

WHITECHEM PU MEMBRANE 100

1 – PRODUCT DESCRIPTION

WHITECHEM PU MEMBRANE 100 is a two component , solvent free, cold applied and cold curing, polyurethane membrane used for waterproofing. It creates a high performance, elastic film by providing strong adherence to most surfaces.

2– FEATURES

- Solvent free, odorless
- Forms seamless membrane without joints or leak possibilities.
- Resistant to water and frost
- Highly elastic and durable
- High adherence to concrete
- Good penetration characteristics
- The film breathes so there is no accumulation of humidity under the coat.
- Resistant to detergent, oil and household chemicals
- Long pot life that enables manual (by hand) application.

3– APPLICATION AREAS

- Waterproofing of roofs
- Waterproofing of terraces
- Waterproofing of balconies
- Waterproofing of wet areas
- Terrace, balcony under ceramic coating
- Waterproofing of pedestrian decks
- Waterproofing and protection of concrete surfaces and other cement based substrates

4 – SURFACE PREPARATION & APPLICATION PROCEDURE

Surface Preparation: Careful surface preparation is essential for optimum finish and durability. All substrates must be sound, dry, free of laitance and loose particles and clean of oil, grease, rubber skid marks, paint stains and other adhesion impairing contaminants. The surface should be prepared by shot blasting, high pressure water jetting or other suitable mechanical method. Substrate compressive strength should be at least 25MPa, cohesive bond strength at least 1.5MPa. New concrete structures need to dry for at least 28 days. The substrate's surface temperature should be at least +10 °C and at least 3°C above the applicable dew point during product application.

Priming: The application surface has to be primed in order to achieve an even surface and good adhesion. Lightly broadcasting with quartz sand 0,3-0,8 mm is recommended because this provides higher adhesion values and extends the maximum waiting time of primer prior to the application of polyurethane coating. In order to avoid the formation of blisters do not broadcast to excess.

Mixing of Components: WHITECHEM PU MEMBRANE 100 is supplied in working kits which are pre-packaged in the exact mixing ratio. Stir Component A well before using. Then add the Component B at the correct mixing ratio. Component A and Component B should be mixed by a mechanical stirrer, for about 3-5 min at a very low speed (max. 400 rpm) until it become homogenous. Scrape the sides and the bottom of the container several times to ensure complete mixing.

Application of Waterproofing Membrane: Pour the mixture onto the surface and spread on the prepared surface with the help of suitable sized teeth trowel, notched trowel, squeegee or roller until all the surface is covered. Subsequently, the surface should be cleaned from air bubbles by using a hedgehog roller provided that it is in both directions. It should be ensured that a non porous layer that completely covers the surface is formed. The use of spiked shoes is recommended to avoid footprint during application. It is always recommended to complete the application in a minimum of two layers.

5- RECOMMENDATION AND LIMITATIONS

- Do not apply PU MEMBRANE 100 on surfaces that are damp, wet or covered with frost.
- Do not apply PU MEMBRANE 100 on dusty, unsound substrates or substrates containing oil and grease residue.
- Do not apply PU MEMBRANE 100 on surfaces that have not been primed or prepared properly.
- The substrate temperature must be at least 5°F (2,8°C) higher than the dew point and maintained at this level during curing.
- The workability of polyurethane materials is affected by temperature. The ideal temperature of application is between +10°C and +35°C, for which the product obtains optimal workability and curing time. Room temperature below +10°C will longer the curing time, while temperatures above +35°C will reduce it. It is recommended to mildly preheat the product in the winter, and store the product in a cool room before application in the summer.
- Please ensure consumption within the pot life of the product. Please do not leave the mixed coating material in the pail for long, because the exothermic reaction accelerates the curing and will shorten the pot life. Directly after mixing the mixture should be transferred to application floor.
- After application completed, it must be protected from direct water contact for at least 24 hours. If there is a water contact, this will cause the coating to will cause it to lose its properties
- The product has been produced ready-to-use sets. No solvent etc. should be added to the mixture during the application.
- Mixing should be done with 300-400 rpm mechanical mixer. **DO NOT MIX MANUALLY**
- PU MEMBRANE 100 is intended for professional use only

6- CONSUMPTION

1,2 kg/m² per mm (recommended thickness 1,5-2mm)

Factors like surface porosity, temperature, humidity, application method and finish required can alter consumption.

7- CLEANING

Tools can be cleaned with solvent while still wet. Once cured, the material can only be removed mechanically.

8– PACKAGING

20 kg packs

Component A: 16 kg and Component B: 4 kg

9– COLORS

Standard color is medium grey. Other RAL colors are available upon request. PU Membrane 100 is an aromatic polyurethane system and therefore will discolor when exposed to UV. Change in appearance does not modify its mechanical properties or leak tightness. For color protection, the use of proper top coat is recommended.

10– SHELF LIFE & STORAGE CONDITIONS

12 months at temperatures between 5°C and 30°C. Once the tin has been opened, the product must be used immediately. Do not expose to direct sunlight. When not in use, the packages should be tightly closed. Packages must be protected from freezing.

11– SAFETY

Contains isocyanate MDI. Avoid breathing vapors. Avoid contact with skin and eyes. Take precautions during application. Wear suitable protective clothing, gloves and eye/ face protection. Adequate ventilation of the working area is recommended. Refer to SDS sheet prior to use.

12- TECHNICAL FEATURES

	METHOD	DATAS
Chemical structure		A: Polyurethane Resin B: Polyurethane hardener
Mix ratio		4:1 (A:B by weight)
VOC content (%)	ASTM D1259	0
Solid content (%)	ASTM D2697	100
Density (mixture)	ASTM D792	1,25-1,3
Viscosity (mixture)		5000-5500 cps
Pot life (min)	--	35-40 (23 °C %50 R.H.)
Light traffic time (hr)	--	24 (23 °C %50 R.H.)
Full Cure (day)	--	7 (23 °C %50 R.H.)
Tensile strength (MPa)	ASTM D638	≥ 5
Elongation at break (%)	ASTM D638	≥100
Hardness (Shore A)	ASTM D2240	80
Pull off strength (N/mm²)	ASTM D 4541	Concrete: ≥2
Service Temperature (°C)	--	-20-80
Application Temperature (°C)	--	10-35
Substrate Temperature (°C)	--	10-35

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