

# PENTENS PU FLOOR-MF

## Self-smoothing Polyurethane Flooring

### Product Data Sheet

### Description

PENTENS PU FLOOR-MF is a pigmented three-component self-smoothing polyurethane flooring material designed to provide excellent durability and resistance against abrasion, impact and chemical attack.

### Uses

PENTENS PU FLOOR-MF has been designed for areas subject to heavy traffic or chemical exposure such as:

- Engineering workshops
- Assembly plants
- Chemical plants
- Pharmaceutical factories
- Warehouses
- Food packing and canning plants
- Bottling plants
- Breweries
- Fish markets

### Advantages

- Seamless - prevents ingress of chemicals into the substrate and bacterial growth.
- Hard-wearing - suitable for vehicular traffic.
- Non-skidding - prevents accidents from occurring in wet areas.
- Easy maintenance - keep work easy and help to lower maintenance costs.
- Color variety - available in a wide range of colors to suit individual needs.



### Technical & Physical Data

Solids	100%
No. of Components	3
Recommended Thickness	3 to 6mm
Theoretical Coverage	2 kg/m <sup>2</sup> /per mm
Pot Life	15 minutes @ 30°C
Drying Time	Initial cure - 1 hour Foot traffic - 6 hours Full cure - 24 hours
Compressive Strength	50 N/mm <sup>2</sup>
Flexural Strength	18 N/mm <sup>2</sup>
Tensile Strength	10 N/mm <sup>2</sup>
Hardness (Shore D)	75
Elongation	2.9%
Water Absorption	0%
Abrasion Resistance (Taber)	99.2mg/1000cycle
Application Temperature	5°C to 45°C

### Chemical Resistance

Acids	Very good
Alkalis	Excellent
Solvents	Very good
Salts	Excellent
Water	Excellent

### Services Temperature

3mm	-5°C to 80°C
6mm	-5°C to 100°C

### Packaging

PENTENS PU FLOOR-MF is 20kg per set.

Part-A is supplied in 3kg pail.  
Part-B is supplied in 3kg pail.  
Part-C is supplied in 14kg bag.

### Storage

The material should be stored in dry and cool rooms for up to 12 months. Protect the material against moisture and direct sunlight.

Storage temperature: 5°C to 30°C. Products should remain in their original, unopened containers, bearing the manufacturer's name, product designation, batch number and application precaution labels.

## Instruction for Use

### Surface Preparation

Concrete surface should be clean and free from oil, grease and other contaminants. New concrete shall be allowed to cure for at least 28 days before applying primer. Preparation by captive blasting or diamond grinding will provide ideal surface for application of topping.

The preferred method of surface preparation is vacuum, shot-blasting with angle grinding being used for edges, corners and inaccessible areas. Other methods such as scabbling, milling, grinding or grit blasting can be used but are generally less satisfactory.

In the case of tiles, all traces of glaze must be removed and substrate should have a tensile strength of at least 1.5KN/mm<sup>2</sup>. Suitable substrates are concrete, polymer-modified concrete screeds. Heavily contaminated substrates, especially for those that contain chemical residues are best removed as decontamination may be impossible.

Any significant high spots remaining after shot-blasting should be removed by grinding. Any holes or excessive roughness areas should be filled with epoxy mortar. Any cracks which may be subject to further movement should be opened out, cross cut, doweled with threaded rods and filled with epoxy resin.

If PENTENS PU FLOOR-MF is applied on free edge, for example, around the perimeter, along channels or expansion joints, at doorways and around machinery plinths and columns, extra anchorage must be provided to help in distributing mechanical and thermal stress arising from shrinkage and temperature changes.

### Primer

Application of PENTENS PU-01 polyurethane primer will enhance the adhesion of the screed materials to the concrete slab.

### Mixing

Stir Part-A thoroughly, then pour Part-B into Part-A container and mix them till homogeneous. Add Part-C gradually into the mixture while stirring. Continue until a uniform mixture is achieved.

## Application

Pour the mixture of components A, B and C onto the hardened primed surface and spread evenly with steel trowel. Roll with spike roller immediately after spreading to remove bubbles and aid the smoothing process.

The wearing layer must not be applied if the air temperature is below 5°C or above 45°C or if it is expected to reach those levels within 1 hour of being exposed. The same consideration applies if the substrate temperature is within 3°C of the dew point.

The wearing layer PENTENS PU FLOOR-MF is a pigmented, solvent-free system based on a 3-component polyurethane resin. The exact mixing ratio of resins to fillers must be adhered to.

PENTENS PU FLOOR-MF should be applied once the primer or scratch coat starts to harden but before it is completely cured. It usually takes 12-14 hours for a primer or 8-12 hours for a scratch coat to cure completely.

Once the 3-component PU mix is homogeneous and reaches 18°C, it is then poured onto the primer or scratch coat and spread using a trowel or rake with the appropriate depth gauges. The mixture should then be treated with a spiked roller to assist flow and release any entrapped air. The material consumption should be 2.0kg/m<sup>2</sup>/mm.

## Health & Safety

Keep away from fire sources. Do not smoke. Sufficient ventilation is recommended, otherwise wear respiratory equipment. Gloves and goggles is a must. If contact with eyes occurs, rinse immediately with plenty of water and seek medical advice. Hands and tools must be cleaned with solvent or cleanser before polymerization.

**PENTENS**



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