MAPEI

Plastimul 2K

Two-component bitumen emulsion with cellulose fibres

WHERE TO USE

Plastimul 2K is used for waterproofing horizontal and vertical surfaces at low surrounding temperatures or in the presence of excessive humidity.

Plastimul 2K is a two-component, solvent-free bitumen emulsion with added cellulose fibres and hydraulic filling binders.

Plastimul 2K is particularly recommended when waterproofing operations are carried out at low temperatures or if there is a high level of humidity, and when it is applied on smooth surfaces. It is also used for spot bonding insulating panels, used for protecting perimeter waterproofing layers.

Some typical application examples

Plastimul 2K is used for:

- external waterproofing on foundations, cellars and underground garages;
- load-bearing walls;
- waterproofing external tanks, containers and wells to protect against aggressive water;
- bonding insulation panels and drainage slabs on mineral and bitumen substrates;

TECHNICAL CHARACTERISTICS

Plastimul 2K is a two-component, fibre-reinforced bitumen emulsion with added synthetic materials and a powdered cement component to accelerate drying when it is applied at low temperatures or if there is excessive humidity.

Plastimul 2K is solvent-free, ecological, has good workability, is flexible and has crack-bridging capacities.

Plastimul 2K is thixotropic, which means it may also be applied on vertical surfaces.

Plastimul 2K is resistant to aggressive substances normally found in the ground.

Plastimul 2K adheres to both dry and slightly damp surfaces.

RECOMMENDATIONS

Do not use **Plastimul 2K** in the following cases:

- mixed with solvents;
- at temperatures below +5°C or higher than +30°C;
- subject to ware in counter-pressure;
- without a protective layer.

APPLICATION PROCEDURE

Preparation of the substrate

Carefully remove traces of installation mortar protruding from between the bricks or blocks. Grout any empty spaces in the joints using either **Planitop 400** thixotropic, shrinkage-compensated, quick-setting and hardening mortar if waterproofing is required quickly, or **Mapegrout Thixotropic** or **Mapegrout T40**

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pre-blended, shrinkage-compensated, normal-setting, fibre-reinforced mortar. Cavities and cracks deeper than 5 mm must be smoothed over with **Planitop 400**. As an alternative, if cavities are less than 5 mm deep, the surface may be smoothed over with a bitumen waterproofing product, to avoid entrapment of air and the formation of blisters.

As an alternative, mortar made using sand and cement with added **Planicrete** synthetic rubber latex resistant to saponification may be used.
For this application, we recommend diluting 1 part of **Planicrete** with 2 parts of water, added to mortar made up of 1 part of cement and 2-3 parts of sand of a suitable grain size. Create a fillet to blend in the foundations with the side walls using **Planitop 400**, **Mapegrout Thixotropic** or **Mapegrout T40**.

Application of the primer
After preparing the substrate as indicated, apply **Plastimul Primer** solvent-free, quick-drying, ready-to-use, low viscosity, bitumen emulsion on the surface using a brush, a roller or by spray to even out the substrate. Consumption depends on the absorption of the substrate and is usually from 200 g/m^2 to 300 g/m^2.

Mixing
The powder and liquid components are pre-dosed. Mix component A at a low speed (400 revs/min) until it becomes liquid. Then add the powder component (B) and mix the blend until it is homogenous and lump-free.

Application of the waterproofing layer
Plastimul 2K must be applied at a constant thickness over the whole surface. Do not apply in thicknesses lower than those indicated regarding a dry layer, and do not apply more than 100% of the thickness of the wet layer.
The product may be applied using either a flat or notched trowel.
Apply **Plastimul 2K** on the horizontal/vertical fillet to cover all the foundations. Do not interrupt application in the corners. If work does need to be interrupted, apply a layer of **Plastimul 2K** and smooth over to a feather edge. When work recommences, overlap the material by 10 cm.

Waterproofing against humidity present in the ground without a build-up of water according to DIN 18195-4
Once the **Plastimul Primer** has dried, apply at least two coats of **Plastimul 2K**, which may be applied using the “fresh on fresh” technique. The waterproofing must form a layer which adheres well to the substrate. The wet layer must be at least 4.8 mm thick and the dry layer at least 3 mm thick.

