

# WHITECHEM PU MEMBRANE T225



*Polyurethane Based, One Component, Aliphatic, Topcoat Waterproofing Membrane*

## 1 – PRODUCT DESCRIPTION

**WHITECHEM PU MEMBRANE T225**, one component, UV resistant, solvent, aliphatic, polyurethane based topcoat waterproofing and coating material. Thanks to special curing system, a non-bubble, elastic and high strength membrane is formed.

## 2 – PRODUCT FEATURES

- UV resistant
- Aliphatic (doesn't change color under the sunlight and no yellowing)
- Easy to apply (brush, roller, airless gun)
- Excellent adhesion
- Suitable for light foot traffic
- Resistant to weather conditions (temperature, water and freezing)

## 3 - APPLICATION AREAS

Direct sunlight, color stability desired ;

- Roofs, balconies and terraces
- Concrete, ceramic, metal, wood, glass protection and waterproofing
- **WHITECHEM PU MEMBRANE 450** applied on all surfaces, protection and waterproofing
- Waterproofing on thermal insulation applications (PU foam, EPS, XPS etc.)

## 4 - APPLICATION CONDITIONS

- The surface must be strong and with sufficient strength. Application should not be made on low screed concrete. The lowest compressive strength for the surface should be 25 MPa and the lowest bond strength should be 1,5 MPa.

- The concrete should be allowed to dry for at least 28 days before application on fresh concrete.
- The surface and ambient temperature should be at least 5 ° C and maximum 35 ° C.
- The maximum amount of moisture in the air should be 80%.
- The maximum amount of surface moisture should be 4% for the surfaces applied polyurethane primer (**WHITECHEM PRIMER 90**), maximum 6% for surfaces applied moisture tolerant epoxy primer (**WHITECHEM PRIMER 80**), maximum 7% for surfaces applied water based epoxy primer (**WHITECHEM PRIMER W80**).
- Attention should be paid to condensation on the surface. Application should not be made early in the morning. The surface temperature should be at least 3 ° C higher than the dew point.
- Do not apply on frozen, melting surfaces or on surfaces where rain is expected within 6-8 hours.
- The above requirements apply to both primer and membrane application.

## 5 – SURFACE PREPARATION

- The application surface should be clean and dry, the elements that prevent adhesion should be cleaned from the surface. Do not wash to clean the surface.
- If necessary, the surface should be wiped off with suitable wiping machines in order to remove the weak concrete on the surface for to open the eyelets and openings. The glazed top layer of ceramic surfaces should be roughened. Dust happened after wiping

should be removed from the surface by brush or vacuum cleaners.

- Dilatations on the surface should be insulated with the appropriate polyurethane based filler material (**WHITECHEM PU DF 25**) and dilatation tape.
- All kinds of cracks, gaps and segregations on the surface should be repaired with suitable epoxy or cement based repair mortars.
- Corner chamfers should be supported with appropriate repair mortar or chamfer tape.
- The application surface should be cut on the screed concrete in large places. Cutted joints must be filled with polyurethane based sealant (**WHITECHEM WP 35**).
- As a result of these processes, dust and debris on the surface should be removed from the surface for the last time.

## 6 – PRIMER APPLICATION

- For highly absorbent surfaces (concrete, wood etc.), one can choose according to surface moisture between **WHITECHEM PRIMER 90**, **WHITECHEM PRIMER S80**, **WHITECHEM PRIMER 80** or **WHITECHEM PRIMER W80**.
- For bituminous surfaces, choose **WHITECHEM PRIMER W80**.
- For non-absorbent surfaces (ceramic, glass or metal), choose **WHITECHEM PRIMER S80**, **WHITECHEM PRIMER 80** or **WHITECHEM PRIMER W80**.
- To obtain a homogeneous primer mixture, the primer should be mixed with an electric mixer for 3-4 minutes, low speed (~ 300 - 400 rpm) or with suitable equipment. Do not mix at high speed for a long time to prevent air bubbles.
- The prepared primer mixture is applied to the surface by brush, roller or airless spraying machines.

## 7 – MEMBRANE APPLICATION

### For Waterproofing;

- Before applying **WHITECHEM PU MEMBRANE T225**, make sure that the primed surface is sufficiently dry (at least 2-3 hours).

The primed surface should not be too wet or completely dry. It is sufficient to leave a feeling of adhesion in your hand.

- Before applying the **WHITECHEM PU MEMBRANE T225** to the surface, mix with an electric mixer for 3-4 minutes, low speed (~ 300 - 400 rpm) or suitable equipment to obtain a homogenous mixture. Do not mix at high speed for a long time to prevent air bubbles.
- The prepared mixture is applied to the surface by brush, roller or airless spraying machines.
- At least 2 coats should be applied. It can be applied in 3 layers depending on where to apply. It is recommended to apply the floors in such a way that the application directions are perpendicular to each other.
- Waiting time between coats varies between 12-36 hours depending on temperature and humidity.

