surrounds/tree pits on the Budapest promenade Duna-korzó

A ROMEX® tree surround offers many advantages compared to the usually used metal tree grates:

- cheaper to buy
- lower subsequent costs
- easy to clean
- many design possibilities
- water permeability
- grows with the tree



When installing tree surrounds, an approx. 10 cm | 4" strip is left free around the tree trunk to avoid damage as the tree grows



Surface of around 800 m² | 2 620 ft with 92 tree pits



AUXILLIARY PRODUCTS

REPAIR MORTAR

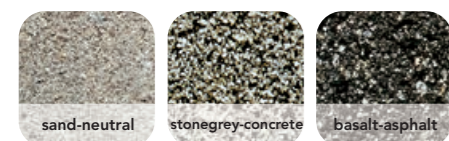
One product. Many possibilities.
Thanks to its outstanding properties, our repair mortar
can be used in many different ways, especially in public areas.



ROMPOX® - D4000 HR

The quick repair mortar

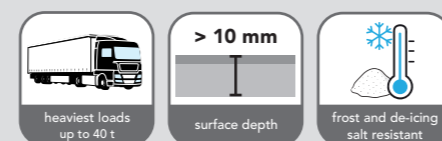
ROMPOX® - D4000 HR is a 2-component epoxy resin repair mortar. This mortar is used for friction locked crack sealing and to repair edges or broken areas. Thanks to the high reactivity of the product, the surface can be re-opened to traffic very quickly. An application temperature of up to -10 °C | 14 °F makes this product unique. Whether for road damage, holes, breakage on curbstones or around manhole covers or cracks in floor coatings: the unique repair mortar ROMPOX® - D4000 HR can be used all year round, even at minus temperatures.



WORLD FIRST!!
Can be applied
even up to -10 °C | 14 °F!

Properties

- high strength
- for friction locked pouring of cracks
- for the repair of edges/broken areas
- for treatment of shrinkholes and faulty areas
- quick re-opening to traffic
- can be applied even up to -10 °C | 14 °F
- no cement haze / residue
- water permeable



APPLICATION

Construction site requirements: The surface should be prepared according to the expected traffic loads. Loads that later go over the surface must not cause the surface to sink or loosen stones.

Preparation: Clean out joints to a depth of at least 10 mm. The surface should be load bearing, slightly rough, free of elutriants, dust and loose particles as well as free of oil, grease and other impurities that could act as separators.

If necessary: Pretreat the surface by sandblasting, shotpeening, grinding or milling. The minimum adhesion strength of the surface needs to be 1.5 N/mm² (Herion machine).

Mixing: Open the bucket, open the bottles within and pour the contents slowly and completely into the filler material component. In order to fully utilise the contents, when working during winter, the resin/hardener components should be brought up to room temperature before use. This makes it easier to empty the bottles and improves mixing. Start the mixing process. Do not add water! After 3 minutes of mixing time, pour the mortar into a clean, dry bucket and mix again for at least 3 minutes. When re-potting please ensure that any remaining resin on the bucket sides is scraped out and added to the new bucket. Total mixing time: at least 6 minutes. Use a professional whisk or concrete mixer.

Application breakage/holes: Pour the ready mixed repair mortar onto the surface and pre-distribute using a shovel or metal squeegee. Using a trowel, compact the mixture and smooth the surface. Good compacting is vital to ensure the longevity of the final product!

Application edge breakage/curbstone repair: Apply the ready mixed repair mortar using a trowel onto the area to be repaired and roughly mould to shape, then compact using a smoothing trowel and level off. Tip: use a second trowel as "moulding" to create a well compacted edge. Larger vertical areas should be encased.

Professional tip: To achieve even better edge strength, with edge chipping and very shallow areas, mix the resin / hardener components in a separate bucket for 2 minutes and then add the contents to the filler component. Mix again for at least 3 minutes. Since a residue of the resin / hardener mixture always remains in the bucket, this residual amount can be used as a primer for the faulty area. To do this, use a brush to coat the resin / hardener mixture onto the area. The repair mortar is then processed wet in wet as described above.

All tools and work shoes should be cleaned in the event of work stoppage and after application with commercially available solvents (for example, ethanol, methylated spirits). The cured product can only be removed mechanically.

Subsequent treatment: Rain protection is not necessary in case of drizzle. In case of permanent or heavy rain, the freshly jointed surface should be protected against rain for 2 hours. The rain protection layer must not be laid directly onto the surface, this is to ensure sufficient air circulation. In case of doubt, please lay a sample surface before commencing application.

Technical data

System	2-component epoxy resin repair mortar	
Compressive strength	51.2 N/mm ² 7 426 psi Building site value	DIN 1164 part 7
Bending tensile strength	19.4 N/mm ² 2 814 psi Building site value	DIN 1164 part 7
Static elasticity module	8 900 N/mm ² 1 290 836 psi Building site value	DIN 1164 part 7
Hard mortar raw density	1.73 kg/dm ³ 1.0 oz/in ³ Building site value	
Application time at 20 °C 68 °F	10–15 minutes	ROMEX®-norm 04
Application temperature	-10 °C up to max. 30 °C 14 °F up to max. 86 °F At lower temperatures slow hardening, at high temperatures quick hardening	
Re-opening of surface at 20 °C 68 °F	after 2 hours can be walked on	
Storage life	24 months, frostfree, dry	



All filler materials are natural products which are subject to natural colour deviations. The information printed in this brochure is based on experiential values and the current levels of knowledge in science and practice, however they are not binding and have no legal force. All previous information becomes invalid with the issue of this brochure. Images similar. Effective June 2020. We reserve the right to make changes.

The strongest repair mortar

The road network in Germany nowadays is already overloaded and the Federal Government's forecast does not see any improvement in the future either. On the contrary. Since most of the road surfaces in Germany are made of asphalt, a further decisive factor for road damage is the heavy traffic loads. Asphalt loses its elasticity and adhesive power over time, the material becomes weak. First, cracks appear, which then turn into potholes caused by erosion and ice formation in the cracks.

Potholes are an annoyance and at the same time a source of danger. It is logical that cities and municipalities are interested in repairing these holes as quickly and permanently as possible. Preferably during the winter when the time for such repair work is available. At minus temperatures, however, most of the materials fail during the application phase. In addition, many products crumble after a certain time, so the renovation is not permanent.



ROMEX® provides the solution for you! With our repair mortar ROMPOX® - D4000 HR, which has been developed precisely for these fields of application, potholes can be repaired quickly and permanently. Thanks to the high reactivity, the area can be re-opened to traffic within a short period of time. Application temperature of up to -10 °C makes this product unique.

But it is the many uses for this product that make it so impressive. Due to its material make up and consistency, ROMPOX® - D4000 HR can also be used to repair edges or breakouts, such as curbs, staircases, ramps. The product is used not only in outdoor areas, but also in storage and industrial halls.

Repair mortar proves itself in practice comparison

Even if we have always been convinced by the quality of our repair mortar, ROMEX® is pleased with the numerous positive feedbacks received, such as the one from the Eifel municipality of Kall: the potholes repaired with ROMPOX® - D4000 HR at the heavily frequented station are still perfectly repaired three years after completion (installation 2014).

This is not a matter of course for many competing products. Retrospect: At that time, the building authority had been looking for a permanent solution to repair road damage. In addition to the cold asphalt of a competitor known in the road construction industry, the ROMPOX® - D4000 HR repair mortar, newly launched on the market in 2013 and a world first, was also used for repairs. With great success: already at the first check after three months the very good quality was recognizable. After ten months, it was found that the conventional cold asphalt slowly crumbled, but the ROMEX® repair mortar showed no signs of damage. And today, after almost three years, it is clear: the material has proved its worth. Not least because of its stability and longevity it does not cause any subsequent costs.

Scepticism removed by quality

At first they were rather suspicious. "We were sceptical at first whether this special repair mortar ROMEX® would hold" Manager of civil engineering Helmut Murk says. However, after a recent site visit, Murk is full of praise: „Yes, the ROMEX® mortar has held, so well in fact that we can hardly believe it ourselves. "On the other hand, the competitor's product fared particularly badly: The cold asphalt used in the same area has broken down again by more than 80 percent, after not even a year."

ROMPOX® - D4000 HR can also be applied at -10 °C

In addition to the longevity of ROMEX® repair mortar, it is the second highlight, which also impressed the municipality of Kall: the substance can be applied even at temperatures of up to -10 degrees. This means that it can be used to repair road damage and potholes all year round. Since the market launch of the new ROMPOX® - D4000 HR in the winter 2013/2014, more than 200 municipalities in Germany and Austria, as well as industrial operators for in-house repairs, have been convinced of the quality of the product and have been using it regularly since then.

Application examples ROMPOX® - D4000 HR



Repair of road damage



Filling of holes and damage



Repair of curbstones

Thanks to the numerous possibilities of use, but above all by its longevity, our repair mortar ROMPOX® - D4000 HR is a cost-effective solution for building yards and road maintenance companies for the maintenance of roads, sidewalks, curbs and other damaged areas.



Permanent bridge repair using the quick repair mortar ROMPOX® - D4000 HR

Autumn 2014, concrete repairs using the repair mortar ROMPOX® - D4000 HR were carried out on a footbridge in Bad Münstereifel. The high strength mortar is ideal for repairing edges and damaged areas such as potholes. Even at low temperatures of up to -10°C | 14°F and during drizzle, the mortar can be applied without difficulty. The surface can be re-opened within a short time thanks to quick hardening of the repair mortar.



Before: potholes on the bridge



Repair of steps using ROMPOX® - D4000 HR

An old staircase made of concrete steps could no longer be used because of risk of accident due to damaged concrete. Old people in particular were no longer able to use the steps. The town had to close down the steps, as until that time, there hadn't been a solution for the permanent repair of the steps. Using the multifunctional repair mortar ROMPOX® - D4000 HR, the steps were repaired quickly and permanently. Holes and breakages were repaired so that the steps are now fit for purpose and can be used again.

Repair of potholes using ROMPOX® - D4000 HR



The high strength 2 component epoxy resin mortar is suitable for heaviest traffic loads and is ideal for repairing edges and broken areas. The repair mortar has a short application time and hardens quickly, even in drizzle, so that quick re-opening to traffic is possible.



DISPLACEMENT PROTECTION

An **innovative** joint seal, combined with **displacement protection**, combines **state-of-the-art** road construction technology.

Shear forces on the slab surface



Problem: Shift/displacement



Solution: Security by ISAT^{ec}

Displacement/Shifts

Large format slabs and pavers are subject to enormous loads due to the driving dynamics of heavy trucks and buses as well as other technical vehicles. Due to the construction of the superstructure and according to the expected traffic loads, constructive installation according to RStO 12 was selected by the planning office. This significantly reduces the risk of breakage of large-format elements. In recent years, many new insights have been gained so that today's planning offices have a lot of experience. Observations showed that the increasing traffic load on our squares, streets and pedestrian zones had caused serious shifts.

Today's planning offers a wide range of possibilities for the prevention of shifts due to ground anchoring systems. This permanently fixes the slabs in the bracing. Various ground anchors have already been tested by manufacturers. The ground anchors used today can specifically protect different bracings. As documented in the picture, even herring-bone bracings can be secured onto a bonded base course by means of ground anchors. These anchors can also be used in an unbonded version if slightly modified.

The resulting damage situation



Experience and craftsmanship

Despite the extensive scientific and technical documentation for road construction, the manual implementation with this building material by trained craftsmen is one of the most important factors. Unfortunately, it is often observed on construction sites that, for example, unskilled or semi-skilled laying personnel are used.

There is therefore a risk that the required standards will not be observed and will not be implemented in accordance with regulations. This then usually leads to damage such as:

- Forcing to fit
- Wrong bracing
- Too thick bedding
- Filter stability / bedding / grouting material
- Too low slope, modulus of elasticity, etc.

Tyre ruts, displaced paving stones and waterlogging are just the "tip of the iceberg" with regard to the type of damage that can occur.

The principle therefore applies: craftsmanship and the implementation of the specifications from the regulations guarantee long-term and lasting functionality of the construction.



Always the right anchor

Technical possibilities for use of displacement protection device

When planning, the expected loads must be correctly estimated from the outset. This does not only depend on the corresponding axle transitions, but at the same time, the trailing curves of the vehicles should be considered. This means that the movement sequence on the planned surface should be simulated and adjusted. This makes it clear which motion profiles the vehicles generate on the surface.

In order to prevent the slabs from breaking and moving, the bracing, slab thickness and superstructure were selected and executed accordingly. In practice, however, temporary overloads may occasionally occur during the later period of use. In order to be able to better deal with this problem in the future, the FGSV (research company for road and transport) Cologne, has looked into this more closely. The FGSV published the leaflet MFG on 16.01.2014. There are references for the planning and execution of large formats made of concrete and natural stone, as well as solutions for the prevention of displacements.

First of all, it is important that large format slabs with a sufficient height (thickness) be used. The thicker a slab, the larger the lateral frictional surfaces of the elements. In our projects, there are always areas that are subject to particularly severe loads.

These include in particular:

- Turning points
- Slopes
- Stop areas
- Driveways
- Exits

Berlin: Kulturforum



Bus stops need special protection

Unbonded surface coverings made with large format pavers and slabs at bus stops, need special protection. Due to the constant start-up and braking of traffic in these areas, displacements can hardly be prevented. In the picture on the left a new bus stop has been created. During the construction phase, the planning office realised displacement protection had not been taken into account. This would inevitably have led to displacements happening. Thanks to the construction company carrying out the work, ground anchors were able to be fitted at the last minute. This turned out to be relatively easy to do, as the stones only had to be pulled up. This process was repeated for the entire bus stop at a distance of approx. 1 m | 3.3 ft. The edge areas received an additional anchor row. The bus stop was completely secured with approx. 250 ground anchors. This meant that in accord with regulations, additional measures had been incorporated to prevent shifts/displacement. Normally, this kind of planning should have taken this into consideration in advance and then given the construction company exact instruction on where to place the anchor rows. When planning bus stops, it is possible that certain circular segments are laid, which will require different types of anchor.

