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PART 1 - GENERAL

<u>1.1 REFERENCES</u>	.1	Sealant and Waterproofer's Institute - Sealant and Caulking Guide Specification.
<u>1.2 ACTION AND INFORMATIONAL SUBMITTALS</u>	.1	Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
	.2	Product Data: <ul style="list-style-type: none"> .1 Submit manufacturer's printed product literature, specifications and datasheet and include product characteristics, performance criteria, physical size, finish and limitations. .2 Submit WHMIS MSDS - Material Safety Data Sheets in accordance with Section 02 81 01 - Hazardous Materials.
	.3	Quality Assurance Submittals: submit following in accordance with Section 01 45 00 - Quality Control. <ul style="list-style-type: none"> .1 Certificates: submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties. .2 Manufacturer's Instructions: submit manufacturer's installation instructions and special handling criteria, installation sequence and cleaning procedures. .3 Manufacturer's Field Reports: submit manufacturer's written reports within 3 days of review, verifying compliance of Work, as described in PART 3 - FIELD QUALITY CONTROL.
<u>1.3 QUALITY ASSURANCE</u>	.1	Qualifications: <ul style="list-style-type: none"> .1 Applicator: company specializing in performing work of this section with minimum 5 years documented experience with installation of air/vapour barrier systems.
	.2	Mock-Up: <ul style="list-style-type: none"> .1 Construct mock-up in accordance with Section 01 45 00 - Quality Control.

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1.3 QUALITY
ASSURANCE
(Cont'd)

- .2 Mock-Up: (Cont'd)
 - .2 Construct typical exterior wall panel, minimum 4 m high by 4 m wide, incorporating window and frame and sill, insulation, building corner condition, illustrating materials interface and seals.
 - .3 Locate where directed.
 - .4 Mock-up may remain as part of finished work.
 - .5 Allow 24 hours for inspection of mock-up by Departmental Representative before proceeding with air/vapour barrier Work.
- .3 Site Meetings: as part of Manufacturer's Services described in PART 3 - FIELD QUALITY CONTROL, schedule site visits, to review Work, at stages listed.
 - .1 After delivery and storage of products, and when preparatory Work is complete, but before installation begins.
 - .2 Twice during progress of Work at 25% and 60% complete.
 - .3 Upon completion of Work, after cleaning is carried out.

1.4 DELIVERY,
STORAGE AND
HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Deliver, store and handle materials in accordance with manufacturer's written instructions.
- .3 Avoid spillage: immediately notify Departmental Representative if spillage occurs and start clean up procedures.
- .4 Clean spills and leave area as it was prior to spill.

1.5 WASTE
MANAGEMENT AND
DISPOSAL

- .1 Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

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| <u>1.5 WASTE
MANAGEMENT AND
DISPOSAL
(Cont'd)</u> | .2 Place materials defined as hazardous or toxic waste in designated containers.

.3 Ensure emptied containers are sealed and stored safely for disposal away from children. |
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| <u>1.6 AMBIENT
CONDITIONS</u> | .1 Install solvent curing sealants and vapour release adhesive materials in open spaces with ventilation.

.2 Ventilate enclosed spaces in accordance with Section 01 51 00 - Temporary Utilities.

.3 Maintain temperature and humidity recommended by materials manufactures before, during and after installation. |
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| <u>1.7 SEQUENCING</u> | .1 Sequence work to permit installation of materials in conjunction with related materials and seals. |
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| <u>1.8 WARRANTY</u> | .1 For sealant and sheet materials the 12 months warranty period prescribed in accordance with General Conditions but for 24 months.

