

SECTION 23 33 00

Foilskin Self-Adhered Weather Barrier Membrane

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SPEC NOTE: This Guide Specification includes materials and installation procedures for the application of Foilskin a sheet applied, self-adhered weather barrier membrane. This specification should be adapted to suit the requirements of individual projects. It is prepared in CSC three part format and should be included as a separate section under Division 23 33 00 – Air Duct Accessories

PART 1: GENERAL

1.1 General Requirements

- .1 The General Conditions, the Supplementary Conditions, the Instructions to Bidders and Division One General Requirements shall be read in conjunction with and govern this section.
- .2 The Specification shall be read as a whole by all parties concerned. Each Section may contain more or less than the complete work of any trade. The Contractor is solely responsible to make clear to the Subcontractors the extent of their work.

1.2 Description

- .1 Supply labour, materials, plant, tools and equipment to complete the Work as shown on the Drawings and as specified herein including, but not limited to the following:
 - .1 Materials and installation methods supplementing primary air/vapour barrier material assemblies.
 - .2 High Velocity Duct Sealer
 - .3 FSK or foil faced insulation

1.3 Related Work

- .1 Insulation: Section [XXXXXX]
- .2 Fire stopping: Section [XXXXXX]
- .3 Roofing: Section [XXXXXX]
- .4 Duct Sealants: Section [XXXXXX]
- .5 Other: Section [XXXXXX]

1.4 Submittals

- .1 Submit in writing, a document stating that the applicator of the primary membranes specified in this Section is recognized by the manufacturer as suitable for the execution of the Work.
- .2 Prior to commencing the Work submit copies of manufacturers' current ISO certification. Membrane, primers, sealants, adhesives and associated auxiliary materials shall be included.
- .3 Prior to commencing the Work submit references clearly indicating that the membrane manufacturer has successfully completed projects on an annual basis of similar scope and nature for a minimum of fifteen years. Submit references for a minimum of ten projects.

1.5 Quality Assurance

- .1 Perform Work in accordance with the printed requirements of the membrane manufacturer and this specification. Advise designer of any discrepancies prior to commencement of the Work.
- .2 Maintain one copy of manufacturers' literature on site throughout the execution of the Work.
- .3 At the beginning of the Work and at all times during the execution of the Work, allow access to site by the membrane manufacturers' representative.
- .4 Weather application issues and surface conditions can affect adhesion and are beyond Henry Baker's control. Henry Baker, therefore, limit our liability to replacement of defective material only.
- .5 Materials used in this Section, including weather barrier membranes, primers, mastics, adhesives and sealants shall be fully compatible and shall be sourced from one manufacturer.
- .6 At the request of the [architect] [engineer] [consultant], submit copies of the membrane manufacturers' current certification to ISO 9000.

1.6 Mock-Up

- .1 Construct mock-up in accordance with Section [01340 - Shop Drawings, Product Data, Samples and Mock-ups].
- .2 Provide mock-up of weather barrier materials under provisions of Section [____] - [____].
- .3 Where directed by [engineer] [architect] [consultant], construct typical section, incorporating [____], substrate, attachment of insulation, and showing membrane application details.
- .4 Allow 24 h for inspection of mock-up by [engineer] [architect] [consultant] before proceeding with work. Mock-up may remain as part of the Work.

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- 1.7 Pre-Installation Conference
 - .1 Convene [one] [____] week prior to commencing work of this section, under provisions of Section [____] - [____].
- 1.8 Delivery, Storage and Handling
 - .1 Deliver materials to the job site in undamaged and original packaging indicating the name of the manufacturer and product.
 - .2 Store role materials on end in original packaging.
 - .3 Store adhesives and primers at temperatures of 5 degree Celsius and above to facilitate handling.
 - .4 Keep solvent away from open flame or excessive heat.
 - .5 Protect rolls from direct sunlight until ready for use.
- 1.9 Coordination
 - .1 Ensure continuity of the seal throughout the scope of this section.
- 1.10 Alternatives
 - .1 Submit requests for alternatives in accordance with Section [XXXXX] - [XXXXX].
 - .2 Submit requests for alternatives to this specification a minimum of ten (10) working days prior to tender closing for evaluation. Include a list of ten projects over the past two years.
 - .3 Acceptable alternatives will be confirmed by addendum. Substitute materials not approved in writing prior to tender closing shall not be permitted for use on this project.

