MAPEI

Plastimul 2K Super

MAPEI GmbH
Werk Weferlingen

Plastimul 2K Super
Bitumendickbeschichtung

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Bautest
Dresden GmbH

Two-component, solvent-free, quick-drying, low-shrinkage, high-flexibility bitumen waterproofing emulsion containing polystyrene spheres

WHERE TO USE

Plastimul 2K Super is used for waterproofing horizontal and vertical concrete and brickwork surfaces subject to high dynamic loads and when the waterproofing product is applied at low temperatures and high levels of humidity.

Plastimul 2K Super is a two-component, solvent-free, quick-drying, low-shrinkage, high-flexibility bitumen waterproofing emulsion containing polystyrene spheres.

Plastimul 2K Superis applied using a flat or notched trowel or by spray using a peristaltic pump. **Plastimul 2K Super** dries quickly thanks to the hydraulic binder with filler material contained in the product and forms a highly-flexible waterproof layer.

Plastimul 2K Super may also be used for spot-bonding insulating panels used to protect the perimeter of the waterproofing layer.

Some application examples

Plastimul 2K Super is used for:

- waterproofing foundations, basements and underground garages from the outside;
- waterproofing load-bearing walls;
- waterproofing balconies and patios by placing protective sheets to isolate the screed from the substrate (in these cases, before laying the floor dressing, we recommend applying **Mapelastic** on the screed to protect it);
- waterproofing basins, tanks and wells from the outside to protect the concrete from aggressive water as prescribed in DIN 4030 standards;
- bonding insulating panels and drainage slabs on mineral and bitumen substrates.

TECHNICAL CHARACTERISTICS

Plastimul 2K Super is a two-component, high-yield bitumen emulsion with added polymers and a powder component.

Plastimul 2K Super is solvent-free, odourless, ecological, easy to work with and is resistant to aggressive substances contained in the ground.

Plastimul 2K Super meets the requirements for polymer-modified bitumen dressing coats applied in thick layers according to DIN 18195-2 standards.

Plastimul 2K Super is thixotropic which makes it possible to apply in thick layers on vertical surfaces.

Plastimul 2K Super bonds well to both dry and slightly damp surfaces.

RECOMMENDATIONS

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

- mixed with solvents;
- if the temperature is lower than +5°C or higher than +30°C;
- in damp or rainy weather;
- to waterproof surfaces exposed to UV rays;
- with water in counter-pressure;
- if there is no protective drainage layer;
- if the drainage layer subjects the waterproofing layer to linear or spot loads;
- for waterproofing in horizontal if the screed above the bitumen layer does not have the capacity of distributing loads evenly;

When using **Plastimul 2K Super**, please consider the specifications in DIN 18195 "*Waterproofing of structures*" and the "*Guideline for the Planning and Implementation of*

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Waterproofings with Polymer-Method Thick Bitumen Coatings (KMB) – structural members exposed to the ground – 2nd edition; version of Nov. 2001".

APPLICATION PROCEDURE

Preparation of the substrate

Carefully remove from the surface all traces of oil, grease, dust and installation mortar protruding from the bricks or slabs and grout any gaps in the joints with **Planitop 400** quick-hardening and drying, compensated-shrinkage thixotropic mortar if there is only a short space of time available to apply the waterproofing layer, or **Mapegrout Thixotropic** or **Mapegrout T40** pre-blended, normal-setting, controlled-shrinkage, fibre-reinforced mortar. If the product is applied on concrete surfaces, remove all gravel clusters and repair the surface with **Mapegrout T40** or **Mapegrout Thixotropic**.
Cavities and cracks deeper than 5 mm must be levelled off using **Planitop 400** or **Nivoplan**. If the cavities are less than 5 mm deep, they may be levelled off with the bitumen waterproofing layer to avoid the entrapment of air and, therefore, the formation of blisters.
An alternative method is to apply mortar made from cement, sand and **Planicrete** special synthetic polymer admix in water dispersion resistant to saponification.
For this type of application, we recommend diluting 1 part of **Planicrete** with 2 parts of water and mixing the mortar with 1 part of cement and 2-3 parts of sand with a suitable grain size. After this operation, apply a bead of **Planitop 400**, **Mapegrout Thixotropic** or **Mapegrout T40** at the junction between the foundations and wall to blend them in.
Smooth off all sharp corners on the horizontal and vertical elements using a suitable tool.

Application of the primer

After correctly preparing the substrate, even out the substrate by applying **Plastimul Primer** solvent-free, ready-to-use, low viscosity quick-drying bitumen emulsion using a roller, brush or by spray. Consumption depends on the absorption of the substrate and varies from 200 g/m² to 300 g/m².

Mixing

The two components which form **Plastimul 2K Super** (powder component/liquid component) are supplied pre-dosed. Mix the thixotropic emulsion (component A) at a low speed (400 rpm) until it becomes liquid. Add the powder (component B) while mixing and continue mixing until a smooth, lump-free blend is obtained (approximately 3 minutes).
Once blended, the product has a pot life of approximately 3 hours at +23°C. If only partial quantities of the product are required, use a set of high-precision electronic scales to weight out the two components at the correct ratio (fluid component : powder component = 4 : 1).

Application of the waterproofing layer

To avoid the formation of blisters when working in direct sunlight, we recommend shading the surface or applying the product either early in the morning or in the evening. **Plastimul 2K Super** must be applied in an even thickness over the entire surface while respecting the recommended thicknesses and the wet and dry layers indicated in the Application Data Table. The product may be applied with either a flat or notched trowel or by spray using a peristaltic pump.

On the bead applied to blend in the horizontal and vertical elements, apply **Plastimul 2K Super** until it covers all the foundations. Work should not be interrupted when working in the corners. If work is interrupted, apply **Plastimul 2K Super** down to a feather edge. When work recommences, overlap the material by 10 cm.