It is quite common, that when securing such risk areas, different types of anchor are used. The expected drag curves play a decisive role in this. The horizontal forces must be determined by means of a drag curve simulation calculation. This will show the exact positions of the ground anchors to be used. The ground anchors that are used will also prevent pressing of the joint material.





Cross joint connections

Especially when cross joint connections are used, the protection should be placed at the drag curves of heavy vehicles. With cross joints, the connection cannot support itself. As well as protecting the connection, the ground anchors have the task, to protect all elements used in the installation. First, the drag curve must be simulated, in the mainstream of the drag curves, anchor protection should be planned and used. The most common risk areas will already be getting anchor protection to prevent possible displacement. The EEAP for cross joint connections is particularly suitable. In combination with the EAK, in cross joint areas and turning curves, additional torsion forces can be absorbed. Turning round can thus be prevented.

Running connections

Running connections are probably the most common connections used in innercity areas. These connections are relatively easy to calculate in advance without the need for cutting. Attention: When using a mixture of connections using different slab formats (including square slabs), then the actual measurements with regard to the laying width need to be calculated. The various rows need identical grid measurements, so that additional cutting can be avoided. When using many different types of slabs, various tolerance limits occur. The laying rows should be laid out in advance and checked.

Slab surfaces with SV concrete and cross-joint bracing, is secured with anchor type EEAP. Two surface mounted large format slabs rest on the anchor and secure the stability.



Protection of installations

If the bracing includes technical devices such as:

- Hydrants
- Light masts
- Sliders
- Gutters
- Shafts and the like

then some anchor rows should be set immediately before these. As a result, in the case of strong thrust forces, the thrust force is intercepted beforehand, and damage to the devices can thus be avoided. This is particularly important in these areas since the large formats have generally been weakened by segmental cuts. Should these areas become overloaded by shear forces, they would break here, which would cause damage.



Innovative jointing

We offer stability

Strong team: ISATec® displacement protection and ROMPOX® - FLEX JOINT

Innovative jointing combined with modern displacement protection brings together modern road construction technology.

The valid rules of road construction, RStO 12 and MFG of FGSV, point to areas of application in the public sector. With increasing traffic loads, shear and torsional forces also increase. In addition to undesired shifts in the upper region, the joints are also at risk of breaking out. Due to the jointing material breaking away, the entire system becomes weakened, at the same time increasing the risk of displacement. Much of the lateral friction forces are lacking as resistance to the occurring shear forces.

Due to the curved down tailpipes of buses and trucks, the upper region of the joint is at risk of being blown out. High powered street sweepers exacerbate this process. Additional ground anchors should be installed in these areas combined with solid joints. It is the combination of both security measures that brings the perfect protection. Missing jointing material weakens the bracing and displacements start to happen. The optimum would be an elastic joint, as this has significant advantages compared to a Hydraulically-bound design. The built-in anchor technology ensures the surface coverings do not come under pressure loads.

The MFG leaflet provides information on covered surfaces (i.e. drop off areas, hotel entryways, company entrances, buildings with overhang): "[...] Covered joint areas are not subject to weathering and can not harden properly, in these cases, special measures need to be taken."



The optimum solution for jointing is ROMPOX® - FLEX JOINT

The pavement jointing mortar ROMPOX® - FLEX-JOINT has the optimum functional characteristics. With unbonded designs (elastic construction), it allows the movements of the surface covering to be dispersed without damaging the joint. Thanks to strong adhesion, breaking edges can be avoided. Hairline cracks may occur along the bonded end connections, but this does not affect functionality. Filling with flexible joint mortar should be at least 3–4 cm | 1 ¼"–1 ½" ideally 2/3 of the stone height of the upper area of the joint. The minimum joint width is 5 mm | ¼". In order to ensure a smooth joint line, a jointing iron should be used. The bedding and jointing material should consist of a mineral mixture of 2/3 crushed sand-gravel mixture (hard rock). It should be certified and comply with valid norms.

Differing grading curves should be discussed and confirmed with the building contractors.



Technical specifications of ROMPOX® - FLEX JOINT

- Max expansion: 9.26 %
- Deflection at the ultimate load: 12.6 mm | 0.496"
- Hard mortar raw density: 1.34 kg/dm³ | 0.77 oz/in³
- Water permeability: 16.29 × 10⁻⁵ m/s | 23.1 iph
- Tensile strength: 0.295 N/mm² | 43 psi

Advantages of jointing with ROMPOX® - FLEX JOINT

- is not washed away
- does not break out
- no weed growth

Pedestrian zones

These require regular intense cleaning. This means several centimeters of valuable joint material can quickly be lost.

The culprits here are often the highly absorbent streetsweepers. This then leads to just dirt and cigarette butts filling the empty joints. Apart from looking dirty, the covering system is weakened. The elastic joint with its elastic design, is the ideal jointing method to ensure protected joints. The pedestrian zone now has a long term and permanent visually attractive surface.





ROMEX® in Project

GROUND BREAKING

DISPLACEMENT PROTECTION

This selection of projects, shows a sustainable use of innovative products in roadworks, which are realized with ROMEX®.

Request our reference brochure for more information or visit our website to check out more projects and inform yourself about our portfolio and the service we offer.



Mannheim, Augustaanlage

The ‚Augustaanlage‘ is developed as an avenue and four-lane street in Mannheim which connects as a main axis to Mannheim’s city centre as the federal highway 37. Due to the passing of approx. 40 000 vehicles per day, the surface is exposed to enormous loads. Because this area has higher expected loads than normal due to emergency vehicles and fire engines, displacement of paving stones can happen. To help prevent displacement, each third row had displacement protection anchors installed. A total of 600 ISATeC® displacement protection anchors were used to secure the ‚Augustaanlage‘.

FACTS

Location: Mannheim, Augustaanlage
 Product: EAP1a
 Number of pieces: 600



FACTS

Location: Berlin, Airport Brandenburg (BER)
 Product: EAP1a, EAP2a
 Number of pieces: 10 000

Airport Berlin

Berlin Brandenburg Airport “Willy Brandt” (BER) is a building under construction since 2006, located on the southern side of the city limits of Berlin in Brandenburg Schönefeld’s international airport.

Because of the many problems with construction work within the buildings and terminals, they are still not completed, but the outdoor area has already had its final inspection and been accepted without defects. In total about 10 000 displacement protection devices were installed on the almost 60 000 m² outdoor area in bus lanes, end loading areas as well as fire roads built in order to protect the large-sized concrete slabs (dimensions: 62.5 × 41.5 × 16 cm | 24 ¾ × 16 ¼ × 6 ¼") against shifting.





We offer [tailor-made solutions](#) for your needs. Our experience means your success.

Always a suitable system



Our credo: Success requires reliable partnerships. We know that, too. That's why we take care that our partners are compatible and act internationally in the field of floor coatings and paving mortar with personal contact and competent advice. As part of our partner concept, we work closely with trained people and certified laying companies.

Specifically: We have the right contractor for your project who will submit you an offer with our high quality systems. As responsible material manufacturer, we not only advise, but remain your constant contact for all concerns about the project.

Areas of application of our floor coatings

ROMEX® grew up in the contract business. For over 25 years we have been involved in the realization of construction projects worldwide. Since every project is unique, we accompany our customers and prospects from the beginning with individual care and support. For the best possible realization of your project we offer tailor-made system solutions and support the project to the final acceptance, so that in the end all parties involved are satisfied: architect, planner, builder and the contractor. Because our experience is your success.





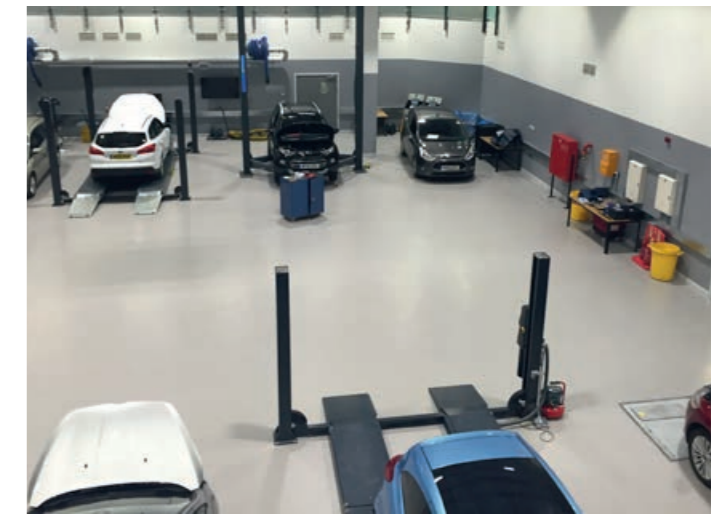
Floor coatings for the automobile industry

Systems tailored to the needs of automobile manufacturers and suppliers

The requirements for a floor coating for the automobile industry are many sided. Depending on the work or production area, there are a variety of requirements for the floor. The coating in the Press Shop is different to the one in the Paint Shop, the wind tunnel needs a different coating compared to the warehouse. Whereas on a concrete floor, a standard floor coating can be applied, with a steel floor, elastic coating must be used. ROMEX® offers tailor-made solutions for all areas of your business.

Properties

- Mechanically highly load bearing
- Very high abrasion strength
- Chemically resistant
- For highly visually attractive requirements
- WHG system is possible (§ 19 WHG)
- Can be made smooth or nonslip
- Elastified, can be made to bridge cracks
- Easy to clean
- Smooth, glossy or matt surfaces
- Can be made electrostatically conductive (ESD)
- Can be made as a structured coating (thix/studded/orange peel structure)





Floor coatings for the electronics industry, IT

Conductive systems for the electronics industry

During the manufacture of electronic components, voltage damage often occurs. This is caused by unregulated electrostatic discharge. Thanks to the ESD coating especially developed for this purpose, regulated voltage can be guaranteed. This electrostatically conductive floor coating ensures that the required leak resistor and all other DIN requirements are met at all layer thicknesses. We are happy to offer individual consultation.

Properties

- Electrically conductive (EA & ESD)
- Various layer thicknesses are possible
- Just one abrasion layer
- Homogenous and shiny surface
- Mechanically load bearing
- Highly abrasion resistant
- High compressive strength
- Chemically load bearing
- Viscous elastic
- Joint free
- Solvent free



 **HÖRMANN**
RAWEMA



 **BOSCH**

SIEMENS



Industrial floor coating in the chemical industry, clinics, laboratories and clean rooms

Elastic and conductive systems for the chemical industry

The clinics, pharmaceutical industry and medical technology (clean room, chemistry, pharma, clinic, laboratory) are among the most sensitive areas in the creation of high-quality services and products. The right floor in clean rooms is crucial to the whole quality standard and therefore must meet the highest standards of protection of persons and products. Clean room coatings are joint free, abrasion resistant and dust free. This makes the floor coating hygienically and microbacterially sound, because there are no areas liable to contamination such as when there are joints. The ROMEX® clean room coatings for floors, but also walls and ceilings, keep the dust particle contamination below the required maximum values - whether dust-free, hygienic, chemical (highly) resistant, electrically conductive, physiologically sound, easy to clean and tested by the health committee for the evaluation of construction products (in short: AgBB).

Properties

- Dustfree
- Hygienic
- Easy to clean (can be decontaminated)
- Chemically resistant
- Mechanically highly load bearing
- Boat formation and jointfree
- Watertight
- Bridges cracks
- Thermically highly load bearing
- Can be made electrostatically conductive (ESD)
- High abrasion strength
- For clean rooms acc. to 14644





Floor coatings for the food and drinks industry

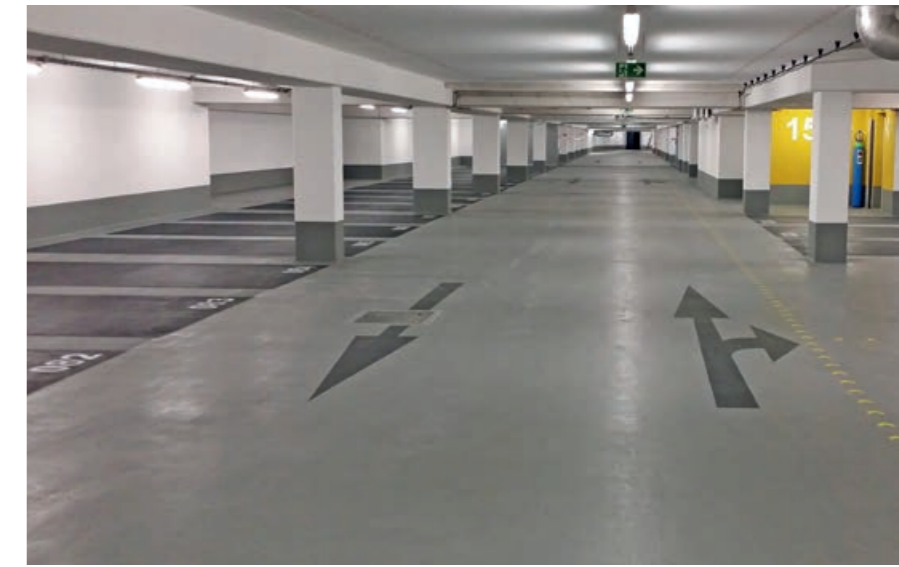
Chemically resistant and open to steam diffusion systems for the food industry

The correct floor in the food and drinks industry is vital for the entire quality standard of a company and their products. Work and hygiene safety need to take priority. Untreated concrete floors, screeds or joints between tiles, do not offer the best protection, because bacteria, fungus and other germs can take hold here and thus become dangerous to the hygiene in the company. ROMEX® offers individual, coating systems for all areas, tailored perfectly to the needs of the user.