PART 2: PRODUCTS

- 2.1 Components and materials must be obtained as a single source from the membrane manufacturer to ensure total system compatibility and integrity.
- 2.2 Membrane Manufacturer: **Henry Company Canada**,
15 Wallsend Drive
Scarborough, ON M1E 3X6
Tel: 1-800-523-0268
Fax: 1-877-223-1285
Web Site: www.bakor.com
- 2.3 Membranes
 - .1 Weather barrier membrane (Self-Adhering): SBS modified bitumen, self-adhering sheet membrane complete with a reflective foil surface, and having the following physical properties:
 - .1 Thickness: 1.0 mm (40 mils).
 - .2 Vapour permeance: 2.8 ng/Pa.m².s (0.05 perms) to ASTM E96;
 - .3 Low temperature flexibility: -30 degree Celsius to CGSB 37-GP-56M;
 - .4 Elongation: 40% to ASTM D412-modified;
 - .1 Acceptable material: Foilskin™ as manufactured by Henry Company Canada.
- 2.4 Duct sealer: Duct sealer in compliance with CAN/ULC-S102, shall be Duck-Seal Polymeric High Velocity Duct Sealer as manufactured by Henry Company Canada.
- 2.5 Membrane Termination Sealant: Membrane termination sealant in compliance with CAN/CGSB 37.29, shall be POLYBITUME® 570-05 Polymer Modified Sealing Compound manufactured by Henry-Bakor.
- 2.6 Exposed Sealant: Termination Sealant shall be HE925 BES Sealant manufactured by Henry-Bakor a moisture cure, medium modulus polymer modified sealing compound having the following physical properties:
 - 1. Compatible with sheet air barrier, roofing and waterproofing membranes and substrate,
 - 2. Complies with Fed. Spec. TT-S-00230C, Type II, Class A,
 - 3. Complies with ASTM C 920, Type S, Grade NS, Class 25,
 - 4. Elongation: 450 – 550%,

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5. Remains flexible with aging,
6. Seals construction joints up to 25mm wide.

PART 3: EXECUTION

3.1 Examination

- .1 Verify that surfaces and conditions are ready to accept the Work of this section. Notify [engineer] [architect] [consultant] in writing of any discrepancies. Commencement of the work or any parts thereof shall mean acceptance of the prepared substrate.

3.2 Preparation

- .1 All surfaces must be sound, dry, clean and free of oil, grease, dirt, or other contaminants.
- .2 Seal all joints in ductwork with **Duct-Seal** to prevent air leakage.
- .3 Install FSK or foil faced insulation over ducts or piping and mechanically fasten using weld pins and washers or cup head pins welded to ductwork.
- .4 Cover washer or cup head pin with a 100mm (4") strip of **Foilskin™**.
- .5 Ensure positive slope to prevent the occurrence of ponding water.
- .6 Install FSK (foil-scrim-kraft) facer over surfaces to receive membrane, if not already present on insulation. Mechanically fasten as for insulation above.

3.3 Weather Barrier Membrane

.1 Insulated Air Handling Plenums

- .1 Position membrane for alignment, and begin application of membrane on bottom of insulated plenum, returning up sides a minimum of 100mm (4").
- .2 Install sections of membrane on sides of plenum and return on to the top a minimum of 100mm(4").
- .3 Finally install top section, lapping down the sides 100mm (4").
- .4 Membrane applied to the underside of the substrate wider than 600mm (2') requires mechanical fastening.
Fasten immediately after installation of membrane and seal with a 100x100 mm (4" x 4") patch of **Foilskin™**.
- .5 When membrane is entirely in place, roll membrane including seams with a counter top roller or apply pressure using a plastic tape applicator to ensure full contact.

.2 Insulated Pipes

- .1 Begin installation on side of insulated pipe, wrapping downward and around the circumference and terminate to provide 100mm (4") lap. Ensure that lap sheds water.
- .2 Remove the release film in small increments, pressing firmly in place as work progresses.
- .3 When membrane is entirely in place, roll membrane including seams with a counter top roller or apply pressure using a plastic tape applicator to ensure full contact.

3.6 Inspection

- .1 Notify [engineer] [architect] [consultant] when sections of work are complete so as to allow for review prior to installing insulation.

END OF SECTION