PRODUCT CODE – 1A69

SmartCare PU Magnum US (Under Screed)

Asian Paints SmartCare PU Magnum US is single component waterproofing liquid applied membrane. This product offers superior mechanical and chemical properties as the same is based on pure, elastomeric, polyurethane resin. It is designed to be applied over concrete surfaces which must be laid over by a protective cement screed.

It conforms to ASTM C 836 and ASTM C 898.

Features:

- Uniform, seamless, elastic, waterproof & vapor permeable sealing layer
- Easy to apply, requires no special equipment.
- High elongation and tensile strength
- Can be applied on horizontal as well as inclined surfaces.
- Excellent crack bridging ability
- Anti-root property: Protects the surface form undesirable root penetration.

Area of Application:

- Flat roofs, balconies, podiums, and other concrete surfaces
- Underneath tile layers in kitchen & bathrooms
- Under thermal insulation layer on flat roofs

PARAMETERS	ASTM/TEST STANDARD USED	TYPICAL VALUE WITH UNIT
Elongation at break	ASTM D 412	> 600%
Tensile Strength	ASTM D 412	3 – 4 MPa
Hardness (Shore A scale)	ASTM D2240	> 50 Shore A
Pull Of Adhesion	ASTM D 7234	Minimum 1.5 MPa*
Service Temperature		-30 deg to +80 deg C
Solid content	ASTM D 1644	85±2%
Water impermeability on coated concrete @5 bar for 72 hours (Resistance to Hydrostatic head > 50m)	BS EN 12390-8	No Leakage
Application Temperature		10 deg to 40 deg C
Tack free time		8-12 Hrs
Light Pedestrian traffic time		24 Hrs
Final curing time conditions		30 deg C, 55% RH 7 days
Dynamic Crack bridging	ASTM C 1305	Passes @3.2mm
Shelf-life		12 months
Typical Consumption		Min 1.5 Kg/per sqm in 2 coats**

Note: All values mentioned above are obtained under control lab conditions.
*Pull-off Adhesion values applicable for cohesive failure. Lower values either indicate substrate failure or adhesive failure and not product failure.
**May vary depending on the surface porosity/surface profile. Rate of application should be 700-800 gm per sqm per coat.

Direction For Use

1 . Substrate preparation

1.1 Concrete substrates:

Substrate must be dry, clean, free of grease, loose particles & dust etc. Substrate compressive strength should be at least 20 MPa, cohesive bond strength at least 1.5 MPa. New concrete structures need to cure for at least 28 days before application of the waterproofing system. Prepare the concrete surface using concrete surface grinder/wire brush. Any existing cavities and cracks in concrete should be filled with the appropriate repairing materials in advance.

1.2 Primer Application:

Once the surface is prepared, (moisture content <10% before priming), it should be primed with Asian Paints SmartCare Two Component Water-based Epoxy Primer/Solvent based Epoxy Primer with a min consumption of 100 to 150 g per sqm. If the surface is highly porous (dry patches visible post primer application), second coat of primer is required.

2. Application Procedure:

2.1 For RCC Surfaces

2.1.1 Stir the material in the container to get a homogenous liquid mixture. Avoid excessive and high-speed stirring. Once stirred, wait for 1-2 mins to allow entrapped air to escape.

2.1.2 Epoxy Primer should be dry and surface moisture should be less than 4%, before the application of PU Magnum US. The first coat of SC PU Magnum US is applied post 16 hours of primer application. Make sure that the primer coat is fully cured, and primed surface moisture is less than 4%. The second coat of SC PU Magnum US should be applied crosswise after 8-24 hours, depending on the weather conditions. The PU Magnum US coating must be laid over by a layer of protective cement screed (min 50 mm thickness). Before the protective cement screed is laid over, a separation layer of 120 to 160 GSM geotextile is placed on the PU Magnum US coating. The SC PU Magnum US liquid applied membrane should be allowed to cure for at least 5 to 7 days before conducting any water ponding test. The protective cement screed can be laid over before 14 days of application of the second coat of SC PU Magnum US.

2.1.3 For vertical surfaces, a layer of dash coat plaster is applied over the cured film of SC PU Magnum US. It is recommended to sprinkle sand, while the second coat of SC PU Magnum US is still wet, before application of dash coat plaster. This sand layer will provide improved adhesion to the dash coat plaster over the SC PU Magnum US coating.

2.2 For Waterproofing of Cracks (localized application):

2.2.1 The primer is applied on the horizontal substrate only across the cracks to a width of 12 cm. The first coat of SC PU Magnum US is applied after 16 hours of primer application. While the coat is still wet, a 10 cm wide polyester fleece (60 GSM) is embedded lengthwise. Then, two extra SC PU Magnum US coats are applied along the crack, completely covering the reinforcement.

Physical Parameters

- Color - Grey
- Pack size - 25 kg
- Shelf Life - 12 months from the date of manufacture. (If the packaging seal intact and the container is stored at temperatures between +5C & +35 C). Keep away from direct sunlight and frost.

Precautions

- Surface preparation – level all surface undulations by using repair polymer or polymer modified plaster
- Apply epoxy primer at a consumption of 100 g to 150 g/square meter. For porous/absorbent floor, additional coat of primer is recommended.
- SC PU Magnum US should be applied only on primed surfaces with moisture content less than 4%, at a coverage of 700 - 800 gm/square meter per coat.
- Time interval between 2 coats of SC PU Magnum US should be 8 to 24 hrs. depending on atmospheric condition
- Drying time for epoxy primer is about 16 to 48 hrs. depending on atmospheric condition
- New concrete surfaces should be fully cured and dry before application of SC PU Magnum US
- Long felt roller should be used for application to avoid air entrapment in the wet coating
- The technical parameters shared are typical values obtained in a controlled lab test
- Above mentioned features & properties are basis the recommended consumption of 1.5kg/sq meter in 2 coats