Royston® 104AHT Architectural Membrane

Royston® 104AHT Architectural Membrane is a prefabricated reinforced laminate constructed of a woven fiberglass core, sandwiched between layers of polymer modified asphalt with a ¼ mil mylar surface film. The embossed release film used is specifically designed to facilitate removal in ambient temperatures within the application range without tearing or splitting. Royston® 104AHT is used as an architectural waterproofing membrane in commercial and residential below grade applications.

A unique 3-inch leading edge guarantees a positive compound-to-compound seal at the overlap during installation. Transverse seals are easily made using Royston® Flex-Flo Adhesive Sealant (FFAS), Royston® 104 CM Mastic or via heat sealing.

FEATURES	BENEFITS
3” Lading edge	Adhesive to adhesive bond creating water-tight seam
Woven Fiberglass carrier	Yields higher tensile and puncture strengths
Flexible	Allows for minor amount of movement related to thermal expansion/contraction, settlement or shrinkage
Cold applied	Eliminates dangers of hot liquids
High tack	Better adhesion in vertical applications without slumping

USES

Application

- Vertical & Horizontal Waterproofing Membrane

Locations

- Commercial & Residential Structures
- Balconies
- Parking Garages

Substrate

- Concrete
- Block
- Asphalt
- Steel
- Wood
- Foam

PHYSICAL PROPERTIES

Properties	Test Method	Typical Values
Surface Layer (Covering)		Protection board, asphalt, concrete, terrazzo, backfill
Color		Black
Top Surface		¼ mil mylar film
Thickness		60±5 mils
Weight		0.35 ± 0.05 lbs/ft²
Elongation Compound Only	ASTM D1000 Mod.[1]	1000% min.
Tensile Strength	ASTM D1000 Mod.[1]	833 psi min. (58.5 kg/cm²)
Permeance	ASTM E96 Method B	.05 u.s. perms max.
Compound Softening Point	ASTM D36	208˚F min. (97.8˚C)
Compound Penetration	ASTM D5	50 min @ 77˚F 5 sec 100 needle
Puncture Resistance	ASTM E154	40 lbs. min
Pliability	ASTM D146[2]	No cracks or splits at -25˚F
Cycling Shear Strength	TWI100336[3] 2”/min (5.08 cm/min) @ 32˚F (0˚C) w/0” opening & .250” (0.635 cm) displacement TWI100336[3] 10”/min (25.4 cm/min) @ 32˚F (0˚C) w/0” opening & .250” (0.635 cm) displacement	40 psi (2.8 kg/cm²) min 25 psi (1.75 kg/cm²) min
Cycling Shear Strength Recovery	ASTM C836	Constant Load @ 10 cycles – no damage
Water Absorption	ASTM D1228 72 hours	0.25% max.
Peel Adhesion	RS 100338	15 lb/in min.
T-Peel Adhesion	RS 100322	3 lb/in min.
Reinforcement		Woven Glass Fiber 10x 20 mesh

NOTES:

1. ASTM D1000 Method using CRE Tester with a 4” jaw separation at a speed of 10”/min. PSI calculated from #/in. width at specified thickness.
2. 1/2" Mandrel @ -10˚F (-23.3˚C)
3. TWI100336 uses membrane properly applied to two primed steel panels with a 1” gap between panels. At specified test temperature the gap is cycled to the specified opening for the specified No. of cycles. For Shear Strength, the force/unit of the 1st cycle is recorded. For Shear Stress recovery any damage after the No. of cycles to constant load and the No. of cycles required to reach constant load is noted.

WHAT IT DOES

Royston® 104AHT Architectural Membrane forms an impenetrable moisture barrier when used for vertical or horizontal applications. It effectively prevents moisture from infiltrating protected surface, eliminating water damage and mildew.

WHERE TO USE IT

Royston® 104AHT Architectural Membrane should be used in vertical applications to waterproof below grade foundation walls of block, brick wood, concrete or foam. It is also recommended on horizontal applications over concrete and wood decks where asphalt, concrete, wood, soil, sand and a variety of pavers are to be used as a wear course. As an additional precaution a 1/8" asphalt core protection board, drain board, insulation or other approved material is recommended as a protection course on both vertical and horizontal applications when being backfilled against.

SURFACE PREPARATION

New Surface: Should be flat, clean, dry and free from dust, dirt, mud, oil, grease and other contaminants. Holes, voids and uneven surfaces, with imperfections over ¼" peak to valley, should be prepared with suitable material to obtain a level substrate. Ensure that all sharp protrusions are removed prior to installation.

Existing Surface: Existing waterproofing must be removed in its entirety. Surface must be cleaned with high pressure water or other acceptable method and allowed to dry. Surface must be swept and blown clean prior to primer, adhesive and membrane application.

USE OF PRIMER

Reference the applicable Roybond Primer technical data sheet for application procedures and rates. Roybond Primers should be stirred before using and applied at a rate of approximately 200 sq. ft. per gallon (without dilution) by brush, squeegee or short nap roller. The primer should be dry to the touch before application of the membrane. This will require 20 to 30 minutes depending on temperature and humidity. Brush out any puddles of primer to allow for uniform drying.

Roybond 713A: Standard Primer

Roybond 713B: Low V.O.C. Primer

Roybond 740: Low temperature primer for use between 25˚F (-4˚C) and 45˚F (7˚C)

Roybond 750: Spray-able version of the 713A standard primer

APPLICATION

For best results, the membrane should be applied at surface and ambient temperatures of 25˚F or higher. The membrane should be applied by hand rolling onto the application surface. The release film should be removed as the application proceeds. If using Flex Flo Adhesive Sealant (FFAS), the membrane should be embedded in the FFAS at all perimeter edges/termination points. A thin bead of FFAS or 104CM is to be applied on the surface of the membrane along all perimeter edges/termination points at the conclusion of the membrane installation.

Each roll should be applied to overlap the previous roll by a minimum of 3-6 inches. Overlapping of the membranes typically results in the loss of 10% of the usable surface area, reducing the coverage area from 200 ft² to 180 ft² per roll. The overlap at the edge is self-sealing due to the compound-to-compound contact. The transverse joint lap at the end of each roll should be sealed by heating with a propane torch to melt and fuse the surfaces together. Patching may also be done by the heat sealing method or with the use of Royston® 104CM or Royston® Flex-Flo Adhesive Sealant.

For additional instructions, reference the most current version of the "Royston® Waterproofing Membrane Installation Guidelines".

APPLICATION OF HOT ASPHALT OVERLAY

The asphalt MUST be between 290˚F and 340˚F at the time of application. Rubber tired pavers and trucks may be driven on the membrane provided care is taken to prevent sudden starts, stops or turns. As the hot asphalt is compacted, it bonds firmly to the surface of the membrane. A minimum of 1 ½ inches (32mm) of compacted asphalt is required to ensure proper bond between overlay and substrate.

AVAILABILITY

Rolls: 4' wide x 50' long (28 rolls per pallet)

SHELF LIFE: 1 year

STORAGE CONDITIONS: Must be stored in a cool shaded area between 35˚F and 90˚F.

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