### For Topcoat Coating;

- If the application **WHITECHEM PU MEMBRANE T225** is to be applied on the **WHITECHEM PU MEMBRANE 450** as a topcoat coating, attention must be paid to the waiting time between the coats.
- 1-2 coats are applied in thin layers.

## 8 – CONSUMPTION

System	Product	Consumption
For water proofing	1 x <b>WHITECHEM PRIMER 80 – W80 - 90</b>	200-400 g/m <sup>2</sup>
	2-3 x <b>WHITECHEM PU MEMBRANE T225</b>	500-700 g/m <sup>2</sup> /layer
For Topcoat Coating	1-2 x <b>WHITECHEM PU MEMBRANE T225</b>	500-700 g/m <sup>2</sup> /layer

\* Consumption in the table is theoretical. Consumption may vary according to surface permeability, weather conditions, and the technique of application.

## 9 – TECHNICAL SPECIFICATIONS

Test Name	Result	Test Method
<b>Chemical Structure</b>	Solvent Aliphatic Polyurethane	
<b>Density</b>	1,35 ± 0,03 gr/ml (23 °C ve % 50 R.H.)	(ASTM D1875)
<b>Appearance / Color</b>	Liquid / White or Grey	
<b>Solid Content Ratio</b>	As a weight ~ % 84	
<b>Viscosity</b>	5000 - 10000 cps	
<b>Tack Free Time</b>	~ 3 hour (23 °C ve % 50 R.H.)	
<b>Rain Stability Time</b>	~ 7-8 hour (23 °C ve % 50 R.H.)	
<b>Light Pedestrian Time *</b>	~ 24 hour (23 °C ve % 50 R.H.)	
<b>Full Curing Time</b>	~ 7 day (23 °C ve % 50 R.H.)	
<b>Hardness (Shore A)</b>	60 ± 5	(ASTM D 2240)
<b>Elongation</b>	≥ % 450	(DIN 53504)
<b>Tensile Strength</b>	~ 3 N/mm <sup>2</sup>	(DIN 53504)
<b>Service Temperature</b>	-20 °C ile +80 °C arası	
<b>Capillary water absorption and water permeability</b>	0,011kg/m <sup>2</sup> .h <sup>0,5</sup>	(EN 1062-3)
<b>Adhesion strength through the pull-out test</b>	>1,2 N/mm <sup>2</sup>	(EN 1542)
<b>Abrasion Resistance</b>	Average 400 mg	TS 8103 EN ISO 5470-1
<b>Fire Resistance Class</b>	F	EN 13501-1

\* It is not for continuous pedestrian traffic, only for the examination or for the application of the next floor.

## 10. CHEMICAL STRUCTURE TABLE

Chemical Name	Resistance
Hydrochloric Acid %10	±
Hydrochloric Acid %20	±
Sulfuric Acid %10	-
Sulfuric Acid %25	-
Sulfuric Acid %50	-
Nitric Acid %10	±
Acetic Acid %5	±
Acetic Acid %10	-
Lactic Acid %10	-
Fosforik Asit %10	+
Phosphoric Acid %30	±
Citric Acid %10	+
Formic Acid %1	±
Ethanol	±
Methanol	±
Ethyl Acetate	-
Trichlorethylene	±
Toluene	±
Potassium Hydroxide 20%	+
Potassium Chlorite 25%	+
Ammonia %25	+
Hydrogen Peroxide 3%	+
Sodium Chloride 25%	+
Iron Sulfate 5%	±
Diesel	+
Unleaded Gasoline, 98 octane	±
Engine oil	+

+ Resistant

± Resistant (color, brightness and hardness may change.) Rarely in case of contact or splash,

- Not Resistant

### 11 - PACKAGING

- 15 kg metal bucket

### 12 – COLOR VARIETIES

- White and gray (other colors can be produced for tonnage orders)

### 13 - SHELF LIFE AND STORAGE CONDITIONS

- It is suitable for 9 months from the date of production when stored correctly between +5 ° C and +30 ° C in original, unopened and undamaged packages.
- Products should be stored in dry and places where not having direct sunlight.

### 14 - WARNING AND SUGGESTIONS

- Personal protective equipment must be used during application. In case of contact with skin, wash with plenty of water. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- Keep products away from sources of ignition. Do not heat the products by sun or other means. Do not smoke at the time of application.
- There must be sufficient air circulation in the application area.
- The opened buckets should be consumed in a short
- It is not recommended to be used in pools such as ornamental ponds, wastewater facility pools or pools permanently submerged.
- In order to minimize the bubble formation in the membrane, application should not be made thicker than the maximum application thickness in one coat.

- The finished product should be protected against rain and mechanical stress until it is dry.
- Clean all tools and application equipment with thinner immediately after use. Hardened / cured material can only be cleaned by mechanical methods.