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# ® PLASTIMUL

## ALL-PURPOSE BITUMINOUS WATERPROOFING AND ADHESIVE EMULSION

### WHERE TO USE

- Waterproofing horizontal surfaces, including those subject to foot traffic.
- Waterproofing foundations.
- Waterproofing bearing walls.
- Bonding insulating panels.

### Typical applications

- Cold waterproofing masonry, or concrete poured over bare ground.
- Waterproofing concrete tanks, cisterns or sump pits for storing water, including slightly acidic or alkaline water.
- Bonding drainage slabs or insulating panels to concrete walls and floors in residential, commercial and industrial construction.
- Waterproofing concrete gutters and chimneys.
- Waterproofing flat or arched roofs and terraces not subject to foot traffic.

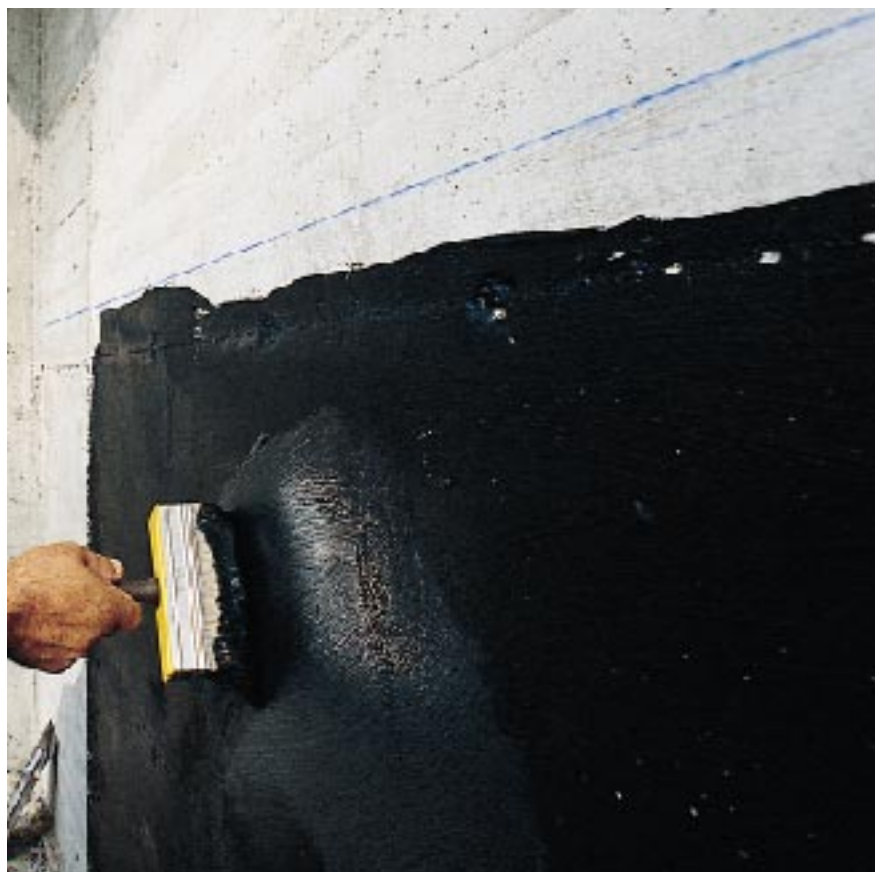
### TECHNICAL CHARACTERISTICS

PLASTIMUL is a solvent-free paste consisting of selected water-emulsified bitumens, special fine-graded aggregates and additives, manufactured according to a formula developed in the MAPEI research laboratories.

PLASTIMUL is compatible with cement and sand in any mix ratio. It is therefore especially recommended for repairing flat roofs subject to moderate traffic such as industrial floors, garages, loading areas, etc.

PLASTIMUL's thixotropic consistency makes it easy to use for waterproofing even vertical and sloping surfaces. It can also be used to waterproof masonry or concrete even when their surfaces are still damp due to insufficient curing or atmospheric condensation.

When completely dry PLASTIMUL forms a waterproof plastic film that is resistant to re-emulsifying after prolonged immersion in water, even when slightly acid or



alkaline, and resistant to aggressive agents present in the soil.

