MAXPUR 2K

Flexible self-leveling polyurethane mastic

DESCRIPTION AND PROPERTIES

2-component,clear epoxy resin, suitable for use as an aggregate binder. Designed for use as a binder for pavement applications that gives draining floors, with no yellowing over time.

APPLICATIONS

Suitable for horizontal flooring joints. Expansion joints in concrete floorings with medium to heavy traffic. Fissure repairs in concrete screeds, roads, etc

TECHNICAL DATA

INFORMATION ON THE PRODUCT BEFORE APPLICATION

	Component A	Component B
Chemical description	Polyol mixture with mineral fillers	Polyisocyanate
Physical state	Liquid	Liquid
Packaging (pre-dosed sets A+B)	Metal container 17 kg 4,2 kg	Metal container 3 kg 0,6 kg
Non-volatile content (%)	Approx. 100%	100%
Flash point	>100ºC	>100ºC
Colour	Gray	Dark brown
Density (g/cm3 at 25ºC)	1,40 g/cm3	1,20 g/cm3

Viscosity

approximate Brookfield

Temp (ºC)	Viscosity (.s)
10	11000
25	3800
35	200

Temp (ºC)	Viscosity (.s)
10	200
25	90
35	<60

A/B mixing ratio	A=100, B=18 by weight A=100, B=21 by volume

Initial density and viscosityof the mixture

Temperature (ºC)	Density (g/cm3)	Viscosity (.s)
25	1,34	2260

Colour	Gray

Pot lifeapproximate values

Conditions (100g)	Pot life(min)
25ºC, 70% rh	55
35ºC, 35% rh	30
10ºC, 60% rh	70

Storage	Keep between 10ºC and 30ºC protected from moisture.
Use before	12 months after manufacturing date, in its unopened container.

INFORMATION ON THE FINAL PRODUCT

Final state	Solid flexible polyurethane
Colour	Gray
Solid density	1,35 g/cm3
Hardness (shore)	81A, 27D

Mechanical properties

Elongation (%)	Tensile strength ()
10	1,0
20	1,9
33	2,9

Elongation at break: 33%
Tension at break: 2,9

Ict resistance	>14,7 N/m (UNE-EN-ISO 6272)
Abrasion resistance	20 mg (Taber, CS-10, 1000 g, 500 cycles)
Adhesion	Concrete: 1,5 N/mm2 (EN 13892-8)
Chemical resistance	Permanent contact test (5=ok, 0=Not recommended)

Chemical	Result
Water	5
Chlorinated water 20 ppm	5
Hydrochloric acid (20%)	0
Hydrochloric acid (20%)	4
Vinegar	2
Sodium hydroxide (4%)	4
Bleach	3
Ammonia	4
Xylene	2
Isopropyl alcohol	0
Diesel	5
Engine oil	5

UV resistance	Maxpur 2k needs an aliphatic protection if colour change must be prevented. Nevetheless, colour change does not imply loss of mechanical properties.
Temperature of use	Stable between -15ºC and 80ºC.

SUPPORT REQUIREMENTS

Support must have the mechanical properties listed below:

Minimum cohesive strength: 1,5
Compression resistance: at least 25

Support must be completely free from water pressure from below. It must be clean, dry and with no signs of poorly adhesive areas. Moisture content should be less than 4%. It must be free from oil stains or other synthetic products.

Support temperature should be between 10ºC and 25ºC.
Where high moisture levels are suspected, a suitable primer, to be advised by Krypton Chemical, should be applied.

On new concrete slabs, wait a minimum of 21 days prior to use Maxpur 2k, in order to allow the support to dry thoroughly.

HUMIDITY AND TEMPERATURE

Air temperature: +10ºC to 30ºC
Relative humidity: less than 60%

SUPPORT PREPARATION

Contacting surfaces must be clean, free form dust, laitance and any loose material. Ideally, support should be rough and be dry. When needed, support can be cleaned by mechanical means, using sanding equipment and/or solvents and stripping chemicals for old coatings.
Use paper tape on the joint edges in order to avoid spill marks.

It is important to ensure ther is no moisture in the joint before application. – Where some residual water persists, some foaming/bubbling may occur. In these cases, the joint can be treated with Primer H and allowed to dry for a reasonable time.

Joints in very porous materials can be primed with Primer TP, allowing the product to dure for several hours before applying Maxpur 2k.