Waterproofing for protection against damp from the ground with no formation of pools of water (according to DIN 18195-4 standards)

When the layer of **Plastimul Primer** has dried off, apply at least 2 layers of **Plastimul 2K Super**. The product may be applied fresh on fresh. The waterproofing layer must form a continuous layer well bonded to the substrate. The wet layer must be at least 3.8 mm thick and the dry layer must be at least 3 mm thick.

Waterproofing layer subject to medium loads for protection against water not in pressure (according to DIN 18195-5 standards)

When the layer of **Plastimul Primer** has dried off, apply at least 2 layers of **Plastimul 2K Super**. The second layer must only be applied once the first layer has dried off perfectly to avoid damaging the first layer. The wet layer must be at least 3.8 mm thick and the dry layer must be 3 mm thick. We recommend applying **Mapenet 150** alkali-resistant glass fibre mesh on horizontal surfaces to achieve the minimum required thickness.

Waterproofing layer subject to high loads for protection against water not in pressure (according to DIN 18195-5 standards)

When the layer of **Plastimul Primer** has dried off, apply at least 2 layers of **Plastimul 2K Super**. The waterproofing layer must form a continuous layer well bonded to the substrate. The second layer must only be applied once the first layer has dried off perfectly to avoid damaging the first layer. The wet layer must be at least 5 mm thick and the dry layer must be 4 mm thick.

Waterproofing layer for protection against stagnating seepage water (according to DIN 18195-6 standards)

When the layer of **Plastimul Primer** has dried off, apply at least 2 layers of **Plastimul 2K Super**. Lay **Mapenet 150** alkali-resistant glass fibre mesh on the first layer while it is still fresh. The second layer must only be applied once the first layer has dried off perfectly to avoid damaging the first layer. The waterproofing layer must form a continuous layer well bonded to the substrate. The wet layer must be at least 5.0 mm thick and the dry layer must be 4 mm thick.

Waterproofing layer for protection against water in pressure (water table at 3 metres)

Please refer to "Stagnating seepage water" (according to DIN 18195-6 standards).

Structural joints

Waterproof structural joints with 1.2 mm thick **Mapeband TPE**, TPE (Thermoplastic Elastomer) tape bonded in place using **Adesilex PG4** two-component, low-viscosity, thixotropic epoxy adhesive.

TECHNICAL DATA (typical values)

PRODUCT IDENTITY	
Consistency:	paste
Colour:	black
Density of the product after mixing (kg/dm³):	0.75
pH:	10
Dry solids content (%):	66
Brookfield viscosity of the product after mixing (Pa·s):	300 (F - rpm 5)
Storage:	12 months
Hazard classification according to Directive 1999/45/CE:	not hazardous (both component A and 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 (at 23°C - 50% R.H.)	
Application temperature range:	from +5°C to +30°C
Mixing ratio:	fluid component : powder component = 4 : 1
Pot life:	3 hours
Drying time:	approx. 1-2 days
Resistance to water:	after approx. 2 days
Resistance to rain:	after approx. 4 hours

Thickness (mm) consumption (litres):	**thickness**		**consumption**	
	wet	**dry**	**l/m²**	**kg/m²**
– waterproofing for protection against damp from the ground and infiltrations which do not form pools of water according to DIN 18195-4:	3.8	3.0	3.8	2.8
– layer subject to medium loads and water not in pressure according to DIN 18195-5:	3.8	3.0	3.8	2.8
– layer subject to high loads and water not in pressure according to DIN 18195-5:	5.0	4.0	5.0	3.7
– stagnating seepage water according to DIN 18195-6:	5.0	4.0	5.0	3.7
– water in pressure according to DIN 18195-6:	5.0	4.0	5.0	3.7
Bonding polystyrene tiles:	–	–	1-2	0.75-1.5

FINAL PERFORMANCE	
Shrinkage (%):	20
Resistance to heat (DIN 52123):	≥ 70°C
Crack-bridging (at 4°C) according to DIN 28052:	≥ 2 mm
Cold bending according to DIN 52123:	≤ 0°C
Impermeability with 1 mm wide cracks according to DIN 52123:	impermeable at 0.75 bar for more than 72 hours

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Protecting the waterproofing layer
When filling the foundation trenches or applying successive protection layers **Plastimul 2K Super** must be completely dry (2 days at +23°C and 50% R.H.). The drying time varies according to weather conditions, surrounding temperature, level of humidity, the thickness applied and the type of substrate.
The state of drying must be checked by cutting a V groove in a sample piece. Protect waterproofed surfaces with protective drainage layers. Only use suitable material to fill trenches, never use waste material.
Floating screeds may be applied on horizontal surfaces after 1-2 days.

Insulation
Insulating panels may be applied once the waterproofing layer has dried off. Bond in place using **Plastimul 2K Super** or **Plastimul 2K Plus** applied in around 5 to 8 points per m² (consumption approximately 1 kg/m²).

Cleaning
Work tools may be cleaned with water before the product hardens. Once hardened, they must be cleaned using mechanical means or alcohol.

CONSUMPTION
0.75 kg/m² per mm of thickness of fresh product according to the type of substrate. For those cases mentioned in DIN 18195, refer to the Application Data Table.

PACKAGING
22 kg kits (A + B).

STORAGE
12 months. Protect from freezing weather.

SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION
Plastimul 2K Super is not considered a hazardous substance according to current norms and guidelines regarding the classification of preparations. However, we recommend the use of protective gloves and goggles, and to take the usual precautions for handling chemical products.
The Safety Data Sheet is available upon request for professional users.

PRODUCT FOR PROFESSIONAL USE.

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.

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

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