TURBAL

APP MODIFIED TURBAL RANGE OF WATERPROOFING MEMBRANE

DESCRIPTION

TURBAL is a waterproofing membrane, produced in highly controlled process conditions, out of a robust reinforcement of spun bound, non-woven polyester and straight run bitumen, modified with selected A.P.P polymers and stabilizers.

FEATURES

- APP modified asphalt.
- Options for thickness as per requirement.
- Polyester reinforced.
- Options for surface finishes in exposed and
- Covered applications.

ADVANTAGES

- Stability at high temperatures.
- Excellent puncture and tear resistance.
- Excellent resistance to U-V rays, aging and weathering.
- Superior waterproof barrier to the roof structure.
- Superior bonding to the substrates at seams.
- Easy for application and repair works.
- Rot proof.
- Resistant to chloride, sulfates and soil chemicals.

FIELD OF APPLICATION

TURBAL is ideal to use for new and re-roofing applications on any concrete and cement surface that needs water proofing. It can be used in almost every waterproofing applications which includes roofs, balconies, basements, reservoirs, bridges, tunnels, lining for sewage canals, sub grade structures etc.

GENERAL DATA

Roll length: 10 m
Roll width: 1 m
Thickness : 2, 3, 4 & 5mm

Reinforcement: Non-woven polyester fabric.

Finish: Both side polymer films

DIRECTIONS FOR USE

TURBAL is installed by torch welding method, either loose laid or fully bonded to the substrate.

Surface cleaning:
The surface to be waterproofed must be thoroughly cleaned and should be made free from dust, debris, oil, protruding elements etc.

Priming:
Coat the prepared surface with a suitable primer. (Recommended **CAPSOLVENT**).

Tools for application:

- Gas torch
- Trowel with rounded tip
- Marking aids
- Knife / Cutter
- Measuring tape
- Safety accessories

Fixing instruction:

Roughly calculate the area of the surface that the **TURBAL** has to be installed / fixed. Arrange the material nearby as per the calculated area.
The installation should be started from one edge / end of the surface that the membrane to be installed. Unroll one piece of **TURBAL** over the surface with minimum 10 cm side lap alignment, so as to get a clear profile. Fixing should be either loose laid or fully bonded as explained below.

Loose Laid:

Re-roll the unrolled membrane approximately to half its total length or to a length suitable for application without changing the orientation. Melt the sides of the membrane, minimum 10 cm from the edges, by using the gas torch without damaging the polyester reinforcement. Fix the melt portion firmly to the pre-primed surface before solidification. Position the subsequent rolls, so as to give a length edge overlapping of minimum 10 cm and width edge overlapping of

Minimum 15 cm. Continue the procedure until the desired area is fully fixed with **TURBAL**
Each finished overlap should be passed by the torch along the joint and the melted compound should be spread with a trowel or roller to ensure a smooth tight seal.

Fully bonded:

Re-roll the membrane fully without changing the desired orientation. Melt the lower surface of the membrane with a gas torch by moving the flame across the entire width of the roll. Fix the melt portion firmly to the pre-primed surface before solidification. Positioning of subsequent rolls should be done in the same manner as of loose laid membrane. As the surface of the roll is heated, it will develop sheen. The generation of smoke is an indication that the material is being overheated.

STORAGE

The rolls of **TURBAL**, whether loose or packed on pallets, must always be kept upright on a smooth flat support. A second layer may be stored on top of the first, provided that the first layer of roll is suitably covered with a rigid covering to distribute load.

HEALTH AND SAFETY

Handling of **TURBAL** requires no special health and safety precaution

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TYPICAL PHYSICAL PROPERTIES

The details given in the Table is based on the average values of the tests conducted on several samples, by stipulated test methods.

Description		Test Method	Typical test result				
			TP-200	**TP-180**	**TP-160**	**TP-140**	**TP-120**
Surface finish	Top		PE	PE	PE	PE	PE
	bottom		PE	PE	PE	PE	PE
Roll length M			10	10	10	10	10
Roll width M			1	1	1	1	1
Nominal Thickness mm		ASTM D 5147, UEAtc M.O.A.T 30	3,4,5	3,4,5	2,3,4	2,3,4	2,3,4
Polyester reinforcement gm/m^2		UEAtc M.O.A.T 30	200	180	160	140	120
Weight per square meter Kg/ m^2 (min)		UEAtc M.O.A.T 30	3,4,5	3,4,5	2,3,4	2,3,4	2,3,4
Penetration dmm @ 25° c		ASTM D-5	10-30	10-30	10-30	10-30	10-30
Water absorption %		CGSB37-GP-56M	Max 1 gm				
Dimensional Stability % (Long & trans)		CGSB37-GP-56M	± 1	± 1	± 1	± 1	± 1
Stability Under exposure to heat @ 100 ^{0} c		ASTM D-5147 UEAtc M.O.A.T 30	**No deformation**				
Water vapor transmission gram/m^2/24 hrs @25^{0}C temp, 50% R. H		ASTM E96,	< 1	< 1	<1	<1	<1
Tensile strength ;N5cm(long/trans)		ASTM D-5147	900/600	850/550	700/500	680/480	600/450
Elongation % (long/trans)		ASTM D-5147	50/55	50/55	45/45	40/50	40/45
Tear Strength N (long/ Trans)		ASTM D4073	550/450	500/400	480/380	460/360	450/350
Load strain Product Long Trans		CGSB37-GP-56M	 45000 33000	 42500 30250	 31500 22500	 27200 24000	 24000 22500
Impermeability to water @ 2 bar pressure		DIN 52123	**Absolutely impermeable**				

Note: The above shown technical data are based on 4 mm membrane from our standard production

TECHNICAL SERVICE:

Our Technical Service Department is available at any time to advise you in the correct use of this product or any other Ahlia products.

Note: The information presented herein is based on the best of our knowledge and expertise for which every effort is made to ensure its reliability. Although all the products are subjected to rigid quality tests and are guaranteed against defective materials and manufacture, no specific guarantee can be extended because results depend not only on quality but also on other factors beyond our control.

As all Ahlia Technical Data Sheets are updated on a regular basis, it is the user responsibility to collect most recent issue.

Rev: 0 May -08