

## PRODUCT CODE 5776

### SmartCare PU Magnum

PU Magnum is two – component polyurethane applied as a waterproofing liquid membrane which offers superior mechanical, chemical, Thermal, UV and weather resistance properties, as it is based on pure, elastomeric, hydrophobic, polyurethane Coatings

#### PRODUCT DESCRIPTION

- A uniform, elastic, waterproof, vaporpermeable sealing layer, without forming seams or joints
- Applicability even on irregular substrates
- An affordable and reliable solution for waterproofing
- Availability in white
- It has been tested according to EN 1504-2 as a coating for surface protection for concrete



#### AREAS OF APPLICATION

- Flat roofs, balconies, underneath tile layers in kitchens, bathrooms, balconies and flat roofs, as long as quartz sand has been broadcasted on its last layer
- Under thermal insulation boards on flat roofs
- In construction works, such as highways, bridge decks, tunnels, foundations
- Gypsum and cement boards, old layers of bituminous or EPDM membranes
- Polyurethane foam, metal surfaces
- Concrete, cement-mortars and most waterproofing layers

#### TECHNICAL DATA

PARAMETER	ASTM/ TEST STANDARD USED	TYPICAL VALUE WITH UNIT
Mixing Ratio [Base: Hardener]		95:05 pbw
Density of Mix, g/cc	ASTM D 1475	1.52
Viscosity of Mix	ASTM D 2196	160-200 Ps
Elongation at break, 14 days	ASTM D 2370	550 ± 50%
Tensile strength, 14 days	ASTM D 2370	2.5 - 3 MPa
Shore 'A' Hardness, 14 days	ASTM D 2240	45 - 50
Water Impermeability on coated concrete @ 7Bar, for 72Hrs	DIN 1048	No Leakage
Water Vapor permeability	EN ISO 7783 - 2	0.72 perms
Adhesion to Concrete	ASTM D 4541	Min 1.5 MPa
Artificial Weathering	EN 1062	Pass (No blistering, cracking)
Temperature Resistance		From -30° C to +90° C
Solid Content		Min 85%
Application Temperature		10 – 35° C
Tack Free Time		Approx. 4 hrs
Light Pedestrian Traffic Time		24 hrs
Final Curing time & conditions		30° C, Min 7 days
Crack Bridging Ability	ASTM C 1305	3 mm
Shelf life		1 year
Theoretical Coverage (WFT)		500 gm/sq.mtr/coat at WFT 400 micron

## DIRECTIONS FOR USE

### 1. Surface treatment before application

#### 1.1 Concrete Substrate

• Prepare the surface by cleaning with Concrete surface grinder / wire brush and a high pressure water jet and Ensure that it is free of dust, oil, grease, grime and loose particles etc.

• The terrace substrate must be checked for its soundness, damaged portions, the hollow areas must be repaired with epoxy mortar.

• Small cracks should be opened out, cleaned & filled with Epoxy Mortar prepared by adding sand into EPOXY PRIMER.

All corners and joints of drainage pipes, channels etc. must be treated with Epoxy Mortar prepared by adding sand into EPOXY PRIMER, prior to coating application.

#### 1.2 Smooth and non-absorptive substrates

Prepare the surface by cleaning it with a high pressure water jet / wire brush and ensure that it is free of dust, oil, grease, grime and loose particles etc.

• The terrace substrate must be checked for its soundness and damaged portions & must be repaired with epoxy mortar.

• Small cracks should be open out, cleaned & filled with Epoxy Mortar prepared by adding sand into EPOXY PRIMER.

#### 1.3 Metal surfaces

• Check the conditions and joints of metal. Must be repaired with suitable method.

• Loose rust, loose mill scale and deteriorated coatings can be removed by suitable chemical treatment and effective use of hand and power tools. The use of high and ultra-high pressure water jetting to achieve various degrees of surface cleanliness.

## APPLICATION CONSUMPTION

2.1. Total waterproofing of the surface: Approx. 1.0 – 1.5 Kg/ sqmeter ; depending on the substrate

2.2. Local Waterproofing of cracks: In this case, the primer is applied on the substrate only across the cracks to a width of 10-12 cm.

2-3 hours after priming, the first 2K-PU layer is applied and, while still fresh, a 10cm wide polyester fabric (40-60 GSM) is embedded lengthwise. Then, two extra 2K-PU layers are applied along the cracks, completely covering the reinforcement.

Consumption: approximately 200-250 g/m of crack length.

2.3 Waterproofing under tiles: 2K-PU is applied by brush or roller in 2 layers. 2K-PU should be locally reinforced along the joints and wall-floor junctions, by embedding a 10cm wide polyester fabric on its first layer, while it is still fresh.

After the application of the final layer and while it is still fresh, quartz sand (Ø 0.3- 0.8mm) must be broadcasted. Ensure that the quartz sand must be completely dry.

Consumption of quartz sand: approx. 3 kg/m<sup>2</sup>. After 2K-PU has hardened, any loose grains should be removed with a vacuum cleaner.

Tiles should be fixed with a high-performance polymer-modified tile adhesive,

## PHYSICAL PARAMETERS

1	Part A	Base	
1.1	Appearance	Visual	White Paste
1.2	Non Volatile Matters (%)	ASTM C 1250	84 - 86
1.3	Viscosity @ 27°C, BRT, SPL-64 RPM-6	ASTM D 2196	130 - 140 Poise
1.4	Specific Gravity @ 27°C	ASTM D 1475	1.50 - 1.54
2	Part B	Hardener	
2.1	Appearance	Visual	Dark Brown Liquid
2.2	Non Volatile Matters (%)	ASTM C 1644	96 - 98
2.3	Viscosity RVT/SPL 6/RPM 20	ASTM D 2196	2.2 -2.4 Poise
2.4	Specific Gravity @ 27°C	ASTM D 1475	1.23 - 1.27

## PRECAUTIONS

- Do not apply during rains or extreme temperatures.
- Remove the old coatings and treat the substrates accordingly.
- Do not apply on rusty metal surface.
- 2K-PU application should be done over primed surface, having moisture less than 4%.
- APL 2K-PU can be applied by spray or roller. In case of roller application, 2nd Coat to be applied within 4-6 hours.
- Geotextile of 40 – 60 GSM are recommended to be used at corners, flashing areas, joints & drain for better reinforcement.
- Not designed to resist excessive surface abuse like vehicular movements, heavy equipment, sharp objects etc. Adequate care must be taken to avoid puncturing of the coating film.
- Avoid contact with chemically treated water for e.g. swimming pools.

Hardener contains isocyanates. It can cause skin/eye irritation, allergic skin reaction and cause allergy or breathing difficulties if inhaled or comes in contact with skin. Seek medical advice on irritation. Refer to the MSDS of base and hardener for detailed safety handling precautions.