PENTENS T-100

Water-Based PU Bituminous Waterproofing Membrane

Product Data Sheet

Description

PENTENS T-100 is a single component, newly developed polymer of MMA, natural rubber, and polyurethane combined with asphalt and then modified and further emulsified to form an elastic waterproof membrane. PENTENS T-100 is an environmentally friendly and low VOC material.

Uses

To provide a better water and vapor proof in complicating application surface compared to membrane type and ensure better integrity between applied surfaces and waterproofing coating. Areas of application include:

- Concealed RC flat roofs
- Suspended floors
- Terraces and balconies
- Patios
- Bathrooms
- RC gutters and planter boxes
- Swimming pools and water features
- Basements and foundations
- Retaining walls
- Landscape areas
- Driveways

Advantages

- Low VOC.
- Environmentally friendly.
- High elasticity.
- Bond to most surfaces.
- Resists to a wide range of acids and alkalis.
- Can be applied directly on damp or wet surfaces.
- Odorless and produces no fumes.
- Non-toxic.

Technical & Physical Data

Form	Liquid
Color	Black Coffee
Solid Content (%) (SS 133:1987 Appendix D)	73.90
Shore A Hardness (ASTM D2240:2005)	57
Crack Bridging (ASTM C 835:00)	2mm
Tensile Strength (N/mm²) (ASTM D 412-98)	3.1
Elongation at break (%) (ASTM D 412-98)	1128.6
Tear Strength (kgf/cm²) (CNS 6986, CNS 6988)	14.7
Water Penetration (DIN 1048 Part 5:1991)	0
Water Vapour Transmission of Materials (ASTM E96/ E96M:2005)	18 g/m²/24 hrs
Puncture (kgf) (ASTM E154)	19
Chemical Resistance (10% HCOOH, 60°C, 24 hrs)	No changes on the surface of the sample
Shelf Life	1 year when unopened and undamaged
Storage Condition	Store in a dry, cool place
Packaging	20kg /pail 200kg /drum

Important Notes

1. Minimum ambient and substrate temperature is 5°C.
2. Never apply more than 1kg/m² of PENTENS T-100 in one single layer.
3. Apply only to clean, sound substrates where surfaces should be well-dampened but free from surface water and leakages.
4. Thoroughly agitate contents before use.

Disclaimer. All representations and recommendations set forth are given in good faith and to the best of our knowledge. However due to varying conditions and applications, the buyer shall conduct its own tests of this product before use. Under no circumstances will the manufacturer be liable for any loss or damages caused by incorrect usages. The sale of this product shall be on terms and conditions set forth on Pentens order acknowledgement.

Green Label Test Data

Heavy Metals: (EPA 3025 / EPA 6010B : ICP)	
a. Cadmium (Cd)	Not Detected
b. Lead (Pd)	Not Detected
c. Total Chromium (Cr)	Not Detected
d. Mercury (Hg)	Not Detected
Volatile Organic Compounds (ISO 11890-2) (g/L)	1.95
Total Halogenated Organic Solvent (ISO 11890-2) (%)	Not Detected
Total Aromatic Organic Solvent (ISO 11890-2) (%)	Not Detected
Epichlorohydrin (ISO 11890-2) (%)	Not Detected
N-Methyl Pyrrolidinone (ISO 11890-2) (%)	Not Detected
Formaldehyde (High Performance Liquid Chromatography) (%)	Not Detected
Alkyl Phenol Ethoxylate (LCMS-MS) (%)	Not Detected
Flash Point (ASTM D3828-07a) (°C)	>61

Instruction for Use

Surface Preparation

All surfaces must be clean, free from grease, oil and laitance. Remove all dirt and contaminants which might affect adhesion.

Any cracks or water leakages should be pre-treated and reinforced with PENTENS repair system (for more details, please refer to PENTENS Technical Department).

Mixing

Generally is not required but for a smoother application, not more than 1kg of clean water can be added into 20kg of PENTENS T-100.

Application

Dilute 1 portion of PENTENS T-007 permeable primer or 1 portion of PENTENS T-100 with 3 portions of clear water and then plaster directly to the surface to be waterproofed at the rate of 0.2kg/m² in order to improve the bonding. Using brush, roller or spray, apply the first coat of PENTENS T-100 on the surface. Leave to cure for approximately 8 hours before applying the second coat.

Standard coating system:

PENTENS T-100 should be applied in minimum two coats (exclude primer)
1 x coat of PENTENS T-007 at 0.2kg/m²
2 x coats of PENTENS T-100 at 0.75kg/m²/coat

Water retaining structure coating system:

PENTENS T-100 should be applied in minimum three coats (exclude primer)
1 x coat of PENTENS T-007 at 0.2kg/m²
3 x coats of PENTENS T-100 at 0.75kg/m²/coat

Reinforced coating system:

PENTENS T-100 should be applied in minimum two coats (exclude primer), reinforced with a layer of Pentens ACW-015 fiberglass mesh
1 x coat of PENTENS T-007 at 0.2kg/m²
1 x coat of PENTENS T-100 at 0.75kg/m²
1 x layer of PENTENS ACW-015 fiberglass mesh
1 x coat of PENTENS T-100 at 0.75kg/m²

Note:

1. PENTENS T-100 should be applied in minimum 2 coats.
2. Primer is required for better bonding.

Curing

For optimum performance, PENTENS T-100 should be allowed to cure for 12 hours before applying the finishing concrete, tiles etc. During this period of time, precautions must be taken to prevent damage to the coating.

Note

The best method to ensure good penetration of the first coating into the surface is by applying with a roller. Subsequent coats may be sprayed or roller-applied.

Cleaning

Tools and equipment can be easily cleaned with water immediately after use. Hardened material may need to be removed mechanically.

Safety

Impervious gloves and barrier cream should be used when handling these products. Eye protection should be worn. In case of contact with eyes, rinse with plenty of water and seek medical advice if symptoms persist. If contact with skin occurs, it must be removed before curing takes place. Wash off with an industrial skin cleanser followed by plenty of soap and water. Do not use solvent. Ensure adequate ventilation when using these products.

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