

MAPEFLEX PU50 SL

Fluid polyurethane sealant with a low modulus of elasticity for flooring joints



WHERE TO USE

Mapeflex PU50 SL is specially formulated for sealing structural expansion and distribution joints in internal and external horizontal surfaces subject to movement of $\pm 25\%$ of their original size.

Some application examples

Sealing expansion and distribution joints in:

- industrial concrete floors, even those subject to intense traffic;
- internal and external car-parks;
- floors in service stations and car-washes;
- airport transit zones and runways;
- terraces with ceramic finishes.

TECHNICAL CHARACTERISTICS

Mapeflex PU50 SL is a one-component, ready-to-use, easy-to-apply polyurethane-based sealant with a low modulus of elasticity, made according to a formula developed in MAPEI's own Research Laboratories.

Mapeflex PU50 SL cures by means of a chemical reaction with atmospheric humidity, to form a flexible product which offers a high guarantee of durability over time. This product is highly resistant to atmospheric agents and is also resistant to occasional chemical attack by hydrocarbon-derived products, such as benzene, kerosene and diesel fuel.

Mapeflex PU50 SL may only be used on horizontal surfaces or surfaces with a maximum slope of 2%.

Before painting over **Mapeflex PU50 SL** it must be fully cured. We recommend using elastomeric paint such as

Elastocolor Paint after treating the surface of the sealant with **Colorite Performance**. Always carry out preliminary tests to make sure the sealant and paint are compatible.

The product is supplied ready to use in 600 ml aluminium soft cartridges or 12 kg plastic drums (approx. 10 litres).

The product has a fluid consistency for quick application and, due to its quick-hardening characteristics (approx. 2 mm every 24 hours), the surface may be put into service quickly with resulting economic advantages.

Mapeflex PU50 SL is available in 111 grey.

Mapeflex PU50 SL is classified F - 25 - LM, according to ISO 11600.

Mapeflex PU50 SL complies with Euronorm EN 15651-4 ("Sealants for pedestrian walkways") with performance rating PW-EXT-INT-CC.

RECOMMENDATIONS

- Do not use on dusty or flaky surfaces.
- Do not use on damp surfaces.
- Do not use on surfaces which are contaminated with oil, grease or form-release agents, since the bonding could be compromised.
- Do not use on bituminous surfaces where the bleeding of oil may be present.
- Do not apply **Mapeflex PU50 SL** if the temperature is lower than +5°C.

APPLICATION PROCEDURE

Preparation of the surface to be sealed

All the surfaces to be sealed must be dry, sound and free of dust, crumbly parts, oil, grease, wax and old paint. To guarantee that the sealant works correctly, it must be free to expand and contract in the joint. Therefore, it is important that **Mapeflex PU50 SL** only bonds perfectly to the side walls of the joint, and must not bond to the bottom. When sealing, **Mapeflex PU50 SL** compensates for movements of up to $\pm 25\%$ the width of the joint. To regulate the depth of **Mapeflex PU50 SL** and to avoid it sticking to the bottom of the joint, **Mapefoam** closed-cell, expanded polyurethane flexible cord of a suitable diameter must be inserted beforehand in the joint. The depth of the sealant is defined according to the table below:

WIDTH OF JOINT	DEPTH OF SEALANT
Up to 10 mm	Same as width
From 11 to 20 mm	10 mm in all cases
More than 20 mm	Half the width

To avoid the sealant spreading out of the joint, and to leave an attractive finish, we recommend using masking tape along the joints.

Mapeflex PU50 SL bonds well even without the use of a primer on substrates which are solid, free of dust and perfectly clean and dry. We recommend applying **Primer M** or **Primer A** on loose substrates and on substrates that are subjected to high deformations or immersion in liquids for prolonged periods.

We also recommend applying **Primer M** or **Primer A** on absorbent materials with high residual moisture content.