Properties

- Is in accord with all European Community hygiene regulations
- Chemically resistant against lactic acid, salt, preservatives and cleaning agents
- Resistant to high mechanical loads
- Resistant to high thermal loads
- Has a boat shape form and is joint free
- Water tight
- Nonslip according to German trade cooperative association guidelines and DIN 51 130
- After hardening, ROMEX® products are free of volatile organic compounds (VOC) and thus do not affect production or products in any form





Coatings for car parks and underground car parks

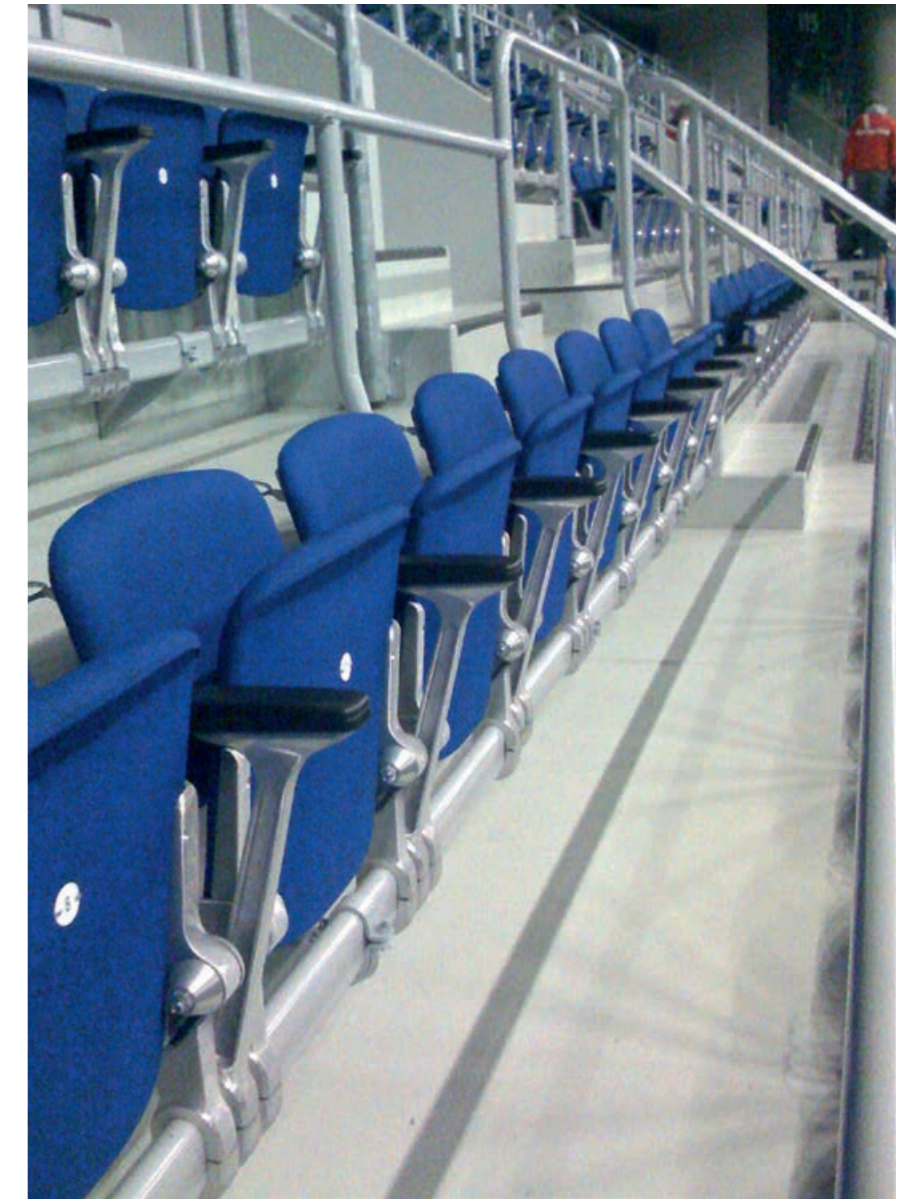
Weather and abrasion resistant systems for all parking areas

Carparks and underground car parks are subjected to heaviest mechanical, chemical and thermal loads such as through abrasion of the road surface, soiling from oil and petrol as well as damp from the weather. Particularly in winter when ice, snow and aggressive salt is brought into the carpark. In order to guarantee the best possible protection for trafficked concrete surfaces, ROMEX® supplies the best OS8 tested systems for all areas such as entrances and ramps, road ways and parking spaces, open air parking decks and surfaces in contact with the ground. We are happy to offer individual consultation

Properties

- Can be made nonslip, depending on sanding - high to very high
- Very high abrasion strength
- Viscous hard floor covering, resistant to vehicles and forklifts
- Fillable with firedried quartz sand
- Solvent free
- Good chemical resistance





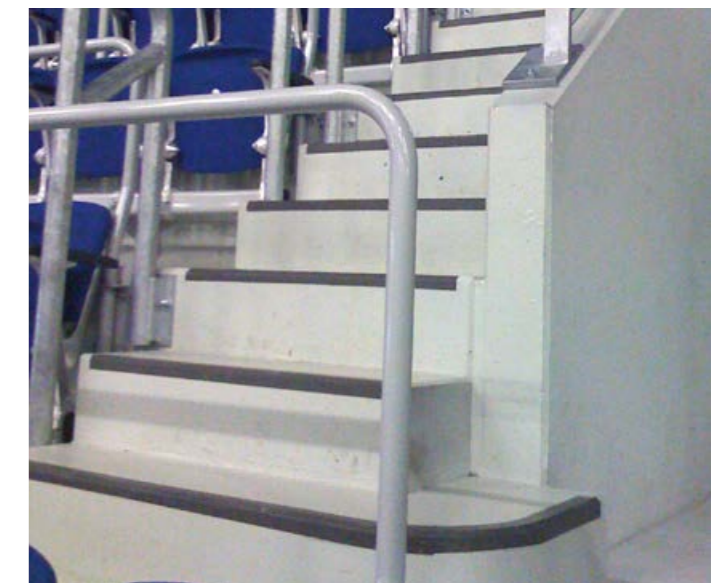
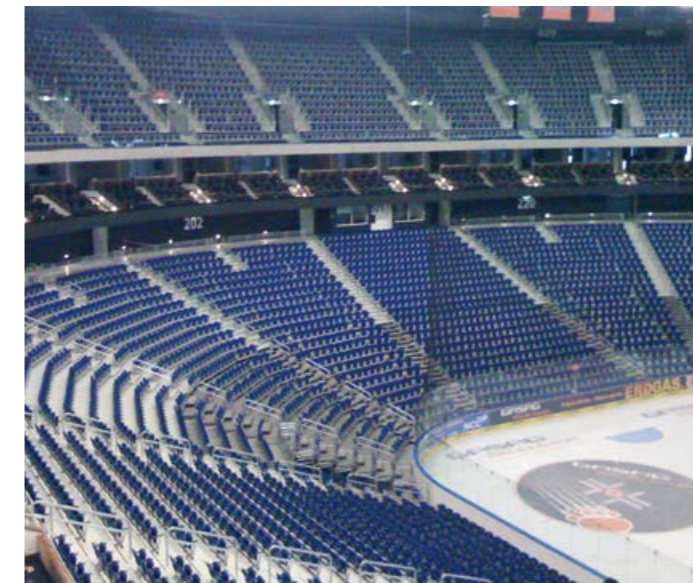
Coatings for stadium stands and stadium boxes and multi purpose arenas

Cost effective and slip safe systems for all areas in the stadium

Requirements for spectator stands in stadiums are getting ever more strict. The owners of the stadiums, as well as the spectators themselves, require ever more safety, comfort, longevity and visual attractiveness for the areas in which the spectators will be. As well as the spectator stands, there are numerous other public and non-public areas for which the correct floor coating is very important. This includes changing rooms, treatment rooms, sanitary areas as well as all restaurant areas.

Properties

- Protection
- Sealing
- Security
- Longevity
- Comfort
- For highly visually attractive requirements





Coatings in heavy industry and mechanical engineering

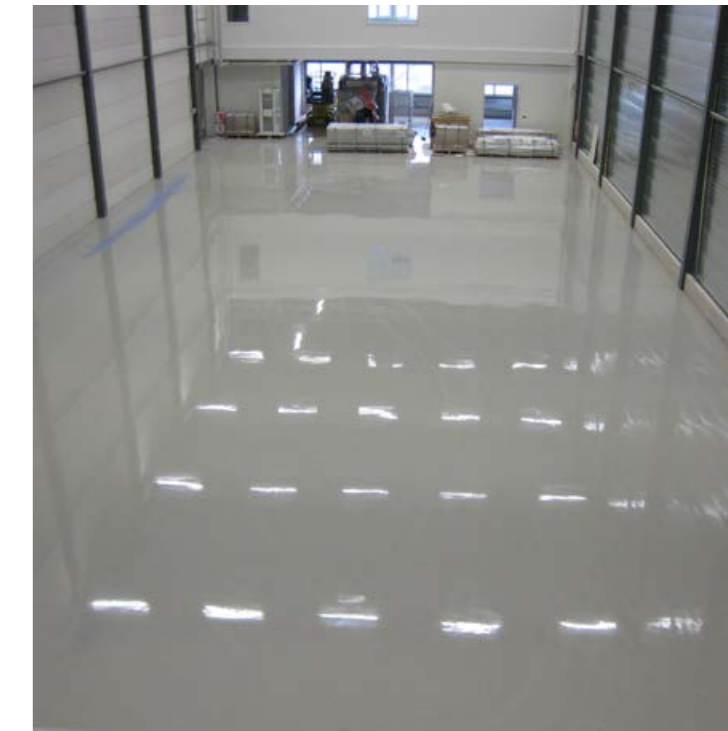
Tailor-made coating systems in heavy industry

In production areas, especially in heavy industry and in mechanical engineering, industrial floors are subject to extremely heavy loads. Coatings must be mechanically highly load bearing, shock and abrasion resistant. There is also the need for thermal and chemical resistance, depending on type of products. To meet these high demands, ROMEX® offers a coating system that is tailored to the individual requirements of the respective production company. There are also mortar systems for underpouring and anchoring of machinery and equipment as well as for anchoring and repair of construction elements and bridge structures. We guarantee the best solution for your production.

Properties

- Mechanically highly load bearing
- Very high abrasion strength
- Chemical resistant
- Can be made smooth or nonslip
- Elastified, can be made to bridge cracks
- Easy to clean
- Smooth, glossy or matt surfaces
- Can be made as a structured coating (thix/studded/orange peel structure)





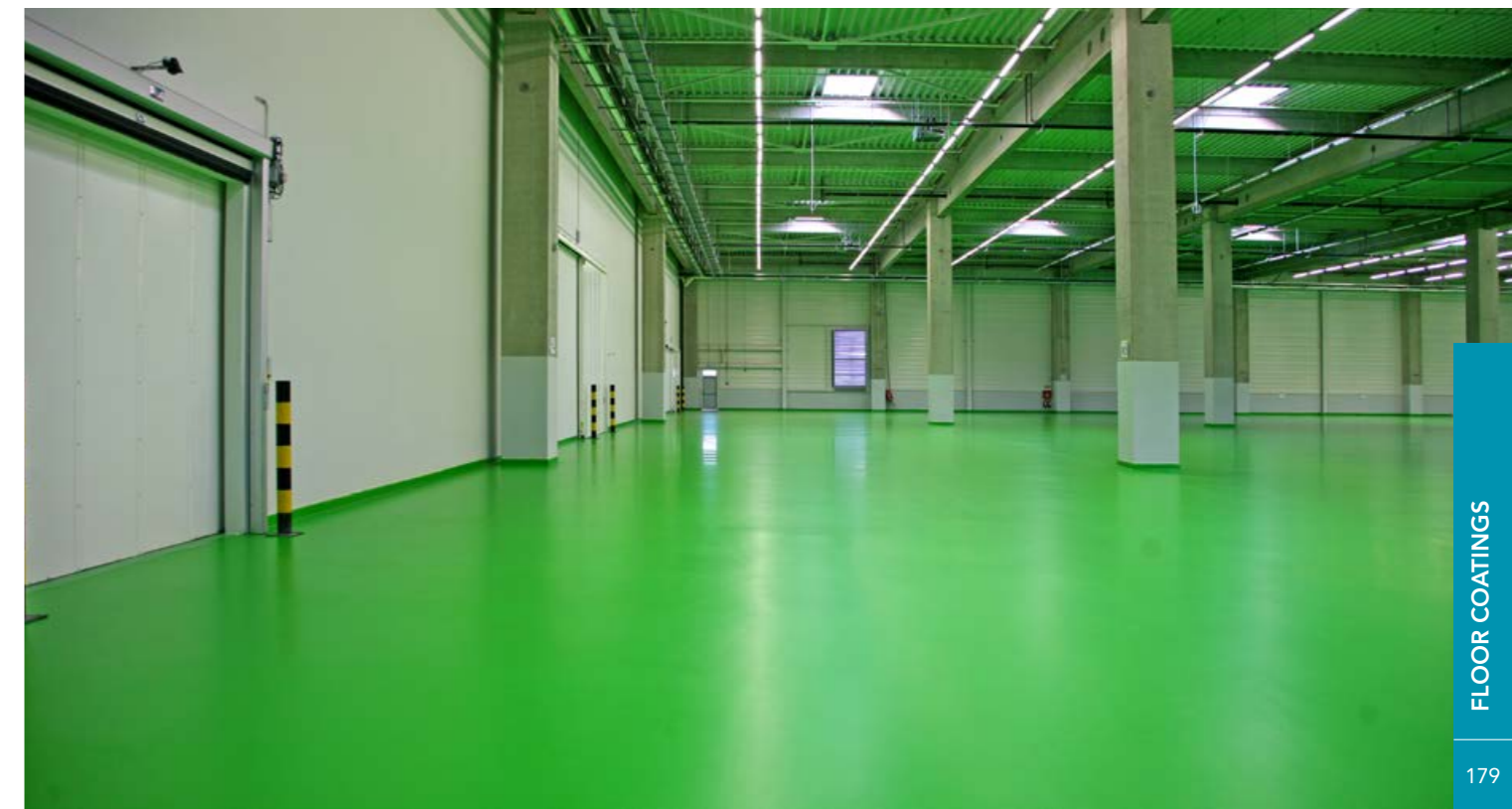
Floor coatings for warehouses with Logistics and Distribution

Abrasion resistant and mechanically highly load bearing systems for the logistics industry

Floor coatings in warehouses and logistics halls are constantly under highest mechanical and often thermal loads, for example, by forklift traffic, deposits of oil and gasoline as well as weather-related moisture when forklifts move between hall and outdoor areas. Especially in the cold season, ice, snow and especially aggressive salt are brought into the warehouses. This happens when forklifts move between warehouse and outdoor storage areas or loading ramps. Our systems for storage areas are highly loadbearing and can withstand any loads/stress that occurs. With lining and marking colors you can mark out running, driving and storage areas thus ensuring the necessary safety and order in the warehouse.

