MAXSHIELD® PF 700

Liquid Applied, Elastomeric, Polyurethane Waterproofing Membrane

Maxshield® PF 700 is a single component, ready to use, moisture cured, liquid applied, polyurethane waterproofing membrane with an excellent elongation. It reacts with the atmospheric moisture to form a seamless watertight membrane that exhibits high tensile strength.

Uses

- Waterproofing in terraces and roofs
- Waterproofing of podiums
- Waterproofing of terrace gardens
- Waterproofing of wet areas

Benefits

- Simple and easy application
- Excellent adhesion to concrete
- When applied forms seamless membrane without joints.
- Excellent waterproofing characteristics
- High crack bridging property and elongation
- Highly durable membrane
- Anti-root property- Excellent resistance to root penetration.

Consumption

Approx. 1.6 kg/m^2 @ 1.2 mm WFT in two coats.

This coverage is based on application by roller onto a smooth surface in optimum conditions. Factors like surface porosity, temperature and application method can alter consumption.

Properties

Color	Grey
Solid Content	90 ± 2 %
Tack Free Time	8-10 hours
Final Cure	36-48 hours
Service Temperature	-40ºC to 70ºC (Continuous) Up to 150ºC (Intermittent)
Elongation at Break (ASTM D412)	700 ± 50 %
Tensile Strength (ASTM D412)	2 ± 0.20 N/mm^2
Hardness, Shore 00 Scale (ASTM D 2240)	≥50
Crack Bridging at Low Temperature @ -9ºC (ASTM C 1305)	≤1.5mm
Adhesion to Concrete (Pull Strength) (ASTM D 4541)	2 ± 0.3 N/mm^2
Extension after Heat Aging (ASTM C 836)	6.4mm with no cracking

Standard Compliance

Maxshield® PF 700 conforms to ASTM C-836 and C-898.

Instructions for Use

Surface Preparation

Careful surface preparation is essential for optimum finish and durability. The surface needs to be clean, dry and sound, free from any contamination, which may harmfully affect the adhesion of the membrane. Maximum moisture content should not exceed 5%. Substrate compressive strength should be at least 20MPa. New concrete structures need to dry for at least 28 days. Old, loose coatings, dirt, fats, oils, organic substances and dust need to be removed mechanically by grinding or any other equivalent method. Possible surface irregularities need to be smoothened. Any loose surface pieces and grinding dust need to be thoroughly removed.

It is imperative that all the cracks be filled with mortar and all honeycombs taken care of. The surfaces leading to a drain must be provided with a slope in the gradient of 1:100. Coving should be done in such areas with cement sand mortar admixed with our integral waterproofing compound, Warep 1000/L @ 200mL per bag of cement.

Priming

The concrete surfaces shall be primed with Maxshield® PU- PR @ 4-5m^2 / ltr. In case anti-root property is desired, the surfaces shall be primed with Maxshield® WPR- AR @ 200gm/ m^2. The primer coat must be allowed to cure before further application.

Mixing

Stir Maxshield® PF 700 well using a slow speed mixer with a suitable paddle before using to ensure a homogeneous mix. Let the entrapped air to escape before using the product. Use the material within 4 hours of opening the container.

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Application

While the primed surface is tacky, pour the Maxshield® PF 700 onto the primed surface and lay it out by roller or brush, until entire surface is covered. You can also use airless spray allowing a considerable saving of manpower. After 10-12 hours, apply another coat of the Maxshield® PF 700. For demanding applications, apply a third layer of the Maxshield® PF 700. Extend waterproofing treatment up to 200 mm on the parapet wall terminating into a groove filled with polymer modified cementitious mortar.

Non-woven geotextile must be used at problem areas, like wall-floor connections, 90° angles, chimneys, pipes, waterspouts (siphon), etc. In order to do that, apply on the still wet first coat of Maxshield® PF 700 a correct cut piece of fabric and saturate again with a second coat of Maxshield® PF 700. We recommend reinforcement of the entire surface, with the non-woven geotextile. Use 50mm overlapping in both directions.

Note: For UV stability, Maxshield® PF 700 can be coated with Maxshield® PF 400 as a protective top coat @ 0.77 kg/m^2 @ 500µ DFT.

Finishing

In case plastering is desired and in order to avoid slipperiness during wet days, sprinkle suitable aggregates @ 200gm/m^2 onto the still wet coating to facilitate screeding and to create an anti-slip surface.

For horizontal non-trafficable surface, a top coat of Maxshield® PF 400 of 500µ can be laid to protect the applied Maxshield® PF 700. In that case, the base coat of Maxshield® PF 700 should be restricted to 1000µ in two coats of 500µ each. Maxshield® PF 400 has UV resistant property which protects the base coat from degradation.

Kindly refer to the Method Statement for detailed application procedure.

Curing

Ensure final curing time of 36 hours before allowing / carrying out any further work. Conduct ponding test after 7 days of curing at ambient temperature.

Precautions

- In humid conditions, the product may develop a skin on the top. We recommend removing the skin from the edges and using the material inside.
- Do not allow any movement over waterproofed area unless ponding is done and waterproofed area is protected.

Health & Safety Instructions

Maxshield® PF 700 should not come into contact with skin and eyes or be swallowed.

Some people are sensitive to polyurethane resins, hardeners and solvents. Gloves, goggles and barrier creams should therefore be used while handing the product. Adequate ventilation should be ensured and if working is in enclosed areas, suitable breathing apparatus must be used. If the resin comes in contact with skin, it must be removed before it hardens with a resin removing cream, followed by washing with soap and water. Solvent should not be used.

Cleaning Sol should be washed from skin immediately with soap and water. Should accidental eye contamination occur with any of the above products, it should be washed well with plenty of water and medical advice should be sought. If swallowed medical attention should be sought immediately. Vomiting should not be induced.

Refer to the product MSDS for instructions on handling the product.

Shelf Life

Pails should be stored in dry and cool rooms for up to 9 months. Protect the material against moisture and direct sunlight.

Storage Temperature

The product must be stored at 4-27°C.
Products should remain in their original, unopened containers.

Packing

Maxshield® PF 700 is supplied in 25kg drums.

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THERMAX

Thermax Limited
Environment House, Plot No.90-92
BG Block, MIDC, Bhosari,
Pune 411 026, India.
Tel: +91-20-67156000
Fax: +91-20-27120206
Customer Care: 18002090115 (India toll free)
Email : enquiry@thermaxglobal.com

Ahmedabad
Tel: +91-79-26575408 • Fax: +91-79-65577270

Bengaluru
Tel: +91-80-22371721 • Fax: +91-80-22371726

Chennai
Tel: +91-44-24303400 • Fax: +91-44-24353841

Delhi
Tel: +91-11- 46087200 • Fax: +91-11- 26145311

Hyderabad
Tel: +91-40-23253700 • Fax: +91-40-23253799

Kolkata
Tel: +91-33-66070800 • Fax: +91-33-66070999

Mumbai
Tel: +91-22-67542222 • Fax: +91-22-22040859

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