### RECOMMENDATIONS

- Do not use PLASTIMUL at temperatures below +5°C or on frozen surfaces.
- Do not use PLASTIMUL when rain is imminent.
- Do not dilute PLASTIMUL with organic solvents.
- Do not use PLASTIMUL on surfaces designed for food preparation.
- Do not use PLASTIMUL to waterproof surfaces in contact with organic solvents, or animal, vegetable, or mineral oils.

### HOW TO USE

#### Substrate preparation

Before applying PLASTIMUL, surfaces must be free of the cement laitance that is always present on formwork concrete, as well as any residues of oil or grease from formwork release agents.

The surface of the concrete or rendering must also be free of excess material and aggregate. Cracks or crazing in the substrate must be repaired with MAPEGROUT THIXOTROPIC or MAPEFINISH.

Horizontal surfaces must have a slope no less than 1% to facilitate the flow of water into the gutters. The substrate and ambient temperature must not be lower than +5°C.

PLASTIMUL may be full strength or diluted with water, depending on the application.

Carefully read the application procedures described below.

## WATERPROOFING VERTICAL SURFACES (e.g. foundations or bearing walls)

Moisten the surface to be treated, then apply PLASTIMUL in two layers, as follows:

- *First layer (primer)*

Dilute the PLASTIMUL 45 to 50% with water and mix until completely homogeneous. Apply the solution with a brush.

The second layer can be applied when the first is completely dry (3 to 6 hours, depending on the temperature and the ventilation).

- *Second layer*

Apply PLASTIMUL with trowel or brush in a thickness of approx. 1 mm.

When the waterproof layer does not need to be highly plastic, a bituminous mortar composed of 4 parts by volume PLASTIMUL, 1 part by volume UNI-ENV 197/1 type II/A-L 32.5 cement (formerly 325 Portland cement), and 1 part by volume graded sand (0 to 3 mm) mixed with 1.5 parts water may be used instead of PLASTIMUL at full strength.

Mix the mortar until homogeneous and creamy.

Apply with a brush in a thickness of approx. 1 to 2 mm.

## WATERPROOFING HORIZONTAL SURFACES NOT SUBJECT TO TRAFFIC

Moisten the surface, then apply PLASTIMUL as follows:

- *First layer (primer)*

Dilute the PLASTIMUL 45 to 50% with water and mix until completely homogeneous. Apply the bituminous solution with a brush.

The second layer can be applied when the first is completely dry (3 to 6 hours).

- *Second layer*

Brush on a coat of PLASTIMUL full strength approx. 2 mm thick. While it is still wet, insert a 4x4 mm fibreglass or lightweight non-woven mesh into it to enhance the tensile strength of the product. The reinforcing is especially recommended if there are cracks in the substrate.

Then apply a second coat of PLASTIMUL full strength in a thickness of approx. 1 mm and sprinkle fine graded sand (0 to 1 mm) over the wet surface.

When completely dry, the waterproofing layer can be walked on for servicing or maintenance purposes.