If **Mapeflex PU50 SL** is applied on non-absorbent surfaces, such as iron, steel, aluminium, copper, ceramic, clinker, glass or zinc-plated or painted sheet, its bonding capacity is good. Applying **Primer M** improves adhesion of the sealant to any type of substrate.

Application of the primer

Using a brush, apply a thin, uniform layer of **Primer M** or **Primer A**, one component polyurethane primers around the edges of the joint. The successive application of sealant must only be carried out once the primer is no longer sticky.

Preparation and application of Mapeflex PU50 SL

Mapeflex PU50 SL comes in 600 ml soft cartridges. Insert the tube of **Mapeflex PU50 SL** in the special extrusion gun, cut off the tip of the tube and inject the product into the joint.

For industrial applications it is also available in drums that can be used to pour the product or with suitable pumping equipment. Contact MAPEI Technical Services Department for further information.

CONSUMPTION

The consumption of **Mapeflex PU50 SL** varies according to the size of the joint. Consult the table below for consumption of the product:

CONSUMPTION TABLE		
Size of the joint in mm	Linear metres	
	600 ml soft cartridges	12 kg drums
5 x 5	24	400
10 x 10	6	100
15 x 10	4	67
20 x 10	3	50
25 x 12.5	1.9	32
30 x 15	1.3	22

CLEANING

Mapeflex PU50 SL may be removed from surfaces, tools, clothing etc. with toluene or alcohol before the hardening reaction takes place. After hardening, it may only be removed mechanically or with **Pulicol 2000**.

PACKAGING

20 pieces bags (600 ml soft-cartridges), 12 kg drums (approx. 10 litres).

COLOURS AVAILABLE

Mapeflex PU50 SL is available in 111 grey.

STORAGE

Mapeflex PU50 SL may be stored for 12 months in a cool, dry place.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Mapeflex PU50 SL may cause sensitisation if inhaled and allergic reactions in those subjects sensitive to isocyanates. It is also corrosive and may damage the eyes. During use, wear protective gloves and goggles and take the usual precautions for handling chemicals. If the product comes into contact with the eyes or skin, wash immediately with plenty of clean water and seek medical attention. Use a suitable device to protect the respiratory track.

For further and complete information about the safe use of our product please refer to the latest version of our Material Safety Data Sheet.

PRODUCT ONLY FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)	
PRODUCT IDENTITY	
Classification according to EN 15651-4:	PW-EXT-INT-CC, 25 LM class
Appearance:	self-levelling paste
Colour:	111 grey
Density (g/cm ³):	1.30
Dry solids content (%):	98
Brookfield viscosity at +23°C - 50% R.H. (mPa·s):	25,000
APPLICATION DATA (at +23°C - 50% R.H.)	
Recommended application temperature range:	from +5°C to +35°C
Dust dry:	1 hour
Final setting after:	3 mm/24 hours; 4 mm/48 h
Set to light foot traffic:	dependant on the depth of the joint
FINAL PERFORMANCES	
Shore A hardness (DIN 53505):	30
Tensile strength (DIN 53504S3a) (N/mm ²) – after 28 days at +23°C:	1.00
Elongation at break (DIN 53504S3a) (%) – after 28 days at +23°C:	900

Resistance to UV rays:	excellent
In service temperature:	from -40°C to +70°C
Elongation in service (continuous use) (%):	25
Classification according to ISO 11600:	class E - 25 - LM
Modulus of elasticity at +23°C (ISO 8339) (N/mm ²):	0.20
Modulus of elasticity at -20°C (ISO 8339) (N/mm ²):	0.40

WARNING

Although the technical details and recommendations contained in this product data sheet correspond to the best of our knowledge and experience, all the above information must, in every case, be taken as merely indicative and subject to confirmation after long-term practical application; for this reason, anyone who intends to use the product must ensure beforehand that it is suitable for the envisaged application. In every case, the user alone is fully responsible for any consequences deriving from the use of the product.

Please refer to the current version of the Technical Data Sheet, available from our website www.mapei.com

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416-11-2016-gb

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