Water not under pressure with an average load according to DIN 18195-5
Once the **Plastimul Primer** has dried, apply two coats of **Plastimul 2K**. The waterproofing must form a uniform layer which adheres well to the substrate. Before applying the second coat, the first one must be perfectly dry so application of the second layer is not compromised. The wet layer must be at least 5.0 mm thick and the dry layer at least 3 mm thick.
Apply **Fibreglass Mesh** in the corners and on the fillets.

Stagnating infiltrated water according to DIN 18195-6
Once the **Plastimul Primer** has dried, apply at least two coats of **Plastimul 2K**.
Apply **Fibreglass Mesh** on the first layer.
Before applying the second coat, the first one must be dry to avoid it being damaged when applying the next coat. The waterproofing layer will adhere perfectly to the substrate. The wet layer must be at least 6.5 mm mm thick and the dry layer at least 4 mm thick.

Drying times may vary according to climatic conditions, temperature, humidity, wind, the thickness applied and the type of substrate.

Waterproofing against water under pressure (ground water ≤3 m): see - Stagnating infiltrated water according to DIN 18195-6
To avoid the formation of blisters caused by sunlight, we recommend protecting the surface or to apply the product early in the morning or in the evening

Structural joints
Waterproof structural joints with **Mapeband TPE** 1.2 mm-thick TPE (Thermo Plastic Elastomer) tape, applied by bonding with **Adesilex PG4** two-component, low-viscosity, thixotropic epoxy adhesive.

Protection of the waterproofing layer
When filling foundation trenches or when applying the successive protective layers, **Plastimul 2K** must be dry (2 days at +23°C and 50% R.H.). The drying time depends on the surrounding temperature and level of relative humidity. At low temperature and with a high level of humidity, drying is slower. To check if it is dry, cut a “V” groove on a test piece. Protect waterproofed surfaces with protective drainage layers. Only use suitable materials to fill trenches, do not use waste material. On horizontal applications, floating screeds may be laid after 1-2 days.

Insulation
Insulating panels may be applied once the waterproofing layer has dried. Bonding with **Plastimul 2K Super** or **Plastimul 2K** with approx. 5-8 points per m^2 (consumption approx. 2 kg/m^2).

Cleaning
With water while still fresh. Mechanically once hardened.

TECHNICAL DATA (typical values)

PRODUCT IDENTITY	
Consistency:	paste
Colour:	black
Density of the mixed product (kg/dm³):	1.03
pH:	approx. 11
Brookfield viscosity (Pa·s):	300
Storage:	12 months
Hazard classification according to EC 1999/45:	not hazardous (both component A and component B). Before using refer to the "Safety instructions for preparation and application" paragraph and the information on the packaging and Safety Data Sheet
Customs class:	2715 00 00

APPLICATION DATA (+23°C and 50% R.H.)				
Application temperature range:	from +5°C to +30°C			
Drying time:	approx. 1-2 days			
Resistance to water:	after complete hardening (after ca. 2 days)			
Resistance to rain:	after approx. 12 hours			
Thickness (mm) and consumption (l)	**thickness**		**consumption**	
	wet	**dry**	**l (m²)**	**kg (m²)**
– waterproofing against damp from the ground and non-stagnating water seeping through according to DIN 18195-4:	5	3.0	5	5
– water not under pressure with an average load according to DIN 18195-5:	5	3.0	5	5
– seeping stagnating water under pressure according to DIN 18195-6:	6.5	4.0	6.5	6.7
– bonding polystyrene panels:	–	–	1-2	1-2

FINAL PERFORMANCE	
Thickness of hardened layer:	64% of the wet layer
Crack-bridging at +4°C:	2 mm

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CONSUMPTION
1.7 kg/m² per mm of thickness.

PACKAGING
30 kg (A+B) units.

STORAGE
12 months.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION
Plastimul 2K is not considered as dangerous according to the European regulation redarding the classification of preparations. It is however recommended to use gloves, eyes protection and to take the usual precaution taken when handling chemical products are recommended.
The Safety Data Sheet is available upon request for professional users.

PRODUCT FOR PROFESSIONAL USE.

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

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