



Mapeflex PU50 SL

One component, fluid polyurethane sealant with a low modulus of elasticity for sealing flooring joints subject to movement up to 25%



WHERE TO USE

Mapeflex PU50 SL is specially formulated for sealing expansion and distribution joints in internal and external horizontal surfaces subject to movement up to 25% of their original size under continuous use.

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 and stone finishes;
- floors made using the **Ultratop System**.

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

Mapeflex PU50 SL polymerises by means of a chemical reaction with atmospheric humidity, to form a

flexible product which offers a high guarantee of durability over time. In fact, 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%.

The product is ready to use and is available in aluminium bags, equipped with a special extrusion gun which makes the product particularly easy to use.

The product has a fluid consistency for quick application and, thanks 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 grey.

RECOMMENDATIONS

- Do not use on dusty or flaky surfaces.
- Do not use on surfaces which are very damp.
- Do not use on surfaces which are contaminated with oil, grease or form-release agents, the bonding could be compromised.
- Do not use on tarmac 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 stretch and expand in the joint. Therefore, it is important that **Mapeflex PU50 SL** only bonds perfectly to the side walls of the joint, and must not touch the bottom.

The size of the joint must be calculated so that, when in service, it expands less than or equal to 25% of its initial size.

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 with a suitable diameter must be inserted beforehand in the joint.

The depth of the sealant is defined according to the table below:

Width/depth ratio		
Size of the joint	Width	Depth
0-10 mm	1	1
10-30 mm	2	1

To avoid the sealant spreading out of the joint, and to leave an attractive finish, we recommend using masking tape around 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 AS** if the surface in concrete, mortar, wood, natural stone and cotto is not solid enough, if it has a slightly powdery surface or if the joints are subject to high mechanical stress or frequent, prolonged contact with liquids.

We also recommend applying **Primer AS** on cementitious surfaces which are still fresh.

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. However, to further improve bonding, we recommend that, under certain conditions, the material is treated with **Primer M**.

Application of Primer AS

Apply **Primer AS** (one component, transparent, epoxy-isocyanate primer in solvent for absorbent substrates) around the edges of the joint. According to the porosity

of the substrate, two coats of **Primer AS** may be applied. The sealant must only be applied when the primer is no longer sticky (approx. 60 mins. at +23°C and 50% R.H).

Application of Primer M

Using a brush, apply a thin, uniform layer of **Primer M**, one component, solvent-free polyurethane primer for non-absorbent surfaces around the edges of the joint. The successive application of sealant must only be carried out once the primer is no longer sticky (after approximately 40 minutes at +23°C and 50% R.H).

Preparation and application of Mapeflex PU50 SL

Mapeflex PU50 SL comes in 600 ml tubes. 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.

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	Metres
5 x 5	24
10 x 10	6
15 x 7.5	5.3
20 x 10	3
25 x 12.5	1.9
30 x 15	1.3

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**.

PACKAGING

20 pcs bags (600 ml soft-cartridges).

COLOURS AVAILABLE

Mapeflex PU50 SL is available in light 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 is an irritant and may cause serious damage if it comes into contact with the eyes. It may also cause rashes in those who are allergic to such substances. While handling the product, protect the face and eyes and wear protective gloves; use in well-ventilated areas. If the product comes into contact with the skin, wash immediately with plenty of water. If it comes into contact with the eyes, wash with plenty of water and seek specialist medical attention.

TECHNICAL DATA (typical values)	
PRODUCT IDENTITY	
Appearance:	self-levelling paste
Colour:	light grey
Density (g/cm³):	1.2
Solid content (%):	97.5
Brookfield Viscosity at +23°C - 50% R.H. (mPa·s):	40.000 ± 5.000
Storage:	12 months in its original, unopened packaging
Hazard classification according to EC 1999/45:	harmful. Before using refer to the "Safety instructions for preparation and application" paragraph and the information on the packaging and Safety Data Sheet
Customs class:	3909 50 00
APPLICATION DATA (at +23°C - 50% R.H.)	
Recommended application temperature range:	from +5°C to +35°C
Dust dry:	approx. 1 hour 30 minutes
Final setting after:	24 hours per 2 mm of thickness
Set to light foot traffic:	dependant on the depth of the joint
FINAL PERFORMANCES	
Shore A hardness (DIN 53505):	20
Tensile strength (DIN 53504S3a) (N/mm²) – after 7 days at +23°C:	2.3
Elongation at break (DIN 53504S3a) (%) – after 7 days at +23°C:	> 1,000
Resistance to UV rays:	excellent
In service temperature:	from -20°C to +70°C
Elongation in service (continuous use) (%):	25
Classification according to ISO 11600:	class F - 25 - LM
Modulus of elasticity at +23°C (ISO 8339) (N/mm²):	0.32
Modulus of elasticity at -20°C (ISO 8339) (N/mm²):	0.37

**Mapeflex
PU50 SL**

FOR PROFESSIONALS.

WARNING

While the indications and guidelines contained in this data sheet correspond to the company's knowledge and wide experience, they must be considered, under all circumstances, merely as an indication and subject to confirmation only after long-term, practical applications. Therefore, anybody who undertakes to use this product, must

ensure beforehand that it is suitable for the intended application and, in all cases, the user is to be held responsible for any consequences deriving from its use.

**All relevant references
for the product are available
upon request and from
www.mapei.com**

(GB) A.G. BETA

Any reproduction of texts, photos and illustrations published
here is prohibited and subject to prosecution

416-1-2007