MAPEFLEX PU 65

Two-component, castable polyurethane sealant for road joints flush with the surface





WHERE TO USE

Mapeflex PU 65 is a two-component polyurethane elastomeric sealant, specifically developed for highway construction joints and for filling / sealing anchoring heads made from pre-formed rubber, reinforced rubber and steel road joints between adjacent decks and between deck and abutments of road substructures, such as roads, railways, airports.
Due to its physical and mechanical properties, **Mapeflex PU 65** can be used as a connection sealant between prefabricated road joints and the adjacent bituminous conglomerate, creating a seal between the two elements while guaranteeing considerable surface hardness and mechanical resistance to friction.
Mapeflex PU 65 is resistant to bad weather conditions and deformability due to compression, with good tensile and shear strength.
Mapeflex PU 65 can be used for surface sealing of the anchoring bolts in pre-formed rubber sections.
Mapeflex PU 65, after mixing the two components A+B, can be added to specific mineral fillers which allow it to obtain different mechanical and deformation properties depending on the different foreseen stresses.

TECHNICAL CHARACTERISTICS

Mapeflex PU 65 is an elastomeric polyurethane based sealant. It is composed of two pre-dosed components: part A is a resin, part B is a hardener. After mixing the two components, the product becomes a cohesive pourable mixture.
When large voids have to be filled, **Mapeflex PU 65** can be mixed with **Quartz 0.5**, a mixture with controlled granulometry of alluvium spherical quartz of light grey colour with maximum aggregate size of 0.5 mm, up to a maximum ratio of 1:1 by weight. The addition of an aggregate enhances the mechanical characteristics of friction resistance and the thixotropy of the product, but the sealant deformability is decreased.
Mapeflex PU 65 is solvent free and the slight smell, that can be noticed, is only due to the resin.
Mapeflex PU 65 cross-links because of the reaction between resin and hardener. The substrate temperature and the environment can influence anyway the cross-linking time of the sealant: high temperatures reduce the workability time of the mixture and accelerate the setting time. Low temperatures make the reaction time longer.
The curing time of the sealant may be reduced if required by adding the specific accelerator **Mapeflex PU 65 Catalyst**.
After crosslinking, **Mapeflex PU 65** becomes an elastomeric substance characterized by a high surface hardness which can deform under compressive, tensile and shear loads.
Mapeflex PU 65 is suitable to support vehicular traffic, on roads, freeways and highways.
Mapeflex PU 65 is the ideal product to carry out sealing substrates subject to limited movements and heavy loads.

RECOMMENDATIONS

- Do not use on dusty and flaky surfaces.
- Do not use on damp surfaces.
- Do not use on surfaces which are contamined with oil, grease or form-release compounds, as bonding could be compromised.
- Do not use on bituminous surfaces where the bleeding of oil may occur.
- Do not apply **Mapeflex PU 65** if temperature is lower than 0°C.

For the correct dimensions of the sealant section refer to the specifications of the manufacturer of the road joints.

APPLICATION PROCEDURE

Preparation of surface to be sealed

All surfaces to be sealed must be dry, sound and free of dust, laitance, oil, grease, wax and old paint.
The use of **Mapei Primerseal M** adhesion primer improves adhesion on all absorbent, compact surfaces. Rubber and plastics in general need to be sanded beforehand.

Preparation and application of Mapeflex PU 65

Mapeflex PU 65 comes in a 10 kg plastic drums (A+B). Homogenize the single components, pour component B into component A, mix with a drill with low rotation speed without entraining air, avoid partial mixing as it will not guarantee the correct ratio between resin and hardener. Immediately after mixing the two components, pour the product, without entraining air, directly from the drum into the joint with a metallic trowel.
When the setting and hardening times need to be reduced, add the specific accelerator (**Mapeflex PU 65 Catalyst**) after mixing components A+B.
The product can be mixed with a quartz aggregate of proper particle size distribution (**Quartz 0.50**) till a ratio of 1:1 by weight is reached (1:0,76 by volume).



Casting neat Mapeflex PU 65 into the anchorage points



Transition sealed with Mapeflex PU 65 mixed with sand



Polymerised Mapeflex PU 65 ready for service

CONSUMPTION

1.2 kg per litre (only components A+B).

CLEANING

Mapeflex PU 65 can be removed from surfaces, tools, clothing, etc with toluol or alcohol before the hardening reaction takes place. After hardening it may only be removed mechanically or with **Pulicol 2000**.

PACKAGING

10 kg drums (components A+B).
Possible **Quartz 0.5**, 25 kg bags.

Mapeflex PU 65 Catalyst accelerant, if required, in 120 g canisters.

COLOURS AVAILABLE

Mapeflex PU 65 is available in black.

STORAGE

Mapeflex PU 65 may be stored up to 12 months in a cool, dry place.
Component B must be kept at more than +5°C. At lower temperatures it tends to crystallise.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Instructions for the safe use of our products can be found on the latest version of the Safety Data Sheet, available from our website www.mapei.com.
PRODUCT FOR PROFESSIONAL USE.

TECHNICAL DATA (typical values)

PRODUCT IDENTITY	
Appearance:	pourable paste
Colour:	black
Density comp A:	1.23 g/cm³
Density A+B:	1.20 g/cm³
Density A+B+Quartz 0.5 charged 1:1 by weight:	1.60 g/cm³
Solids content A+B:	100%
Solids content A+B+Quartz 0.5:	100%
Viscosity Brookfield comp. A:	12,000 mPa·s ± 2,000 (rotor 5 - 20 revs)
Viscosity Brookfield comp. A+B:	5,000 mPa·s ± 500 (rotor 5 - 20 revs)
Viscosity Brookfield comp. A+B+Quartz 0.5 charged 1:1 by weight:	20,000 mPa·s ± 3,000 (rotor 7 - 50 revs)

APPLICATION DATA (at +23°C and 50% R.H.)	
Application temperature range:	from 0°C to +35°C
Workability time:	A+B (normal setting) approx. 15-20 mins. A+B (*) (fast setting) approx. 5 mins
Dust dry:	A+B (normal setting) approx. 40-50 mins A+B (*) (fast setting) approx. 15-20 mins.
Set to foot traffic:	A+B (normal setting) approx. 2-3 h A+B (*) (fast setting) approx. 75-90 mins
Final hardening time:	A+B (normal setting) approx. 24 h A+B (*) (fast setting) approx. 6-8 h

FINAL PERFORMANCE (after 7 days at +23°C + 14 days at +50°C)	
Shore A hardness Comp. A+B (DIN 53505):	80
Shore A hardness Comp. A+B+Quartz 0.5 (DIN 53505):	90
Shear strength Comp. A+B (DIN 53504):	5.5 N/mm²
Shear strength Comp. A+B+Quartz 0.5 (DIN 53504):	4.0 N/mm²
Elongation at break Comp. A+B (DIN 53504):	250%
Elongation at break Comp. A+B+Quartz 0.5 (DIN 53504):	85%
Resistance to UV:	very good
In service temperature:	from -40°C to +70°C

* ***Mapeflex PU 65*** *components A+B admixed with* ***Mapeflex PU 65 Catalyst*** *accelarant*

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

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