## TECHNICAL DATA

<b>PRODUCT IDENTIFICATION:</b>	
Consistency:	thick paste
Colour:	black
Density:	1.08 ± 0.5 kg/l
pH:	6 to 7
Brookfield viscosity, 6 shaft, 5 rev.:	28,000 ± 2000 cps
Dry solid content:	56 ± 2%
Inflammability:	no
Storage:	12 months in original packaging. Protect from frost.
Health hazard EC 88/370:	no
Customs class:	2715 00 00
<b>APPLICATION DATA</b>	
First layer (primer):	dilute PLASTIMUL 45 to 50% with water
Drying time at +23°C:	3 to 4 hours
Second layer, thickness 0.5 mm:	PLASTIMUL full strength
Second layer, thickness 1 to 2 mm:	4 parts by volume PLASTIMUL 1 part by volume cement 1 part by volume sand (0 to 0.3 mm) 1.5 parts water
Density of mortar + PLASTIMUL:	1.32 ± 0.05 kg/l
Flow of mortar + PLASTIMUL:	85%
<b>WATERPROOFING HORIZONTAL SURFACES NOT SUBJECT TO TRAFFIC</b>	
First layer (primer)	
Mix ratio:	dilute PLASTIMUL 45 to 50% with water
Drying time at +23°C:	3 to 4 hours
Second layer with reinforcing, thickness 3 mm	
Mix ratio:	PLASTIMUL full strength
Minimum application temperature:	+5°C
<b>WATERPROOFING HORIZONTAL SURFACES SUBJECT TO TRAFFIC</b>	
First layer (primer)	
Mix ratio:	dilute PLASTIMUL 45 to 50% with water
Drying time at +23°C:	3 to 4 hours
Second layer with reinforcing, 5 to 6 mm thick	
Mix ratio:	2 parts by volume PLASTIMUL 1 part by volume cement 3 parts by volume sand (0 to 1 mm) 1 part water
Density of mortar + PLASTIMUL:	1.700 ± 0.05 kg/l
Flow:	20%
Minimum application temperature:	+5°C
<b>BONDING DRAINAGE SLABS AND INSULATING PANELS</b>	
First layer (primer)	
Mix ratio:	dilute PLASTIMUL 45 to 50% with water
Drying time at +23°C:	3 to 4 hours
Adhesive layer	
Mix ratio:	4 parts by volume PLASTIMUL 1 part by volume cement 1.2 parts water
Density of mortar + PLASTIMUL:	1.20 ± 0.05 kg/l
Flow:	88%
Minimum application temperature:	+5°C
<b>FINAL PERFORMANCE DATA</b>	
Resistance to ageing:	excellent
Resistance to diluted acids and alkalis:	excellent
Resistance to sprayed water at +23°C:	6 hours after application
<b>ADHESION OF INSULATING PANELS ON CONCRETE SUBSTRATES</b>	
After 7 days at +23°C:	0.25 to 0.35 N/mm <sup>2</sup> (breaking point of adhesive)

## **WATERPROOFING HORIZONTAL SURFACES SUBJECT TO FOOT TRAFFIC**

### • *First layer (primer)*

Dilute the PLASTIMUL 45 to 50% with water and mix until completely homogeneous. Apply the bituminous solution with a brush.

The second layer can be applied when the first is completely dry (3 to 6 hours).

### • *Second layer*

For this application, the waterproofing layer must have a strong resistance to imprinting. Prepare a mortar composed of:

- 1 part by volume II/A-L 32.5 cement (formerly 325 Portland cement);
- 3 parts by volume graded sand (0 to 1 mm);
- 2 parts by volume PLASTIMUL;
- 1 part water.

Mix until a homogeneous paste with a plastic consistency is obtained. Apply with trowel in two coats. Insert a 4x4 mm fibreglass mesh into the first coat. Recommended thickness: 5 to 6 mm.

## **BONDING DRAINAGE SLABS AND INSULATING PANELS**

The surface must be thoroughly clean. Masonry surfaces must be even, therefore a rough float coat of cement mortar is recommended. When the mortar is dry, bond the slabs or panels as follows:

### • *First layer (primer)*

Dilute the PLASTIMUL 45 to 50% with water and mix until completely homogeneous. Moisten the surface slightly and apply the bituminous solution with a brush.

The adhesive layer can be applied when the first layer is completely dry (3 to 6 hours at normal temperatures).

### • *The adhesive layer*

Prepare a bituminous mortar composed of:

- 4 parts by volume PLASTIMUL;
- 1 part by volume II/A-L 32.5 cement (formerly 325 Portland cement);
- 1.2 parts water.

Mix until a homogeneous paste with a plastic consistency is obtained.

Apply the mortar with a trowel when the primer coat is completely dry.

The notch size of the trowel used should allow 100% transfer of the adhesive to the back of the panels or slabs. The latter should be back-buttered and pressed down firmly onto the surface to ensure total transfer of the adhesive.

### **Cleaning**

Tools can be cleaned with water while the PLASTIMUL is still wet. When dry, use turpentine.

### **COVERAGE**

- Vertical walls: approx. 1 kg per m<sup>2</sup>.
- Horizontal surfaces not subject to traffic: 3 to 3.5 kg per m<sup>2</sup>.
- Horizontal surfaces subject to traffic: 3 to 4 kg per m<sup>2</sup>.
- Bonding drainage slabs and insulating panels: 2 to 3 kg per m<sup>2</sup>.

### **PACKAGING**

PLASTIMUL is available in 20 and 8 kg buckets.

### **STORAGE**

Store in original containers. Protect from frost and sunlight.

### **WARNING**

*N.B. Although the technical details and recommendations contained in this report 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 applications; 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.*



**N.B. FOR PROFESSIONAL  
USE ONLY**



MAPEI QUALITY SYSTEM



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