MIXING

Open container of component A. Stir gently to redisperse fillers and avoid trapping of air. Stir for 2 minutes. Pour component B into the A container and continue stirring for 2 more minutes. Transfer the mixture to a bigger container and check there is no unmixed product left.

APPLICATION

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Maxpur 2K can be used as a filler in joints and cracks 8-40 mm wide. As a general rule, joint depth should be half of the width. Exceptionally, joints less than 15 mm wide can have the same depth. In all expansion joints, width must be four times the expected movement distance. For deep joints, it is advisable to use a polyethylene stopper (Rayston Fond PE) having a diameter 25% larger than the joint width.
If masking tape is used for preventing spills, it is important to remove ir before curing of Maxpur 2k.

RECOMMENDED AMOUNTS

As an estimation of the amount of Maxpur 2k needed, use the following rule:

Consumption (kg/m of linear joint) = 0,14 * (1/100) * joint width (mm) * joint depth (mm).

Example: for a 10 mm x 10 mm joint, estimated material is 0,14 kg for 1 m of joint. These values may vary depending on the surface conditions and the application tools used. It is recommended to test beforehand to assess the final quantities needed.

CURING TIME

Conditions	Light Walking traffic (h)	Fully cured (days)
25ºC, 60% rh	15	4
25ºC, 40% rh	18	4
35ºC, 40% rh	15	3
6ºC, 60% rh	100	8

REAPPLICATION

A second application can be done after 24 hours from the curing (walking) of the first one.

RETURN TO SERVICE

Under usual conditions, light pedestrian traffic is allowed the following day. A degree of curing suitable for most uses is achieved in 3 or 4 days.

TOOL CLEANING

Component A and B can be cleaned with solvent Rayston. Cured product cannot be dissolved.

FAQ

Problem	Answer
Bubble/blister formation	Bubbles form easily under not optimal ambient conditions. Do not apply the product in warm and/or humid environments. Ensure correct primer application, with enough thickness to be sure all porosity has been sealed. Under humid conditions, an addition of solvent Rayston (up to 10%) at component A before mixing can help to block moisture pickup. Bubble-affected areas have to be sanded and a new fresh coat of Maxpur 2k applied onto.
Soft spots. Uncured areas	When mixing is not complete, some pockets containing unmixed component A remain, which are poured toghether with the mixed mass. These areas remain as a soft spots, sometimes under a cured, hard skin. Repair them by removing the liquid material and refill with fres mixture.
Colour changes	Under sunlight, aromatic polyurethanes undergo colour change to yellow/brown. This does not iir their mechanical properties, but it may affect the aesthetic appearance. This can happen even in a short time after the application. Apply a protective, colour-stable aliphatic topcoat when colour stability is important
Uneven surface even after application	A cavity filling primer is needed, as recommended combination for uneven supports.

SAFETY

Maxpur 2k contains isocyanates. Always follow the instructions provided in the material safety data sheet and take the precaution described there. As a general rule, a suiable ventilation must be ensured and any skin contact avoided. This product is intended to be used only for the uses and in the way here described. This product is to be used only by industrial or professional users. It is not suitable for DIY-type uses.

ENVIRONMENTAL PRECAUTIONS

Empty containers must be handled taking the same precautions as if they were full. Containers must be considered as hazardous waste, to be tranferred to an authorized waste manager. If there is some residual product in the containers, component A and B can be mixed, always according to the A/B ratio, and allowed to cure. Do not mix volumes bigger than 5 litres in order to prevent dangerous reactions.

OTHER INFORMATION

The information contained in this DATA SHEET, as well as our advice, both written as verbal or provided through testing, are based on our experience, and they do not constitute any product guarantee for the installer, who must consider them as simple information.
We recommend to study deeply all information provided before proceeding to the use or application of any of our products, and strongly advise to conduct tests “on-site” in order to determine their convenience for a specific project.
Our recommendations do not exempt of the obligation of installers to deeply study the right application method for these systems before use, as well as to conduct as many preliminary tests as possible should any doubt arise. The application, use and processing of our products are beyond our control, and therefore under the exclusive responsibility of the installer. In consequence, the installer will be the only responsible of any damage derived from the partial or total in-observation of our indications, and in general, of the inappropriate use or application of these materials.
This data sheet supersedes previous versions.

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