Properties

- Mechanically highly load bearing
- Very high abrasion strength
- Viscous hard floor covering, resistant to vehicles and forklifts
- Chemically resistant
- Can be made smooth or nonslip
- Elastified, can be made to bridge cracks
- Easy to clean
- Smooth, glossy or matt surfaces
- Can be made as a structured coating (thix/studded/orange peel structure)





Floor coatings for hangars

Suitable for air buffer guidance systems, mechanically and chemically highly loadbearing systems for maintenance and repair halls

Coatings in hangars are subject to strong mechanical and chemical loads, for example due to abrasion of tires, deposits of kerosene and oil. Weather conditions can also cause thermal loads such as when moisture, ice or snow and de-icing salt or de-icer are brought into the hangars.

The ROMEX® coating system for aerospace ensures the optimum protection of concrete and steel surfaces and offers the necessary functionality.

Properties

- Mechanically highly load bearing
- Very high abrasion strength
- Oil and kerosene resistant
- Dust free
- WHG system is possible (§ 19 WHG)
- Can be made smooth or nonslip
- Elastified, can be made to bridge cracks
- Easy to clean
- Smooth, glossy or matt surfaces
- Can be made electrostatically conductive (ESD)
- Can be made as a structured coating (thix/studded/orange peel structure)





Areas of application ROMPOX® 1009 (2K-MULTI SEALANT)

In order to make the many years of positive experience with top industrial products also available for private use, ROMEX® has adapted two of its coatings. Thanks to the adaptation to the needs of home users and craftsmen, a very easy to use, universally applicable sealant and a high quality coating were formulated. These products are available through specialist retailers.

- High quality floor and wall sealant
- Extremely loadbearing
- Easy application
- Modern solutions for garages, cellars, industrial and work halls as well as many more
- For indoor and outdoor use

Visually appealing, easy to use coating system for garages, cellars and hobby rooms. The 2 component multi sealant is an extremely loadbearing sealant for garages, cellars, warehouses and industrial halls indoors and outdoors. Floor, wall and ceiling surfaces can be sealed user friendly.



Airless spray method



Before



After: 15 m² Garage



Before



After: 500 m² Showroom at HotSpring in Gerasdorf, Austria

The allrounder for private and commercial surfaces

ROMPOX® 1009 (2K-MULTI SEALANT) is perfect for the sealing of cementbound surfaces – including those with rising damp. Because of its good water vapor permeability, the sealant is also suitable for magnesite and anhydrite screeds with light mechanical loads, as well as for use on hardcast asphalt indoors.

ROMPOX® 1009 (2K-MULTI SEALANT) can also be applied using the airless spray method for quick work on large surface areas, when 10 % water is added. Equipment must be cleaned each time it is not in use. The cleaning is done by carrying out the spray process with water until no material is left in the system. The final cleaning is done using water plus 10 % solvent (preferably ethanol).

ROMEX® offers the product ROMPOX® 1009 (2K-MULTI SEALANT) in two standard colors. For large size industrial areas, the product ROMPOX® 1009 is available as a sealant and ROMPOX® 1010 as a thick coating, available in large containers and many colors.

Properties

- For use indoors and outdoors
- Suitable for surfaces that touch the ground
- Fulfills fire classification B1 (Bfl-s1 flame resistant)
- Primer and sealant in one
- Water soluble
- Solvent free
- Environmentally friendly
- Open to steam diffusion/water vapor permeable
- Chemically resistant
- Lightly structured surface
- Can be applied using airless spray method



FLOOR COATINGS

SYSTEM SOLUTIONS

ROMEX® as a system specialist in the field of floor coatings, stands for guaranteed safety and optimal results with suitable solutions as a basis for lasting coatings.



ROMEX®-system solutions

Tailor-made system solutions

As specialists with decades of experience in the construction project business, ROMEX® brings you tested and certified systems of the highest quality. For the best possible realization of your construction project we offer tailor-made system solutions and accompany your project until the final acceptance. The quality of our systems is ensured by specially developed quality standards, which go far beyond the generally applicable standards.

Our durable 2-component epoxy resin primers provide optimal protection for almost any surface. Whether on steel, concrete, anhydrite and magnesite screeds or asphalt / bitumen, the primers by ROMEX® are perfectly matched to the respective substrate. Our high-quality floor coatings are characterized by their high resilience, their slip resistance and chemical resistance. In addition to tested systems such as our OS 8 coating for multi-storey car parks and underground car parks, ROMEX® is one of the leading suppliers of ESD coatings.

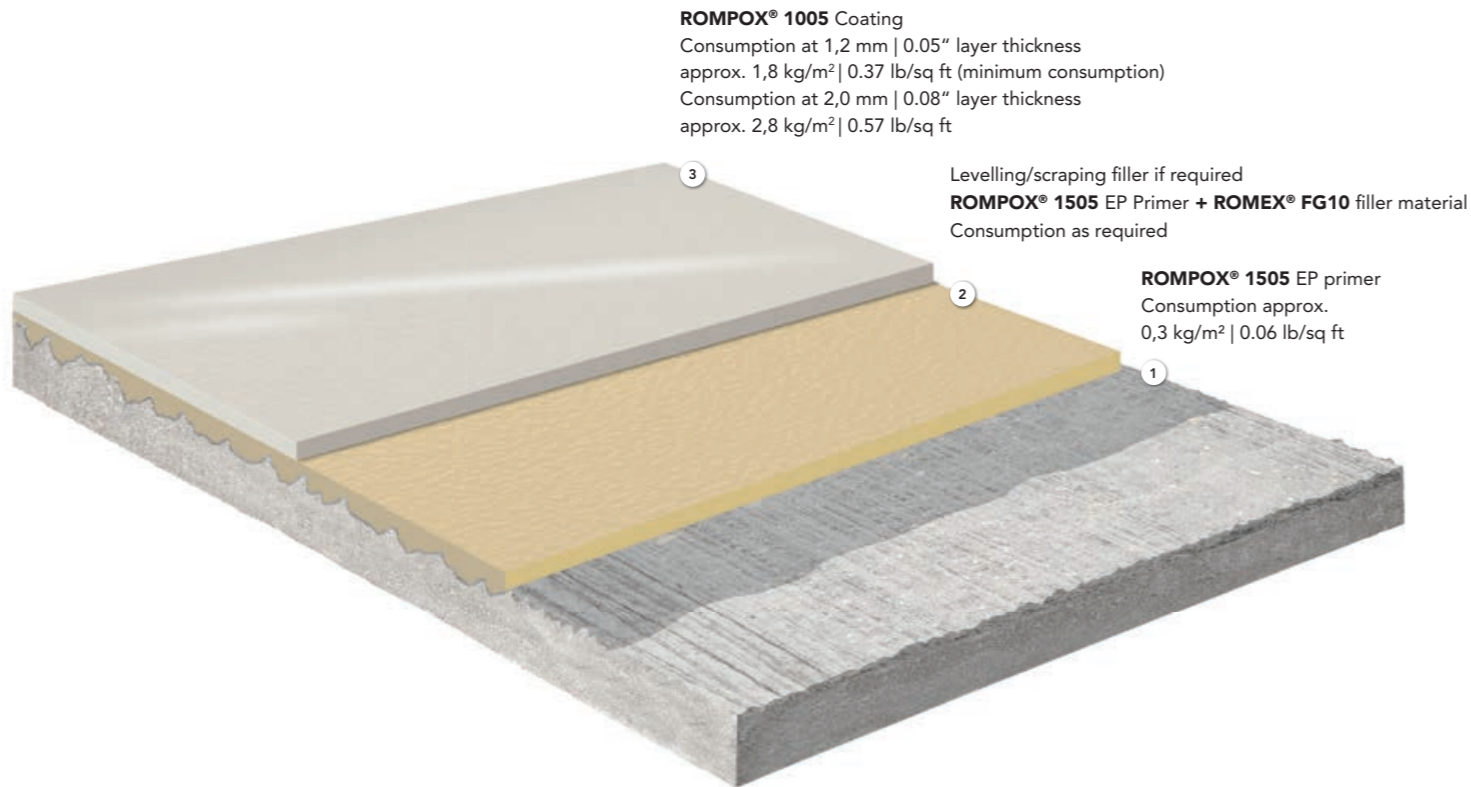
ROMEX® coating systems are rounded off with our floor and wall sealants. Our EP and PU sealers provide optimum protection for almost any surface. We leave nothing to be desired and offer our customers glossy sealants with mirror effect, as well as matt surfaces. Rough or smooth, colored or transparent, plain or decorative. ROMEX® offers the right solution for every requirement.



We offer system solutions, coatings and sealants of the highest quality

ROMEX® Standard (Coating) System

High quality, solvent free and pigmented self-levelling coating, epoxy resin based



Areas of application

ROMPOX® 1005 is a ready to use, pigmented, self-levelling, viscous hard floor coating for cement bound and metallic surfaces in areas subject to chemical and mechanical loads. It is especially suitable for the production of high quality industrial goods such as in the electronics industry, pharma industry, automotive industry, mechanical engineering and in nuclear power stations.

Properties

- High gloss
- Can be decontaminated
- Easy to clean
- Watertight
- Viscous hard floor covering,
- Resistant to forklifts
- Very high abrasion strength
- Solvent free
- Good chemical resistance
- Very good levelling and aeration properties

Surface requirements before application

- ▷ The surface must be loadbearing, even, dry and free of oil, grease, separators and dust.
- ▷ Loose particles and other dirt must be removed.
- ▷ In general, the surface should be prepared by shotpeening.
- ▷ If necessary: pre-treat surface by grinding or milling
- ▷ The adhesion strength of the surface needs to be $\geq 1,5 \text{ N/mm}^2$ | 218 psi
- ▷ Before coating the concrete surface must be primed using a primer such as ROMPOX® 1505 (depending on type of surface) and evened out using a scraping filler such as ROMPOX® 1505, in order to achieve an extremely smooth surface.
- ▷ For cement surfaces with residual moisture $\leq 4 \text{ CM-\%}$: ROMPOX® 1505
- ▷ For higher residual moisture $\leq 6 \text{ CM-\%}$: ROMPOX® 1506
- ▷ For higher residual moisture $> 6 \text{ CM-\%}$: ROMPOX® 1504
- ▷ Highly porous surfaces need to be primed twice!
- ▷ In all cases, it is necessary, that after priming, all pores on the surface are sealed.
- ▷ Metal surfaces should be treated according to the Swedish norm SA 2 ½ acc. to ISO Norm 8501-1 and then primed with ROMPOX® 1101.

Due to the numerous variations in surfaces – especially with old coatings – we recommend that a sample coating is laid, in order to eliminate any reactions that cannot be calculated in advance.

PLEASE NOTE:

It is recommended to have a minimum consumption of ROMPOX® 1005 (resin and hardener mixture) of $1,8 \text{ kg/m}^2$ | 0.37 lb/sq ft = approx. 1,2 mm | 0.05" layer thickness!

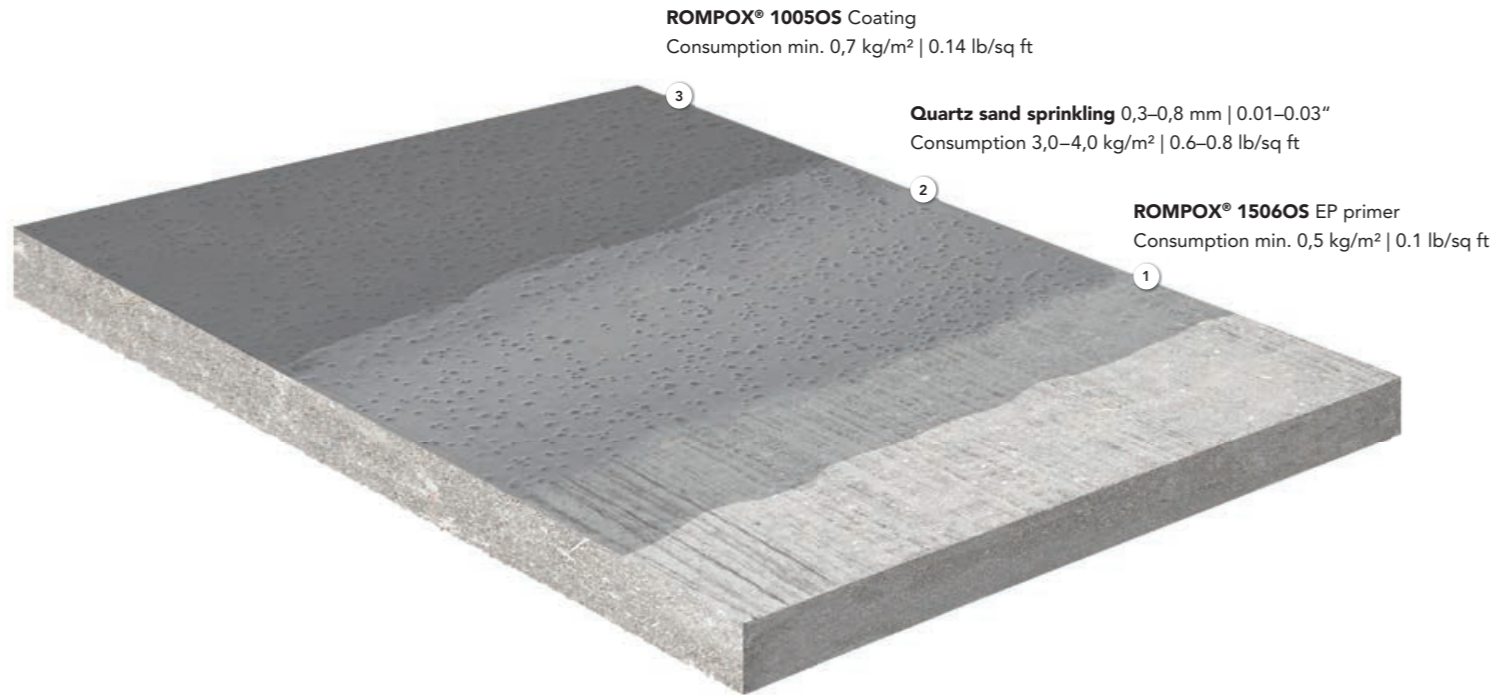
In case of surface and material temperatures below $+15 \text{ }^\circ\text{C}$, or when going below the thaw/melting point distance, self-levelling and surface damage as well as adhesion problems for the coating system may occur.

