MAPEI

Mapeflex PU20

Self-levelling, two-component polyurethane sealant for flooring joints subject to movements of up to 10%

WHERE TO USE

- Abrasion-resistant seals in joints in external and internal industrial floors subject to intense traffic.
- Sealing joints in rubber and PVC floors.

Some application examples

- Sealing expansion joints in concrete floors in car parks and industrial buildings subject to vehicle traffic or where high resistance to chemical agents is required.
- Sealing movement joints in ceramic floors in areas subject to intense traffic such as supermarkets, industrial environments, pavements, pedestrian crossings, arcades, squares and in areas with forklift trucks movement.
- Sealing rubber and PVC floors by filling the joints between each single block or sheet.
- Flexible seals in bases for industrial machinery.
- Flexible seals around pipe-work, waste pipes, manholes, etc.
- Flexible seals of joints in hydraulic applications, such as canals, basins, treatment tanks, swimming pools and water tanks.

TECHNICAL CHARACTERISTICS

Mapeflex PU20 is a two-component, self-levelling sealant formed by a polyurethane polymer without free isocyanates (component A) and a special catalyst (component B), made according to a formula developed in MAPEI's own research laboratories.

When the two components are mixed together, a self-levelling, free-flowing paste with a uniform colour is obtained.

Mapeflex PU20 may only be applied on horizontal surfaces.

After hardening, which occurs by means of a chemical reaction and without shrinking, **Mapeflex PU20** is flexible, resistant to water and heat, has high resistance to abrasion and bonds well to all materials normally used in the building industry.

Mapeflex PU20 also has good resistance to chemicals. However, since the product may be subject to a wide range of chemical products and working conditions, preliminary testing must be carried out.

Mapeflex PU20 is resistant to temperatures from –30° to +80°C.

RECOMMENDATIONS

- Do not use on substrates which are subject to rising damp.
- Do not use on surfaces which are damp.
- Do not use on tarmac surfaces which have been laid recently or where the bleeding of oil may be present.
- Do not apply **Mapeflex PU20** if the temperature is lower than +10°C.

Mapeflex PU20

• On vertical surfaces, use **Mapeflex PU30**.

APPLICATION PROCEDURE

Mixing

The two components which make up **Mapeflex PU20** are supplied in pre-dosed quantities.

• Component A: 94 parts in weight;

• Component B: 6 parts in weight.

The most suitable method for mixing is by means of a low-speed mixer, until a smooth paste with a uniform colour is obtained.

The setting time and pot life of the product depend on the surrounding temperature.

Once mixed, the pot life of the product at +23°C is approximately 45 minutes, but the self-levelling property of the product is at its best during the first 30 minutes. Therefore, we recommend mixing quantities of product which may be applied within this time.

The mixing ratio between the resin (component A) and the catalyst (component B) must be strictly followed.

Do not use partial quantities of the packages, unless the dosage rate of the two components (94 : 6) is measured with high-precision electronic scales.

Application

All the surfaces to be sealed must be dry, sound and free of dust, crumbly parts, oil, grease and wax.

In order to guarantee that the sealant functions correctly, it must be able to stretch and compress freely once it has been poured into the joints.

Therefore, it is important that **Mapeflex PU20** only bonds to the sides of the joint and not to the bottom, and that the depth of the joint is always less than its width.

To regulate the depth of **Mapeflex PU20** and to avoid it sticking to the bottom of the joint, **Mapefoam** expanded polyurethane must be inserted beforehand in the joint to form a compressible seal.

The size of the joint must be calculated so that, when in service, it moves less than 10% of its total width.

Sealing is normally carried out immediately after mixing **Mapeflex PU20** in a container by pouring it directly into the joint.

In certain cases, masking tape may be required around the joints to avoid rough edges.

CONSUMPTION

According to the size of the joints, bearing in mind that the density of **Mapeflex PU20** is 1,330 kg/m^2.

Cleaning

Mapeflex PU20 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**.

COLOURS AVAILABLE

Mapeflex PU20 is available in anthracite grey.

Special colours are available upon request in quantities of at least 500 kg.

PACKAGING

Mapeflex PU20 is available in 10 kg kits (component A 9.4 + component B 0.6) and 5 kg kits (component A 4.7 + component B = 0.3).

STORAGE

Store the product in a dry place at a temperature between +10°C and +35°C.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

Component A of **Mapeflex PU20** irritates if it comes into contact with the eyes or skin.

Component B of **Mapeflex PU20** is corrosive. If it comes into contact with the eyes or skin, it may cause serious injury or burns. If the products come into contact with the eyes or skin, wash off immediately with water and seek medical advice.

The resins contained in **Mapeflex PU20** may cause rashes. Avoid contact with the skin by using protective gloves and goggles.

Mapeflex PU20 is dangerous for aquatic life: do not dispose the product in the environment.

PRODUCT FOR PROFESSIONAL USE ONLY.

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 of the product are available upon request

TECHNICAL DATA (typical values)

PRODUCT DETAILS		
	component A	**component B**
Consistency:	fluid paste	liquid
Colour:	anthracite grey	straw-coloured, transparent
Density (g/cm³):	1.35	0.92
Dry solids content (%):	96.5	100
Brookfield viscosity at 10 revs (mPa·s):	50,000 # 7	250 # 1
Shelf life:	**Mapeflex** remains stable for at least 2 years if stored in its original, sealed containers	
Hazard classification according to EC 99/45:	irritant	corrosive, dangerous for the environment. Before using refer to the "Safety instructions for preparation and application" paragraph and the information on the packing and Safety Data Sheet
Customs class:	3909 50 00	
APPLICATION DATA at 23°C – 50% R.H.		
Mixing ratio:	component A : component B: = 94 : 6	
Consistency of the mix:	fluid	
Brookfield viscosity of mix at 10 revs (mPa·s):	20,000 # 7	
Density of mix (kg/m³):	1,330	
Pot life of mix (workability time):	45 minutes	
Recommended application temperature range:	from +10°C to +30°C	
End of setting time:	9 hours	
Step-on time:	after 24-36 hours	
Waiting time before putting into service:	7 days	
FINAL PERFORMANCES		
Tensile strength (according to DIN 53504-S3a) (N/mm²):	1.9	
Elongation at breakage (according to DIN 53504-S3a) (%):	190	
Shore A hardness:	50	
Movement in service (continuous service) (%):	max 10	
Abrasion resistance:	excellent	
Resistance to humidity:	excellent	
Resistance to ageing:	excellent	
Resistance to solvents and oil:	good	
Resistance to acids and alkalis:	good	
In service temperature range:	from -30°C to +80°C	
Flexible:	yes	

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