

OVERVIEW

RANSAPP-HM100 is a polymeric waterproofing membrane consisting of five layers. The Centre core consists of 100 micron High Molecular High Density Polyethylene Film. The Polyethylene Film is the reinforcement barrier against water and moisture. The Centre Core is provided on both sides with SBS/APP polymer modified bitumen with properties of high Softening point, Heat resistance and high Penetration making it ideal for waterproofing purposes. The polymer modified bitumen is protected on both side with thermo fusible High Molecular High Density Polyethylene Film. The polymeric membrane has elongation exceeding 300% to absorb all Structural movements. It has a very high tensile strength and cold resistivity to adapt to all contours.

PROPERTIES

- Excellent resistance to positive water & vapor pressure.
- Good heat resistance.
- Good dimensional stability under tension.
- Can accommodate structural movements because of excellent flexibility.
- High puncture and fatigue resistance.
- High tensile and tear strengths.
- Resistant to water borne chemicals.

AREAS OF USE

RANSAPP-HM100 is used as a waterproofing membrane on the following structures:

- Inverted Roofs & parapets
- Terraces, balconies & patios
- Sunken slabs
- Bridges & tunnels
- Airport aprons & ramp areas

RANSAPP-HM100 in tropical regions can also be used for waterproofing of below ground concrete structures like:

- Concrete foundations & footings
- Basements
- Pile heads
- Swimming pools & water retaining structures

INSTRUCTIONS FOR USE

The application temperature should be between 5°C to 45°C. Application procedures may vary slightly depending upon site conditions. The general recommended guidelines for the application of the waterproofing system are as follows:

SURFACE PREPARATION

The surface shall be cleaned thoroughly of all contaminants like dust, traces of curing compound, oil and grease. All surface imperfections and protrusions shall be removed and repaired. Structurally unsound and friable concrete must be removed and repaired with a suitable RANSCRETE AP concrete repair mortar.

PRIMING

Apply Solvent based RANSBITU-PRIMER @ 0.3-0.4L /Sqmt as per ASTM D 41 & IS: 3384-1986 and BS 4147-1980 to a clean smooth and dry surface by brush, roller or spray. Allow the primer to dry prior to the application of the membrane. As the viscosity of the primer is low, it easily penetrates into the concrete pores which promote the adhesion between the membrane and the concrete surface. In addition to that the primer also acts as a binder for the dust which gets accumulated on the concrete surface even after cleaning.

ALIGNMENT

Start the installation of all membrane plies from the low point or drains, so the flow of water is over or

RANS ENGINEERING & CHEMICALS offers a comprehensive range of products and services for most concrete and finishing needs. Please contact the RANS Technical Service Department or your local RANS agent for further information, samples, demonstrations and instructor services. The information given in this leaflet is based upon laboratory research, as well as extensive field work and application. All products are sold subject to standard conditions of sale which are available on request. This information is based on RANS present state of knowledge and is intended to provide general information on RANS's products and their methods of use. The prospective user is recommended to determine the suitability of RANS's suggestions and products before adopting them on a commercial scale.

parallel to the plies, but never against the lap. All overlaps at the membrane seams shall be installed so as to have "up" slope laps over "down" slope lap. Begin membrane application by unrolling the roll of **RANS BITU-PRIMER** and aligning the side laps. Re-roll the roll halfway and stand on the unrolled portion to prevent shifting. Side overlaps should be a minimum of 100 mm and the end overlap 150mm.

TORCHING

RANSAPP-HM100 membranes are installed by using a cylinder fed propane gas torch. Use of hand-held roofing torch is recommended as it affords a good control. If multiple burner torching machines are utilized, care must be taken to ensure the application of uniform heat and avoid overheating of the membrane. Begin torching the embossed polyethylene side of the rolled portion of the membrane.

Proper torching procedure involves passing the torch flame in an "L" pattern applying about 75 percent of the heat across the coiled portion of the roll and 25 percent across the substrate, including the lap area of the previously installed membrane.

As the membrane is heated the embossing starts to melt away exposing a shiny bitumen surface. Roll forward the membrane and press firmly with the boot or roller against the substrate to bond well. The propane flame should be moved from side to side and up the lap edge while the membrane is slowly unrolled and adhered to the surface. Subsequent shift of the roll shall be avoided after heating has begun. When one end is complete, re-roll the opposite end not yet torched, and install in the same manner.