Smaller surfaces with metallic foundations can be primed with ROMPOX® 1101 and coated with ROMPOX® 1005, if the surfaces are free of movement and are not subjected to large or sudden temperature changes.



ROMEX® Carpark system OS8

High quality, solvent free, pigmented epoxy resin coating for sprinkled, non slip surfaces.
As a system, tested according to surface protection classification 8 (OS8)



System diagram:
Coating approx. 1,5 mm | 0.06" layer thickness
(Further tested system installations,
i. e. 2,5 mm | 0.1", are possible)

Areas of application

Tested system for car parks, underground car parks, entry and exit ramps, parking and driving areas indoors. Test certificate for OS 8 system acc. to DIN EN 1504-2 and DIN V 18206 for the protection and maintenance of concrete support structures. Not suitable for surfaces exposed to the weather without a roof.

Properties

- Can be made nonslip, depending on sanding - high to very high
- Very high abrasion strength
- Viscous hard floor covering,
- Resistant to vehicles and forklifts
- Fillable with firedried quartz sand
- Solvent free
- Good chemical resistance

Surface requirements before application

- ▷ The surface must be loadbearing, even, dry and free of oil, grease, separators and dust.
- ▷ Loose particles and other dirt must be removed.
- ▷ In general, the surface should be prepared by shotpeening.
- ▷ In some cases it may be necessary to carry out grinding or milling.
- ▷ The minimum adhesion strength of the surface must be $\geq 1.5 \text{ N/mm}^2$ | 218 psi.
- ▷ Before coating the concrete surface must be primed using a primer such as ROMPOX® 1505 (depending on type of surface) and evened out using a scraping filler such as ROMPOX® 1505, in order to achieve an extremely smooth surface.
- ▷ For cement surfaces with residual moisture $\leq 4 \text{ CM-\%}$: ROMPOX® 1506OS
- ▷ for higher residual moisture $\leq 6 \text{ CM-\%}$: ROMPOX® 1506
- ▷ for higher residual moisture $> 6 \text{ CM-\%}$: ROMPOX® 1504
- ▷ Highly porous surfaces need to be primed twice!
- ▷ In all cases, it is necessary, that after priming, all pores on the surface are sealed.
- ▷ Metal surfaces should be treated according to the Swedish norm SA 2 ½ acc. to ISO Norm 8501-1 and then primed with ROMPOX® 1101.

Due to the numerous variations in surfaces – especially with old coatings – we recommend that a sample coating is laid, in order to eliminate any reactions that cannot be calculated in advance.

PLEASE NOTE:

Attention! When installing according to Rili-SIB (2001), the corresponding AbP should be heeded, according to DIN V 18026 the information for execution.



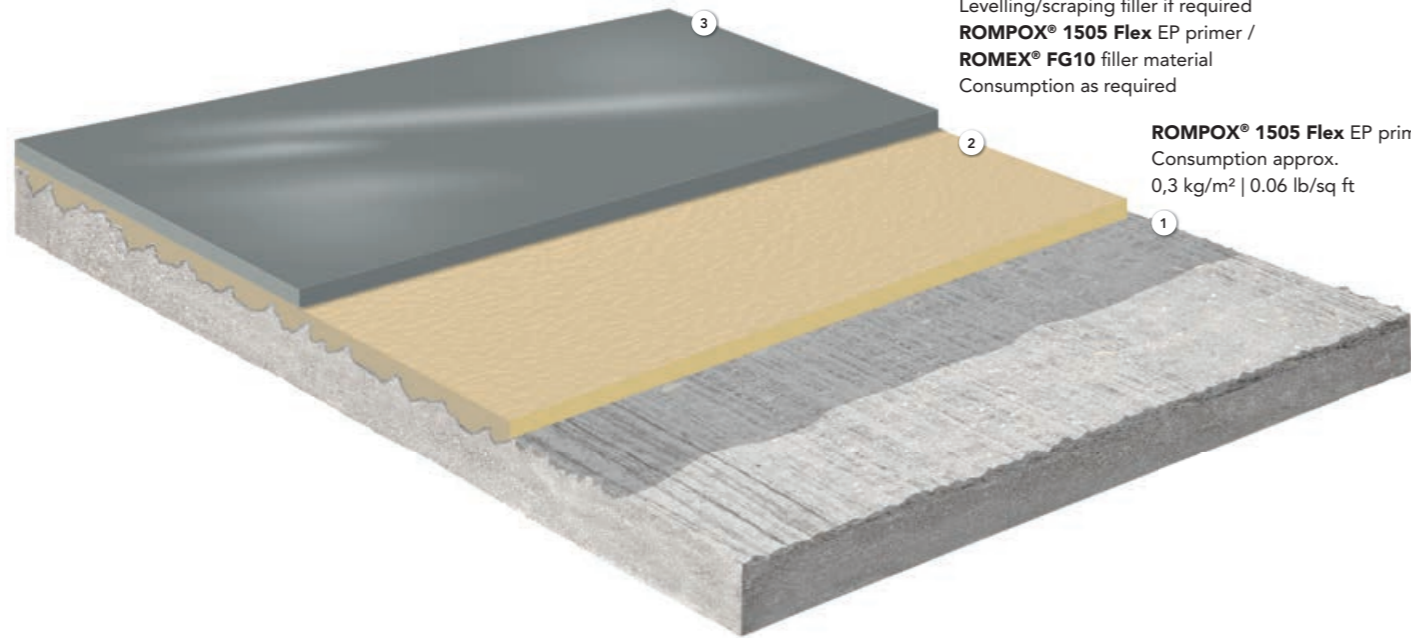
ROMPOX® 1080 Elastic (coating) system

Elastic coating system for crack bridging, can be used especially for steel surfaces and poured asphalt.

ROMPOX® 1080 EP elastic coating
Consumption at 1,2 mm | 0.05" layer thickness
approx. 1,8 kg/m² | 0,37 lb/sq ft (minimum consumption)
Consumption at 2,0 mm | 0.08" layer thickness
approx. 2,8 kg/m² | 0,57 lb /sq ft

Levelling/scraping filler if required
ROMPOX® 1505 Flex EP primer /
ROMEX® FG10 filler material
Consumption as required

ROMPOX® 1505 Flex EP primer
Consumption approx.
0,3 kg/m² | 0.06 lb/sq ft



Areas of application

ROMPOX® 1080 is an elasticized floor coating with special resistance to impact. The system is pigmented, self-levelling, chemical resistant and easy to clean. Surfaces can be created using chip sprinkling. Suitable for new construction and renovation of cementbound surfaces, hardcast asphalt floor coverings indoors as well steel plates indoors. Areas of application are mechanically and chemically contaminated areas in the printing industry, in chemical companies, sewage plants, petrol stations and in the petroleum industry. In addition, it can also be used in areas of the aviation and automotive industry, paint shops, clean rooms and stadium stands. ROMPOX® 1080 can be used as elastic sealing material for sprinkled, non-slip coatings. Crack bridging ability acc. DIN EN 1062-7: 2004 up to 0.3 mm | 0.012".

Properties

- High gloss
- Very good levelling and aeration properties
- Elastified, bridges cracks up to 0,3 mm | 0.012" with static cracks (ROMPOX® 1080: 2,8 kg/m² | 0.57 lb /sq ft)
- Chemically resistant
- Solvent free
- Resistance to yellowing
- Suitable for poured asphalt

Surface requirements before application

- ▷ The surface must be loadbearing, even, dry and free of oil, grease, separators and dust.
- ▷ Loose particles and other dirt must be removed.
- ▷ In most cases, the surface should be shotpeened and then primed.
- ▷ In some cases it may be necessary to carry out grinding or milling.
- ▷ The minimum adhesion strength of the surface needs to be $\geq 1.5 \text{ N/mm}^2$ | 218 psi
- ▷ Residual moisture of the concrete must be $\leq 4 \text{ CM-\%}$ (CM machine).
- ▷ The concrete surface must be evened out using ROMPOX® 1505 as either a primer or scraping filler, in order to achieve an extremely smooth surface.
- ▷ For cement surfaces with residual moisture $\leq 4 \text{ CM-\%}$: ROMPOX® 1505/1505 Flex
- ▷ for higher residual moisture $\leq 6 \text{ CM-\%}$: ROMPOX® 1506
- ▷ for higher residual moisture $> 6 \text{ CM-\%}$: ROMPOX® 1504
- ▷ Highly porous surfaces need to be primed twice!
- ▷ Metal surfaces should be treated according to the Swedish norm SA 2 ½ acc. to ISO Norm 8501-1 and then primed with ROMPOX® 1101.

Hard poured asphalt indoors is primed using ROMPOX® 1505 Flex, or evened out using ROMPOX® 1080, in this case, in order to ensure optimum adhesion, at least 80% of the additives in the hard poured asphalt surface must be laid bare (by grinding, shotpeening etc.).

Due to the numerous variations in surfaces – especially with old coatings – we recommend that a sample coating is laid, in order to eliminate any reactions that cannot be calculated in advance.

PLEASE NOTE:

When working indoors, sprinkling does not need to be carried out on the primer and scraping filler if it is ensured that subsequent work is carried out no later than after 48 hours.



ROMPOX® 1107 ESD-System

Electrostatically conductive coating system for areas with sensitive components according to the current ESD norms.

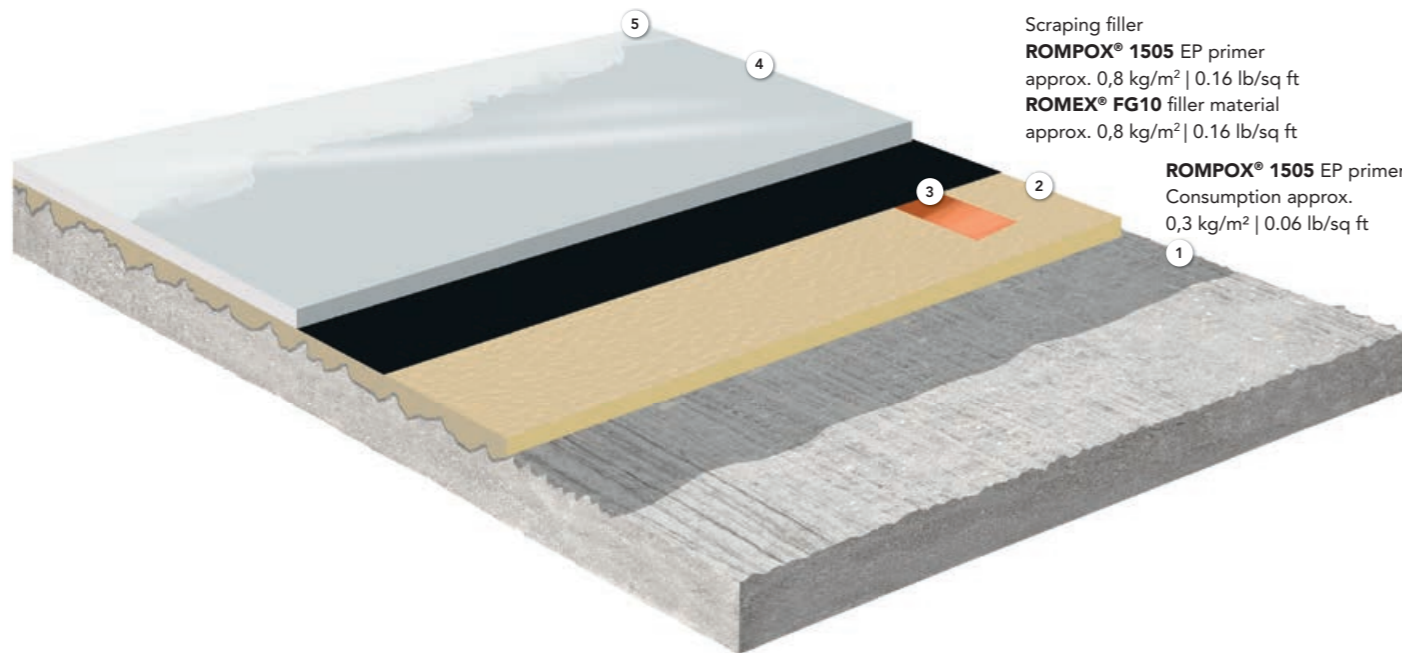
Optional Initial care treatment:
ROMEX® maintenance sealant antistatic
 Wiping consumption 2x approx. 0,025–0,040 l/m² | 0.079–0.126 oz./sq ft

ROMPOX® 1107 ESD coating
 Consumption approx. 1,5–1,8 kg/m² | 0.31–0.37 lb/sq ft

ROMPOX® 1104 ESD conductive paint incl. copper band
ROMEX® 1106 consumption approx. 0,15 kg/m² | 0.03 lb/sq ft

Scraping filler
ROMPOX® 1505 EP primer
 approx. 0,8 kg/m² | 0.16 lb/sq ft
ROMEX® FG10 filler material
 approx. 0,8 kg/m² | 0.16 lb/sq ft

ROMPOX® 1505 EP primer
 Consumption approx.
 0,3 kg/m² | 0.06 lb/sq ft



System sketch:
ROMPOX® 1107 ESD (Coating) system
 2,5 mm | 0.1" layer thickness
 (further system installations, i. e. 1,5 mm, are possible)

Areas of application

ROMPOX® 1107 ESD coating is an electrically conductive, mechanically and chemically loadbearing self-levelling coating. It is used in manufacturing areas in the electronics industry, circuit board manufacture, laboratories, operating theatres, computer rooms and in the automotive industry as well as for use in other areas with EPA requirements. It fulfills the requirements according to DIN EN 61340-5-1. ROMPOX® 1107 ESD fulfills the location junction resistance according to VDE 0100-600 (2008) electrode 1 (tripod electrode) of >50.000 Ohm, according to the tolerance limit requirements of VDE 0100-410. ROMPOX® 1107 ESD coating is an easy to clean coating combined with high abrasion strength. It is chemically resistant to alkalis, saline solutions and diluted acids as well as mineral oils.

