

# Plastimul PU

## Elastomeric, Pitch-modified Polyurethane Waterproofing Membrane

### WHERE TO USE

Plastimul PU is ideal for application on concrete decks, especially where surface profiles and the presence of services provide detailing difficulties for the use of pre-formed membranes.

### Some application examples

- Waterproofing flat or arched roofs and terraces not subject to traffic
- Waterproof concrete structures such as suspended slabs, plinths, balconies, patios, terraces, air-cond. ledges, planter boxes and tunnels
- Waterproofing protection of concrete gutters

### TECHNICAL CHARACTERISTICS

Plastimul PU is a ready-to-use, liquid-applied, pitch-modified Polyurethane which cures to form a tough, highly-flexible, elastomeric waterproofing membrane designed to provide a durable and seamless waterproofing protection for concrete and steel substrates.

When completely dry and fully bonded to the substrate, **Plastimul PU** forms an impervious continuous barrier to eliminate migration of water between membrane and substrate.

### Advantages

- Single-component for easy application by air-less spray, brush or roller
- Excellent adhesion to prepared substrates
- High elastic recovery
- Forms a seamless barrier against cracks

- Excellent crack-bridging properties
- Designed for structures subject to cyclic movements
- Excellent abrasion resistance
- Ease of maintenance. Leaks from punctures are isolated to the damaged area of membrane and thus easy to identify and repair
- Chemically resistant to dilute acids & alkalis, oils, common fuels and bacterial attack

### RECOMMENDATIONS

- Do not apply Plastimul PU on wet or damp substrates, or when rain is imminent
- Do not apply Plastimul PU on substrates subject to rising damp
- Do not apply Plastimul PU in potable water tanks
- Do not apply Plastimul PU in confined areas with poor ventilation
- Substrate temperature must be at least 3° above dew point at time of application
- After full cure, it must be protected from UV and traffic with a layer of protective screed.

### APPLICATION PROCEDURE

#### Substrate preparation

All substrates, whether new or old, must be solid, clean, dry and free of dirt, loose materials, oil, grease, old coatings, rust, mold, and any other material which may affect adhesion. Remove hardened cement droppings and sharp protruberances. Hollows on the surface must be repaired with a suitable mortar eg. **Nivorapid**, and allowed to cure.

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TECHNICAL DATA (Typical values)	
<b>PRODUCT IDENTITY</b>	
Consistency:	Pasty Liquid
Colour:	Black
Density (g/cm <sup>3</sup> ):	~ 1.3
Solids Content:	90±2%
Storage:	12 months in its original, unopened packaging.
<b>APPLICATION DATA</b>	
Priming layer for absorbent substrates:	Dilute <b>Plastimul PU</b> with Xylene 1:1
Waiting time between coats, 35°C:	12 – 24 hours
Full Cure, 35°C:	approx. 7 days
Application temperature:	min. +5°C, max. +35°C
Dosage:	1.3 liter/m <sup>2</sup> (1.7kg/m <sup>2</sup> )
<b>FINAL PERFORMANCES</b>	
Shore A Hardness:	38 – 50 (ASTM D2240)
Tensile Strength:	>1.5 N/mm <sup>2</sup>
Tensile Set Recovery:	100% (ASTM D412)
Elongation:	>500%
Tear Resistance:	22 kg/cm (ASTM D4541)
Water Permeability:	Nil at 5 bar pressure (BS EN 12390)
Crack-bridging:	>1.5 mm
Adhesion in Peel:	>110 N/25mm (ASTM C794)

# Plastimul PU

Pre-treat static and shrinkage cracks with **Plastimul PU** extending 80mm each side of the crack and allow to cure overnight.

Fill all internal angle junctions with 25mm corner fillets, using a mortar prepared by mixing **Planicrete SP** 1 : 2 with a cement/sand (1 : 1) blend. Allow to cure fully.

Horizontal surfaces (i.e. terraces) must have a slope no less than 1% to facilitate the flow of water into the gutters.

Waterproof structural joints with 1.2mm thick **Mapeband TPE** tape bonded in place with **Adesilex PG2 SP** adhesive

## PREPARATION OF THE PRODUCT

**Plastimul PU** is supplied ready for use. Stir thoroughly with a mechanical mixer for about 3 minutes to achieve homogeneity and apply immediately.

For absorbent substrates, prepare and apply a primer coat by diluting **Plastimul PU** with Xylene 1:1 and mixing thoroughly.

## APPLICATION OF THE PRODUCT

**Plastimul PU** may be applied by brush or roller or with an airless spray.

### Waterproofing vertical walls (e.g. foundations or basement walls)

Prepare the surface to be treated, then apply **Plastimul PU** as follows:

Priming layer : Apply a priming coat and allow 12-24 hours for complete drying, depending on temperature and ventilation conditions.

Second layer : Apply **Plastimul PU** neat at a dosage of 1.3 liter/m<sup>2</sup> (approx. 1.7kg/m<sup>2</sup>).

### Waterproofing horizontal slabs

Prepare the surface to be waterproofed, then apply **Plastimul PU** as follows :

For absorbent substrates, apply a priming coat and allow 12-24 hours for complete drying. The priming coat is not necessary for dense substrates.

Then apply a neat coat of **Plastimul PU** at 1.3 litre/m<sup>2</sup> (approx. 1.7kg/m<sup>2</sup>).

If a second coat is necessary, allow 12-24 hours for the 1<sup>st</sup> coat to dry to tack-free condition before applying the 2<sup>nd</sup> coat in a direction perpendicular to the 1st.

When completely dry, the waterproofing layer can be walked on for servicing or maintenance purposes only. Apply a protective screed immediately.

## CLEANING

Tools can be cleaned with thinner while the **Plastimul PU** is still fresh. When hardened, it can only be removed by mechanical means.

## CONSUMPTION

1.3 liter per m<sup>2</sup> (~1.7kg per m<sup>2</sup>)

## PACKAGING

**Plastimul PU** is available in 20-litre pails

## STORAGE

**Plastimul PU** may be stored in a dry place at a temperature of 25°C for a maximum period of 12 months.

## SAFETY INSTRUCTIONS FOR PREPARATION AND APPLICATION

**Plastimul PU** contains harmful, flammable solvents which are dangerous to aquatic organisms. It is necessary to wear protective gloves and goggles during application and to take all the usual precautions for working with flammable products. Do not smoke and avoid working in the presence of flames or sparks. Ensure there is adequate ventilation when working in a closed environment. Work clothes with material spilt on them must be changed immediately. Uncured waste must be disposed of as hazardous.

The Safety Data Sheet is available upon request.

## FOR PROFESSIONAL USERS

## WARNING

*Although the technical details and recommendations contained in this datasheet 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.*

**All relevant references  
for the product are available  
upon request and from  
[www.mapei.com](http://www.mapei.com)**

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**MAPEI Malaysia Sdn. Bhd.** (231780-K)  
PT 521, Batu 23, Jalan Rawang/Jalan Batang Berjuntai,  
48000 Rawang, Selangor Darul Ehsan  
Tel: +(6)03-6093 5799 – Fax: +(6)03-6091 5801  
e-mail: [mapei@mapei.com.my](mailto:mapei@mapei.com.my) – website: [mapei.com.my](http://mapei.com.my)