As subsequent rolls are installed, heat is applied to both the roll and the exposed laps of the membrane being overlapped onto. Be sure to heat the entire Roll evenly, not just the lap areas, with extra concentration at the laps.

CAUTION

Do not over torch the membrane as this will expose the reinforcement and cause damage to it.

SEALING

Heat both the overlaps and use round tipped trowel to seal the overlap. Adequate heat is confirmed when a uniform flow of melted bitumen compound flows evenly in a bead that oozes from the applied membrane's edges. Excess compound should be smoothed and pressed into the seam using a heated trowel. Any un-bonded areas must be lifted and re-torched. Do not attempt to reseal by torching the top surface of the membrane. Up stand

Flashing details are accomplished using cut pieces of **RANSAPP-HM100** in combination with appropriate prefabricated flashing components. The same side lap and end lap rules apply to flashing details as to field membrane.

All angles and abutments should be sealed with extra care to ensure full bonding.

All brushes and tools should be cleaned by water immediately after use.

Wash all the tools and tackles with industrial solvent immediately after the application is completed.

HEALTH & SAFETY

Avoid prolonged contact with eyes and skin. For detailed information refer to relevant material safety data sheet.

PACKGING & STORAGE

RANSAPP-HM100 is packaged in (10.00 Mtr L x 1.00 Mtr W) as per given details:-

THICKNESS:-

2MM - (1Mx10M), Weight - 2.8 Kg-3.0 Kg

3MM - (1Mx1M), Weight - 3.8 Kg-4.0 Kg

4MM - (1Mx10M), Weight - 4.8 Kg-5.0 Kg

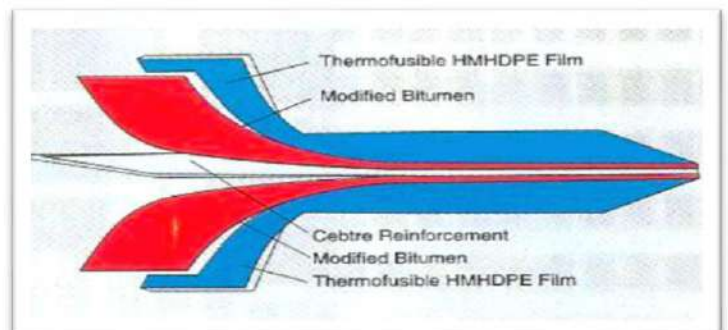
Store in a clean dry area protected from direct sunlight and extreme heat and cold.

Unopened condition rolls can be stored for 12 months. Use oldest material first.

**TECHNICAL
DATA**

Product	APP Modified Membrane		
Proper ties	2mm/3mm/4mm		
Membrane thickness (+/- 5%)	(UEAtc. M.O.A.T.30)		
Nominal weight	2.80/3.80/4.80 kg/m ² (UEAtc. M.O.A.T.30)		
Reinforcement base	(HMHDPE) 100 micron (UEAtc. M.O.A.T.30)		
Thickness of Polyethylene Core	0.090 mm ± 0.01 mm		
Tensile strength			
Longitudinal (ASTM D 638)	130 N/5cm		
Transverse (ASTM D 638)	110 N/5cm		
Elongation of membrane			
Longitudinal (ASTM D 638)	300%		
Transverse (ASTM D 638)	300%		
Heat Resistance at 100°C (UEAtc. M.O.A.T.30)	No Flow	Resistance to Water Pressure (DIN 52123)	No Leakage
Cold Flexibility (0°C to -2°C) (ASTM D 836)	No Cracks Observed	Penetration@25°C (ASTM D-5)	20±5 (100grms/Sec)
Softening point (ASTM D-36)	120°C	Service Temperature	+5°C to +65°C
Packaging	(1Mx10M)	Storage	12 months in original condition.

PICTURES/IMAGES AT GLANCE



RANS ENGINEERING & CHEMICALS PVT. LTD

[An ISO 9001: 2015 Company]

205, GALI NO-7, A BLOCK, BRIJPURI

YAMUNA VIHAR, NEW DELHI-110094

CONTACT AT: +91-11-22170895, +91-9871393743

Website: www.ransengineering.com

Email: ransengineering@gmail.com