Properties

- Electrically conductive self-levelling coating for increased ESD protection requirements
- Fulfills the requirements acc. to DIN EN 61340-5-1 for ESD areas and EPA zones ("human-shoe-floor", Walking Test with maximum charging of < 100 Volt)
- Fulfills the location junction resistance according to VDE 0100-600 (2008) electrode 1 (tripod electrode) of >50.000 Ohm, according to the tolerance limit requirements of VDE 0100-410.
- Balanced mechanically and chemically loadbearing
- Homogeneous, coloured surface
- Solvent free

Surface requirements before application

- ▷ The surface must be loadbearing, even, dry and free of oil, grease, separators and dust.
- ▷ Loose particles and other dirt must be removed.
- ▷ In all cases, the surface should be prepared by shotpeening or similar and then primed.
- ▷ In some cases it may be necessary to carry out grinding or milling.
- ▷ The adhesion strength of the surface needs to be $\geq 1.5 \text{ N/mm}^2$ | 218 psi
- ▷ Residual moisture of the concrete must be $\leq 4 \text{ CM}\%$ (CM machine).
- ▷ Before coating the concrete surface must be evened out using a primer or scraping filler such as ROMPOX® 1505, in order to achieve an extremely smooth surface.

- ▷ For cement surfaces with residual moisture $\leq 6 \text{ CM}\%$: ROMPOX® 1506
- ▷ for higher residual moisture $> 6 \text{ CM}\%$: ROMPOX® 1504
- ▷ Highly porous surfaces need to be primed twice!
- ▷ In all cases, it is necessary, that after priming, all pores on the surface are sealed.
- ▷ Metal surfaces should be treated according to the Swedish norm SA 2 ½ acc. to ISO Norm 8501-1 and then primed with ROMPOX® 1101.

Due to the numerous variations in surfaces – especially with old coatings – we recommend that a sample coating is laid, in order to eliminate any reactions that cannot be calculated in advance.

PLEASE NOTE:

For better aeration use a metal pinfeed platen. The maximum consumption of ROMPOX® 1107 ESD coating is 1.8 kg/m² and must not be exceeded. Conductive value measuring can be carried out from day three, protocol measuring from day seven.

If the surface is at risk of rising damp, then to prevent osmosis, apply ROMPOX® 1506 or ROMPOX® 1504 with at least $2 \times 0,300 \text{ kg/m}^2$ | 0.06 lb/sq ft.

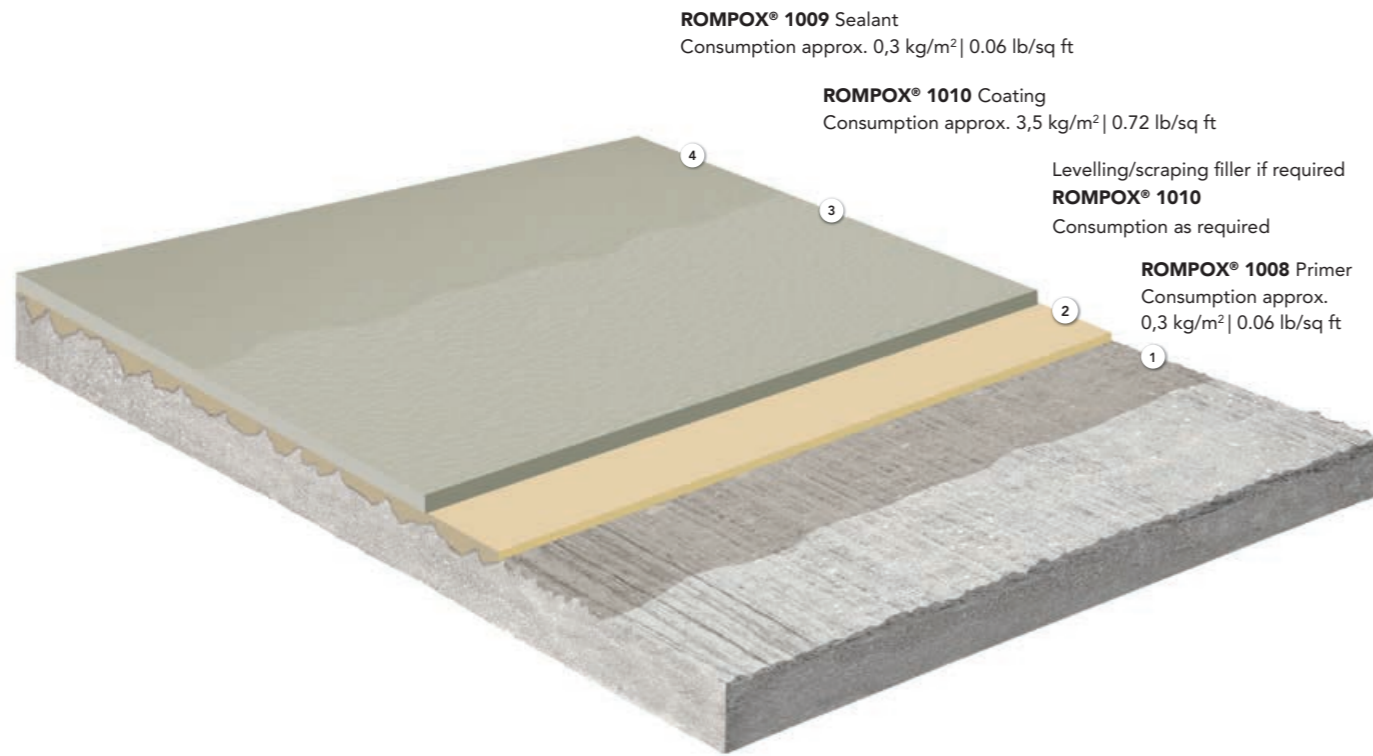
Due to the conductive nature, technical deviations may cause slight colour deviations. Higher layer thickness also affect the electrical properties and lead to increased resistances. Depending on conditions, whilst hardening a light surface film may form which can be wiped away with water. From relative air humidity of below 25%, resistance may increase, this decreases again with normal room climates.



ROMPOX®

Open to steam diffusion system

Open to steam diffusion coating system for all surfaces with rising damp.



Application example as **open to steam diffusion coating** on anhydrite floors and cementbound surfaces

Areas of application

ROMPOX® 1010 is used as a water vapor-diffusible self-levelling coating for cementbound surfaces indoors and outdoors. Main application area is the coating of floor surfaces with rising damp i.e. in warehouses, workshops and garages and as a special application for coating magnesite and anhydrite surfaces.

Properties

- Completely frost and de-icing salt resistant (after hardening)
- Open to steam diffusion
- Mechanically highly load bearing
- Chemical resistance
- Thick layer as self-levelling coating
- For surfaces touching the ground
- Can be made nonslip
- Available in many standard and light colour tones, special colours on request

Surface requirements before application

- ▷ The surface must be loadbearing, even, dry and free of oil, grease, separators and dust.
- ▷ Loose particles and other dirt must be removed.
- ▷ In general, the surface should be prepared by shotpeening and a primer should be applied.
- ▷ If necessary: pre-treat surface by grinding or milling.
- ▷ Damp surfaces can be treated, but must not have any standing water on them.
- ▷ Please note: magnesite and anhydrite surfaces can be sealed when residual moisture content is 0.5 CM.-% (unheated) and 0.3 CM.-% (heated).
- ▷ Highly porous as well as magnesite and anhydrite surfaces need to be primed with ROMPOX® 1009 2 × 0,3 kg/m² | 0.06 lb/sq ft.
- ▷ In all cases, it is necessary, that after priming, all pores on the surface are sealed.
- ▷ For surface roughness greater than 0,5 mm | 0.02", scraping filler made with ROMPOX® 1009 should be used

Due to the numerous variations in surfaces – especially with old coatings – we recommend that a sample coating is laid, in order to eliminate any reactions that cannot be calculated in advance.

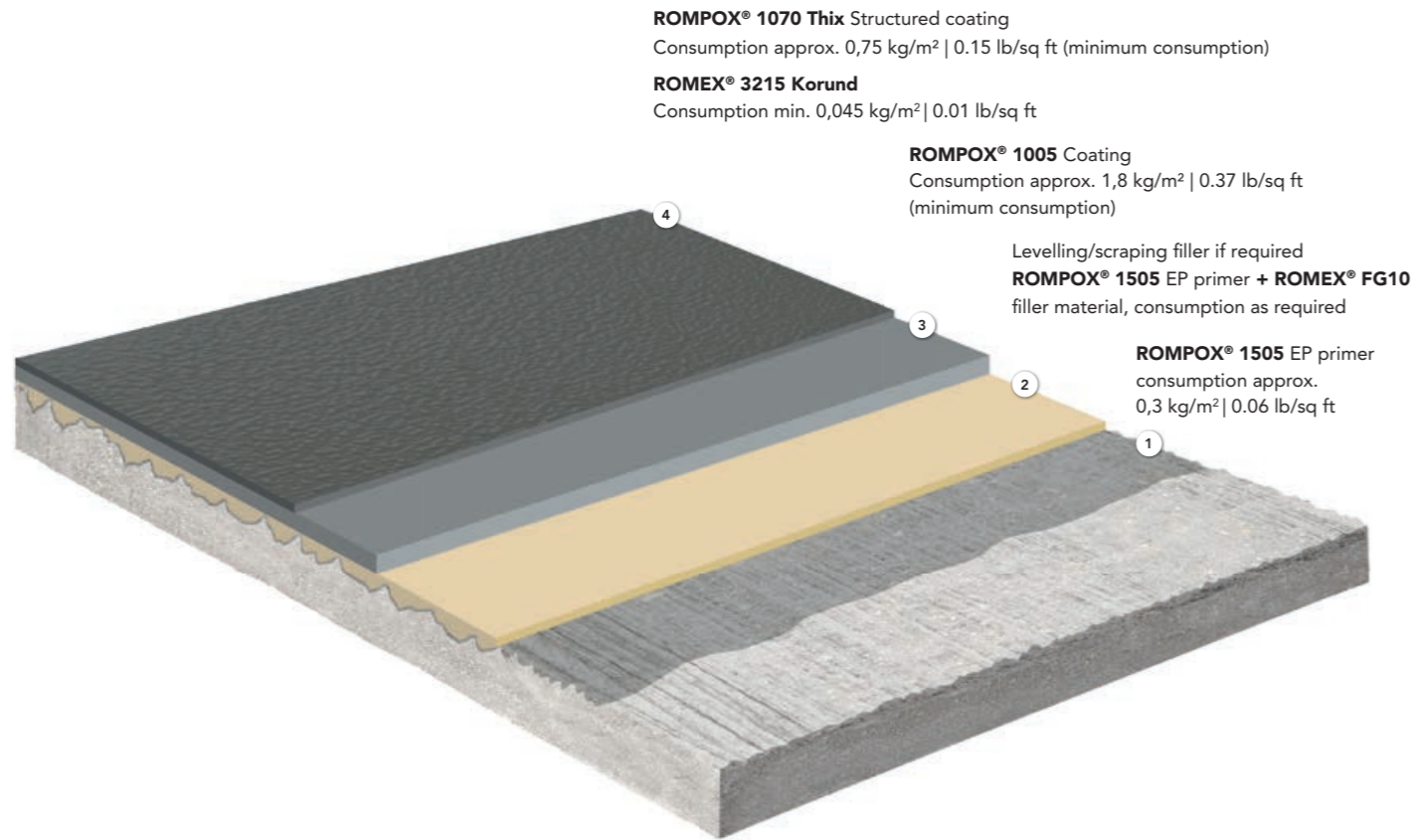
PLEASE NOTE:

The minimum consumption of ROMPOX® 1010 is 3,5 kg/m² | 0.72 lb/sq ft! Insufficient aeration can increase the waiting time for subsequent works and hardening of coating as well as causing differences in degree of shine or formation of white marks. Coated rooms need to be aired thoroughly in order to enable optimum diffusion of the water particles from the fresh coating!



ROMPOX® Structured coating

Structured coating system with predefined nonslip level that is easy to clean for industrial production facilities and warehouses.



ROMPOX® 1070 Thix Structured coating
Consumption approx. 0,75 kg/m² | 0.15 lb/sq ft (minimum consumption)

ROMEX® 3215 Korund
Consumption min. 0,045 kg/m² | 0.01 lb/sq ft

ROMPOX® 1005 Coating
Consumption approx. 1,8 kg/m² | 0.37 lb/sq ft (minimum consumption)

Levelling/scraping filler if required
ROMPOX® 1505 EP primer + ROMEX® FG10
filler material, consumption as required

ROMPOX® 1505 EP primer
consumption approx.
0,3 kg/m² | 0.06 lb/sq ft

Application example as a structured coating on cementbound surface

Areas of application

ROMPOX® 1070 Thix is a lightly structured, solvent free, viscous hard topcoat with high abrasion strength. By mixing in aluminium-oxide (Korund), firedried quartz sand, etc. it is possible to achieve a predefined nonslip level along with good cleaning capability. ROMPOX® 1070 Thix is used as a structured, rolled coating in production and warehouse areas in the automotive industry, in the electrical and pharmaceutical industry, engineering and factory workshops.

Properties

- Easy to clean
- Elastified (ROMPOX® 1505 Flex / ROMPOX® 1080 Thix)
- Viscous hard floor coating, resistant to vehicles and forklifts
- Very high abrasion strength
- Can be made nonslip
- Good chemical resistance
- Solvent free

Surface requirements before application

- ▷ The surface must be loadbearing, even, dry and free of oil, grease, separators and dust.
- ▷ Loose particles and other dirt must be removed.
- ▷ In general, the surface should be prepared by shotpeening.
- ▷ In some cases it may be necessary to carry out diamond grinding or milling.
- ▷ The minimum adhesion strength of the surface must be $\geq 1.5 \text{ N/mm}^2$ | 218 psi.
- ▷ Residual moisture of the concrete must be $\leq 4 \text{ CM}\%$ (CM machine).
- ▷ For cement surfaces with increased residual moisture $\leq 6 \text{ CM}\%$: ROMPOX® 1506
- ▷ For higher residual moisture $> 6 \text{ CM}\%$: ROMPOX® 1504 (as moisture barrier).
- ▷ Highly porous surfaces need to be primed twice!
- ▷ In all cases, it is necessary, that after priming, all pores on the surface are sealed.
- ▷ Metal surfaces should be treated according to the Swedish norm SA 2 ½ acc. to ISO Norm 8501-1 and then primed with ROMPOX® 1101.

PLEASE NOTE:

When working indoors, sprinkling can be left out, if it is ensured, that subsequent work will take place within 48 hours at the latest. Please take note of ROMEX® technical specifications for coatings and sealants.





FLOOR COATINGS

TECHNICAL INFORMATION

ROMEX® synthetic resin based floor coatings are modern, high quality systems. The following instructions and application tips should help towards good planning and the correct execution and to avoid damage.



Surface before coating

TECHNICAL INFORMATION

Surface preparation

1. Preliminary notes

The application of reactive resins when laying, improving or repairing industrial floors, needs precise knowledge of the requirements of the surface, a thorough examination of the surface and careful preparatory work for each individual case. ROMEX® as a material manufacturer works only with certified partners who have been trained in the processing of reactive resin coatings with ROMEX® materials. The ROMEX® partner takes on the task and together we give you the warranty for the finished coating. ROMEX® as manufacturer does make direct offers and does not accept work contracts.

2. Areas of validity

The following instructions and requirements are valid - DIN 18560 screeds in construction, ATV DIN 18353 screed work and ATV DIN 18365 floor coating work. The requirements described here should be applied to industrial floor coatings. The terms and regulations found in DIN 55945- painting materials and similar coating materials- cannot be used for industrial floors because they primarily apply to painting applications and do not take into consideration the requirements of industrial floors.

3. Testing and preparation of the surface

The durability and resistance of industrial floors made from reactive resins, depends on the strength and quality of

the sub surface. This must therefore always be tested for its suitability for the subsequent layer construction and, if necessary, prepared and pre-treated sufficiently.

The requirements for testing and surface preparation involve the following:

- Testing moisture / dryness of concrete
- Risk of rising damp (osmosis)
- Evenness acc. to DIN 18202
- Incorrect height
- Compressive strength of floor slab
- Surface strength (minimum adhesion strength)
- Soft and breakable parts
- Chemical soiling
- Porosity
- Roughness
- Cracks
- Joints
- Room climate (temperature and air humidity)
- Surface temperature and risk of melting point
- Hollow areas
- Compatibility between reactive resin and surface

Depending on results, additional measures may need to be taken.

4. Requirements of the surface before coating

The surface must be loadbearing, level, dry, free from oil, grease, separating agents and dust. Loose parts and other soiling must be removed. As a rule, each surface must be prepared by means of shot peening and then primed. Milling or grinding may be necessary in individual cases. The adhesive strength of the surface must be 1.5 N/mm² to ensure good adhesion with the standard primer ROMPOX® 1505.

If the minimum tensile strength is not reached, the damaged concrete surface must be removed by grinding, milling or shot peening, until the healthy core concrete is reached. The residual moisture content of the concrete must be ≤ 4 CM%, for anhydrite-bound surfaces < 0,5 CM%, heated < 0.3 CM% (CM device). For cement surfaces with increased moisture content ≤ 6 CM%, use ROMPOX® 1506, for higher residual moisture content > 6 CM%, use ROMPOX® 1504. Highly porous surfaces must be primed twice! In all cases it is necessary that all surface pores are sealed after priming.

Metal surfaces should be treated according to SA 2 ½ acc. to ISO Norm 8501-1 and then primed with ROMPOX® 1101. Due to the numerous variations in surfaces – especially with old coatings or dense surface made of hard materials or any treatment agents that may have been used – we recommend that a sample coating is laid, in order to eliminate any reactions that cannot be calculated in advance.

For all concrete and epoxy works, at least 15 °C and maximum 70% air humidity are required according to ROMEX® standards.

The floor can then be used as follows:

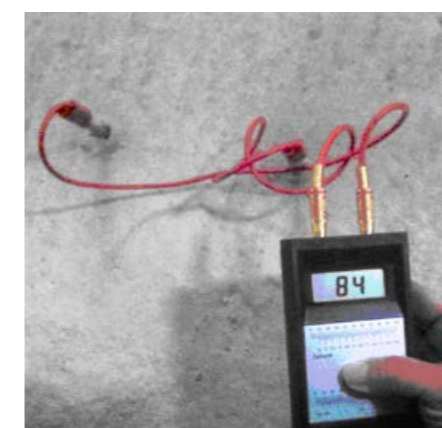
- Pedestrian traffic after 2 days
- Medium heavy traffic after 5 days and
- Fully loadbearing after 7 days

The services are provided according to the standards of the ROMEX® checklist for concrete and epoxy resin floors. Any expansion joints are laid according to static calculations. Cracks that appear due to the physical properties of concrete and steel, or due to breakages or hollow areas, are not an indication of faulty work.

Table 3 – Tolerance values for evenness deviations acc. to DIN 18202:2005-10

Reference		Actual dimension as tolerance limit in mm at measuring point distances in m up to				
		0,1	1 ^{a.)}	4 ^{a.)}	10 ^{a.)}	15 ^{a.) b.)}
1	Non surface completed upper sides of ceilings, under concrete and under floors	10	15	20	25	30
2	Non surface completed upper sides of ceilings, under concrete and under floors with special requirements i.e. for swimming screeds, industrial floors, tiles and slab surfaces, bonded screeds	5	8	12	15	20
3	Surface completed floors, i.e screeds as used screeds, screeds for floor coverings, tiles, coverings that are filled and glued.	2	4	10	12	15
4	As 3, but with higher requirements	1	3	9	12	15
5	Non surface completed walls and under sides of raw ceilings	5	10	15	25	30
6	Surface completed walls and under sides of ceilings, i.e. plastered walls, wall coverings, underhanging ceilings	3	5	10	20	25
7	As 6, but with higher requirements	2	3	8	15	20

a.) In between values can be seen in pictures 4 and 5 and should be rounded up to whole mm.
b.) Tolerance limits for evenness deviations in column 6 are valid for measuring point distances more than 15 mm | ½".



Moisture measuring (electronic system power)



Measuring surface temperature



Testing adhesive tensile strength

TECHNICAL INFORMATION

Slip Resistance System

Concept, Advice, Service – from one source

Each year over a million accidents caused by falls on slippery floors occur in Germany alone, that is why ROMEX® has devoted themselves to this topic. ROMEX® has extensively researched the currently valid norms, as well as carrying out testing separately with our own line of research and the different methods of testing practical applicability. We can offer you a full-service concept and high-quality systems that meet all requirements for a non-slip industrial coating.

Assessment of testing methods

Slanted level acc. to DIN 51 130

In Germany, the test used to determine slip resistance is always the construction sample test according to BGR 181, corresponding to DIN 51 130 „Test of floor coverings – determining the nonslip property – workrooms and work areas with increased risk of slipping – walking method – slanted level“.

The test method according to DIN 51 130 serves as a suitability test to determine and to classify the nonslip quality of industrial floor coatings.

The floor coating to be tested is attached to a set up that can be tipped and then painted with motor oil. A test person then „walks“ downwards on the slanted level with normal work shoes, in small steps, forwards and backwards. The test angle is continuously changed and measured until the test person feels unsafe or slips.

The angle degree then determines the so called R value:

R 9: 6°–10°	R 10: > 10°–19°	R 11: > 19°–27°
R 12: > 27°–35°	R 13: > 35°	

According to the requirements of the trade association guidelines BGR 181, the minimum requirement is:

Evaluation group	Areas of application (examples)
R 9	General indoor areas such as offices and break rooms, company canteens, sales rooms, packaging areas, checkout areas, customer rooms, OP rooms, hospital rooms, corridors, chemists, laboratories, hairdressers, medical practices, switch rooms, classrooms, break halls, corridors and entrances in schools and nurseries.
R 10	Public toilets, work rooms in schools, garages and underground carparks that are not affected by the weather.
R 11	Entrances to shops, outside stairs, kitchens in residential homes, nurseries and sanatoriums
R 12	Hospital kitchens and other kitchens with a capacity of more than 100 settings daily, rooms for hose maintenance at firestations.
R 13	Abattoir floor coatings

Adjacent work areas must also be covered according to „adjacent“ test groups, i.e. crossing from R 12 to R 11 is allowable, from R 12 to R 10 not.

Work areas that are subjected to loads consisting of greasy, paste-like or viscous materials need to have a displacement room. Barefoot areas subject to water are classified according to DIN 51 097 in ABCdegree-classifications.

Sliding friction test acc. to DIN 51 131

Even though the trade association only allows certain results using sliding friction testing machines, all surfaces on building projects must be able to be tested for slip safety. We recommend, as do leading surveyors, accompanying testing during and after application. With this testing method, movable test machines with varying sliders, measure the slip resistance. On site testing is possible. The results are authorised for floor coverings up to requirement R 9 and bare foot areas up to classification B with displacement room below 400 ml/m² | 0,105/10,764 sq ft.

According to BGR / GUV-R 181 for R9 and classification B, the following categories are valid for the sliding friction coefficient:

- up to 0.30 = insufficient slip resistance
- from 0.30 – 0.44 = slip resistant
- from 0.45 = fit for unlimited industrial use

Due to missing comparative sliding friction coefficients with R classification, we have determined our own measuring values. With these measuring values, we are able to determine values for the classifications R10 to R13, which offer a practical test of slip safety as a guide for laying companies and users.

The requested values of R10 to R13 (slanted level) cannot be measured on the finished floor. Experts make use of the sliding friction test method in order to get comparable values. ROMEX® has carried out comparative testing on 12 different, rough floor coatings and can thus produce comparable classification for the finished project. You can find all the measured and test values in the research report „Slip safety“ by ROMEX® Produktionsgesellschaft. Request your copy from us or download it at www.romex-ag.de

Pendulum Test

The SRT pendulum test is used in Europe mainly to determine slip resistance in road construction, as well as for pedestrian zones and trafficked areas.

The SRT machine consists of a calibrated pendulum, that measures micro roughness, and an emission measurer that in principle determines the roughness and thus the displacement group, indirectly, but not comparatively. Both measured values lead to the SRT value.

SRT values are required acc. to EN 1341 (slabs), 1342 (paving stones), 1343 (curbstones) for natural stones as floor coverings, stairs and paving stones in outside areas, but are not recognised by German trade associations due to unreliable test results.



Sliding friction instrument

Our service for your success.

ROMEX® SLIP SAFETY CONCEPT

We offer tailor-made safety concepts for your industrial floor coating, specifically for your special, industrial needs

- Analysis of your requirements
- Testing of floor system and shoes in your company environment
- Recommendation of the slip safety classification and shoe type
- Preparation of samples of the nonslip floor coating as well as laying of sample surface on site
- Presentation and checking of prepared slip safety concept with your expert for work safety
- Checking by using our sliding friction test machines on sample surfaces, during laying and after the coating has been completed
- Production of a test protocol for final inspection and release
- Regular checks to guarantee permanent safety



Airless machines:

Function

The airless spray method uses a pump powered by either an electric, pneumatic or petrol powered motor, to put the material under pressure and then press a defined amount of material with up to 540 bar through a nozzle forming a jet spray of material.

Recommended equipment

- **Airless machines with membrane**
Separation of material transport and machine system, thus easy to clean
- **Airless machines with piston**
Higher power but also need more cleaning

Compressor-powered units operate in contrast to electric or gasoline powered units without additional heat - the pot life can be fully utilized. Accordingly, compressor-powered devices are preferable. Transportable devices can be placed on a cart with material.

Requirements

The airless equipment needs to expel the material at a pressure of approx. 160 – 200 bar (setting dial with pressure gauge). The nozzle (made of stainless steel) should have a diameter >0,033 mm (standard 13 nozzle or 15 to 17 nozzles for larger surfaces.) Cleaning is done by spraying with water until no more material is left in the system. End of day final cleaning is done using a solvent. In between cleaning is only necessary in case of work interruption.



Example of a piston airless machine being used



Membrane airless machine with compressor drive



Easy to clean turn nozzle for all airless machines

TECHNICAL INFORMATION

Airless spray method

ROMEX® coatings and sealants with time and money saving airless spray method for floors, walls and ceilings.

Time is a major factor on most building sites. Work usually needs to be completed in a very short time and coatings need to have a perfect appearance and optimum characteristics. Thanks to use of the airless spray method, these requirements can now be fulfilled even better.

ROMPOX® 1009 Open to steam diffusion sealant is used with this method for thin coatings. Floors, walls, ceilings and angled rooms can be coated easily and efficiently using this method. ROMPOX® 1009 Open to steam diffusion sealant is excellent for use on cementbound surfaces that have rising damp. Thanks to its good water steam permeability, it can also be used on magnesite and anhydrite screeds as well as a sealant for hard poured asphalt indoors.

ROMPOX® 1009 open to steam diffusion sealant has the following properties:

- Epoxy resin based
- Open to steam diffusion
- For indoor and outdoor use
- Suitable for stadium stands
- Suitable for surfaces in contact with the ground
- Lightly structured surface
- Fulfills fire class B1 (flame resistant)
- Water emulsifiable
- Can be made nonslip by use of quartz sand or glass bead sprinkling
- Large selection of colours

Advantages of airless spray technology

- Quick coating of large surfaces
- Easy application
- Quick drying
- Enormous time saving
- Visually attractive result from no roller marks
- Low material consumption
- Ideal for hard to access or angled areas
- Lower costs



Gloss grades

Testing acc. to DIN 67530:

“Shine is an impression by the senses, created by the reflection of light rays onto the surface of a coating and perceived by the human eye”

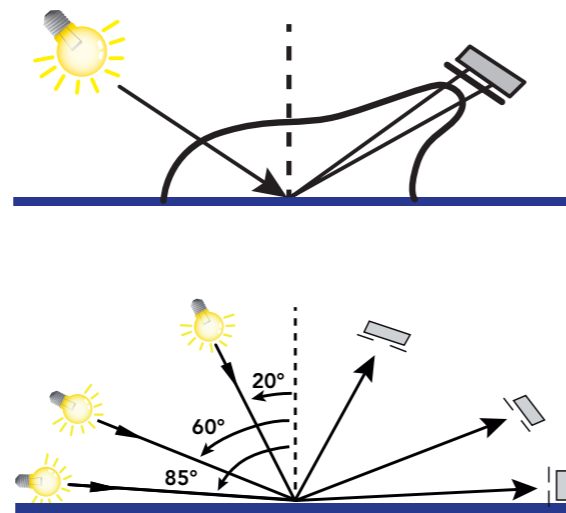


ROMPOX® 1005 coating, high gloss



ROMPUR® 2508 Matt sealant

Shine measuring is carried out using a reflectometer. The principle of the reflectometer is based on the measuring of the directed reflection. The intensity of the reflected light is measured within a narrow band of the reflection angle. The test results are not based on the quantity of light shown, but on a black, polished glass standard with defined refraction index. This standard uses the measured value 100 units of shine (100GE). It is possible to have materials and layers with values >100GE i.e. metal up to 2000GE. To differentiate better between the measuring values, depending on the shine, different measuring angles are used: high shine 20°, medium shine 60° and matt shine 85°. Nowadays “TriGloss” machines are used for measuring because they can measure all 3 angles



Description	Measuring angle	Reflectometer value
Gloss	60°	> 60
Medium shine	60°	< 60
Medium shine	85°	> 10
Matt	85°	< 10
Dull matt	85°	< 5

Thaw/melting point

acc. to ZTV-SIB 90

Air temperature in °C	Thaw/melting point in °C at a relative air humidity of approx.										
	45 %	50 %	55 %	60 %	65 %	70 %	75 %	80 %	85 %	90 %	95 %
2	-7,70	-6,56	-5,43	-4,40	-3,16	-2,48	-1,77	-0,98	-0,26	0,47	1,20
4	-6,11	-4,88	-3,69	-2,61	-1,79	-0,88	-0,09	0,78	1,62	2,44	3,20
6	-4,49	-3,07	-2,10	-1,05	-0,08	0,85	1,86	2,72	3,62	4,48	5,38
8	-2,69	-1,61	-0,44	0,67	1,80	2,83	3,82	4,77	5,66	6,48	7,32
10	-1,25	0,02	1,31	2,53	3,74	4,79	5,82	6,79	7,65	8,45	9,31
12	0,35	1,84	3,19	4,46	5,63	6,74	7,75	8,69	9,60	10,48	11,33
14	2,20	3,76	5,10	6,40	7,58	8,67	9,70	10,71	11,64	12,55	13,36
15	3,12	4,65	6,07	7,36	8,52	9,63	10,70	11,69	12,62	13,52	14,41
16	4,07	5,59	6,98	8,29	9,47	10,61	11,68	12,66	13,63	14,58	15,54
17	5,00	6,48	7,62	9,18	10,39	11,48	12,54	13,57	14,50	15,36	16,19
18	5,90	7,43	8,83	10,12	11,33	12,44	13,48	14,56	15,41	16,31	17,25
19	6,80	8,33	9,75	11,09	12,26	13,37	14,49	15,47	16,40	17,37	18,22
20	7,73	9,30	10,72	12,00	13,22	14,40	15,48	16,46	17,44	18,36	19,18
21	8,60	10,22	11,59	12,92	14,21	15,36	16,40	17,44	18,41	19,27	20,19
22	9,51	11,16	12,52	13,89	15,19	16,27	17,41	18,42	19,39	20,28	21,22
23	10,44	12,02	13,48	14,87	16,04	17,29	18,37	19,37	20,37	21,34	22,23
24	11,34	12,93	14,44	15,73	17,06	18,21	19,22	20,33	21,37	22,32	23,18
25	12,20	13,83	15,37	16,69	17,99	19,11	20,24	21,35	22,27	23,30	24,22
26	13,15	14,84	16,26	17,67	18,90	20,09	21,29	22,32	23,32	24,31	25,16
27	14,08	15,68	17,25	18,57	19,83	21,11	223,23	23,31	24,32	25,22	26,10
28	14,96	16,61	18,15	19,38	20,86	22,08	23,18	24,28	25,25	26,20	27,18
29	15,85	15,58	19,04	20,48	21,83	22,97	24,20	25,23	26,21	27,26	28,18
30	16,79	18,44	19,96	21,44	23,71	23,94	25,11	26,10	27,21	28,19	29,09
32	18,62	20,28	21,90	23,26	24,65	25,79	27,08	28,24	29,23	30,16	31,17
34	20,42	22,19	23,77	25,19	26,54	27,85	28,94	30,09	31,19	32,13	33,11
36	22,23	24,08	25,50	27,00	28,41	29,65	30,88	31,97	33,05	34,23	35,06
38	23,97	25,74	27,44	28,87	30,31	31,62	32,78	33,96	35,01	36,05	37,03
40	25,79	27,66	29,22	30,81	32,16	33,48	34,69	35,86	36,98	38,05	39,11
45	30,09	32,17	33,86	35,38	36,85	38,24	39,54	40,74	41,87	42,97	44,03
50	34,76	36,63	38,46	40,09	41,58	42,99	44,33	45,55	46,75	47,90	48,98



ROMEX® in Project

PREMIUM-QUALITY

FLOOR COATINGS

The following pages contain just a few, exquisite selection of projects, to illustrate the business activities of ROMEX®.
Request our reference brochure for more information or visit our website to check out more projects and inform yourself about our portfolio and the service we offer.



ROMPOX® 1070 Thix structured coating at FORD

FORD, founded in 1903 in Detroit, today belongs to the TOP-5 biggest automobile manufacturers in the world. The standard for Industrial floor coatings in the production facilities was to be unified worldwide and adapted with the goal of eliminating accidents caused by unsuitable flooring (lack of slip safety). The floor coating ROMPOX® 1070 Thix fulfills the current requirements for floors in FORD production facilities, worldwide!



LEFT Finished surface with ROMPOX® products

RIGHT Slip safety and cleaning capability are guaranteed



11 000 m² | 120 000 sq ft of coating in four underground car parks using ROMEX® surface protection system (OS 8)

At Gustav-Heinemann-Ufer, Cologne, a former office block was converted into a residential complex as well as the new construction of five apartments and an office building. To cater to these more than 320 residential units and offices, four underground car parks with a total surface area of approx. 11 000 m² | 120 000 sq ft were built.

16 000 m² | 180 000 sq ft carpark coating in Köln and Düsseldorf

5 000 m² | 54 000 sq ft OS 8 coating at Le Quartier Central

For the newly built luxury residential area Le Quartier Central in Düsseldorf, the general contractor BAM Germany AG, received the contract to build the two storey underground car parks in the Ciel et Terre and the Pandion d'or residential complex. A certified ROMEX® partner carried out the application of the primer ROMPOX® 1506OS and the topcoat ROMPOX® 1005OS to complete the OS 8 system incl. lines and marking paint.





MARKETING SALES SUPPORT TRAINING SERVICE

With experience and freshness, ROMEX® focuses its resources on the market segments in order to be always up to date. Sales are promoted through extensive sales promotion measures and materials as well as through numerous training courses and specialist seminars.

True to the motto:
How can we serve the customer?

Because our experience means your success!



The current dates can be found at:
<https://romex-ag.de/unternehmen/service/forum.html>

The seminars usually take place on Thursday between 10 am and approx. 3 pm. The cost for the 1 day seminar is € 50 per person. Lunch and drinks, as well as samples and flyers are included.

In case of staying longer, we can book a nearby hotel for you. Extra costs for this per person are 60,- € for a Three-star Hotel or 90,- € for a Four-star Hotel.

Should you not be able to participate on one of the set dates, ROMEX® will be happy to organise a personal training session for you (from five people)!

The number of participants for each forum day is limited to 25 persons. Should your required date be fully booked, we will be happy to suggest an alternative date.

Register with your ROMEX® contact person or at www.romex-ag.de

ROMEX®- Forum

You are warmly welcome!

After doing this Training, nobody else will be able to show you how to do it!

This is what you can expect from us:

- Theoretical application principles
- Expert seminars tailored to specific target groups
- Practical application using our techniques
- Repair of old paved stone joints without new construction
- Current subjects taught by experienced expert speakers
- Water permeable systems for footpaths and tree pits/grates



In the spring of 2008, a new training centre was opened in Euskirchen for carrying out seminars called the ROMEX® - FORUM. This is where you can learn the "secrets" behind the application of our systems. We provide the right solution for each problem.

Expert speakers will inform you on current subjects regarding jointing with synthetic resin pavement fixing mortars, laying of paving stones and guidelines. Target groups for theory and practical training courses are natural stone and construction trade specialists, construction company managers and local authorities, planners and architects as well as professional garden/landscapers.

A further training course covers the theory and practice of all matters involving floor coating. The main focus is the theoretical application basics as well as areas of application for the ROMEX® liquid plastic based systems, primers, coatings and sealants. Target groups for these courses are particularly floor coating companies, planners and architects.

You will have the opportunity to gain new insights as well as have the chance to exchange knowledge with like-minded persons and our trained expert personnel.





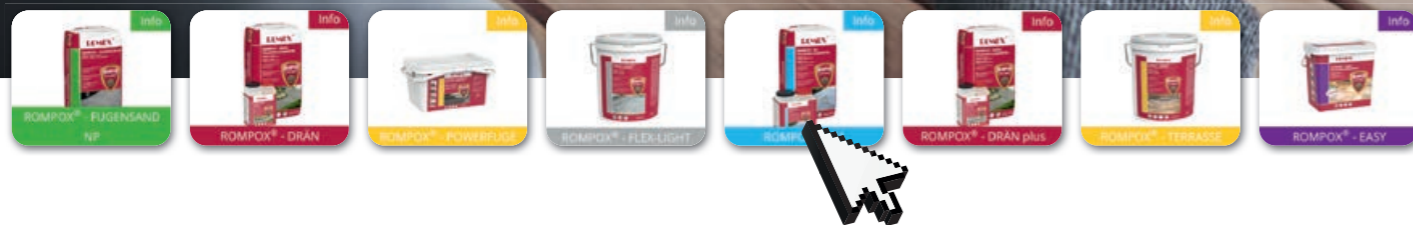
ROMEX®-News

We don't hold back current news about ROMEX®. Therefore we like to inform about products, projects, changes or news at

www.romex-ag.de

Always up to date. Sign in to the ROMEX® RSS Feed and don't miss news anymore.

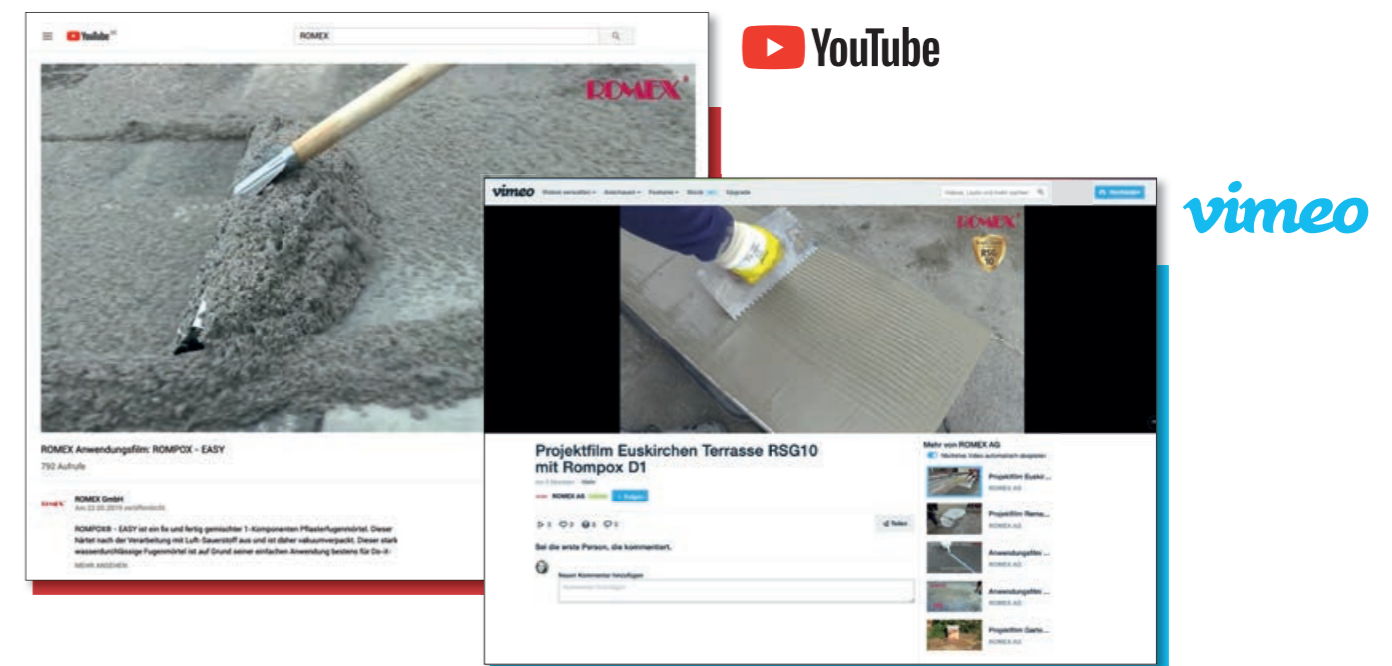
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Planning tool & Consumption calculator

With the consumption calculator, you can determine the material requirements for a specific product without any detours. In addition, you have the opportunity send directly your result as a request to ROMEX®.

With our **Tools**, we offer you a **practical service** to quickly and easily find the right answers.



Watch **our projects** and **films** on vimeo and youtube.