.2 Warranty: include coverage of installed sealant and sheet materials which: <table border="0" style="margin-left: 20px;"> <tr><td>.1</td><td>Fail to achieve air tight and watertight seal.</td></tr> <tr><td>.2</td><td>Exhibit loss of adhesion or cohesion.</td></tr> <tr><td>.3</td><td>Do not cure.</td></tr> <tr><td>.4</td><td>Display other signs of failure.</td></tr> </table> | .1 | Fail to achieve air tight and watertight seal. | .2 | Exhibit loss of adhesion or cohesion. | .3 | Do not cure. | .4 | Display other signs of failure. |
| .1 | Fail to achieve air tight and watertight seal. | | | | | | | | |
| .2 | Exhibit loss of adhesion or cohesion. | | | | | | | | |
| .3 | Do not cure. | | | | | | | | |
| .4 | Display other signs of failure. | | | | | | | | |

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PART 2 - PRODUCTS

- 2.1 SUSTAINABLE REQUIREMENTS .1 Materials and products in accordance with Section 01 35 21 - LEED Requirements.
- 2.2 SHEET MATERIALS .1 SBS modified bitumen, self-adhering integrally laminated to a polyethylene film. Membrane shall have the following physical properties:
- .1 Membrane Thickness: 0.9 mm.
 - .2 Low temperature flexibility: -34°C to ASTM D146.
 - .3 Elongation: 200% minimum to ASTM D412-modified.
 - .4 Minimum Puncture Resistance 178 N to ASTM E154.
 - .5 Lap Peel Strength 1750 N/m width to ASTM D903 180° bend.
- .2 Tie-in Flaps: self-adhering membrane for all window jambs, headers, doors openings, inside and outside corners, and other transitions shall be pre-cut or site cut strips 150 mm wide.
- .3 Low VOC primer for primary self-adhering water resistant air barrier membrane and self-adhering transition membrane shall be a manufacturer's standard. Primer shall have the following physical properties:
- .1 Solids by weight: 40%.
 - .2 Max. VOC <240 grams/litre.
 - .3 Drying time (initial set): 30 minutes at 50% RH and 21°C.
- 2.3 ACCESSORIES .1 Penetration and termination sealant shall be a moisture cure, medium modulus polymer modified sealing compound having the following physical properties:
- .1 Compatible with sheet air barrier and substrate.
 - .2 To ASTM C920, Type S, Grade NS, Class 25.

- 2.3 ACCESSORIES .1 (Cont'd)
- (Cont'd) .3 Seals construction joints up to 25 mm wide.
- .4 As recommended by air barrier membrane.

PART 3 - EXECUTION

- 3.1 MANUFACTURER'S INSTRUCTIONS .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheets.
- 3.2 GENERAL .1 Perform Work in accordance with National Air Barrier Association - Professional Contractor Quality Assurance Program and requirements for materials and installation.
- 3.3 EXAMINATION .1 Verify that surfaces and conditions are ready to accept work of this section.
- .2 Ensure surfaces are clean, dry, sound, smooth, continuous and comply with air barrier manufacturer's requirements.
- .3 Report unsatisfactory conditions to Departmental Representative in writing.
- .4 Do not start work until deficiencies have been corrected.
- .1 Beginning of Work implies acceptance of conditions.
- 3.4 PREPARATION .1 Remove loose or foreign matter, which might impair adhesion of materials.
- .2 Ensure substrates are clean of oil or excess dust; masonry joints struck flush, and open joints filled; and concrete surfaces free of large voids, spalled areas or sharp protrusions.

- 3.4 PREPARATION
(Cont'd)
- .3 Ensure substrates are free of surface moisture prior to application of self-adhesive membrane and primer.
 - .4 Ensure metal closures are free of sharp edges and burrs.
 - .5 Prime substrate surfaces to receive sheet materials in accordance with manufacturer's instructions.
- 3.5 INSTALLATION
- .1 Install materials in accordance with manufacturer's instructions.
 - .2 Secure sheet seal sheathing materials.
 - .1 Position lap seal over firm bearing.
 - .3 Install tie-in flaps between window and door frames.
 - .1 Caulk to ensure complete seal.
 - .2 Position lap seal over firm bearing.
 - .4 Apply sealant within recommended application temperature ranges.
 - .1 Consult manufacturer when sealant cannot be applied within these temperature ranges.
- 3.6 FIELD QUALITY CONTROL
- .1 Manufacturer's Field Services:
 - .1 Obtain written report from manufacturer verifying compliance of Work, in handling, installing, applying, protecting and cleaning of product and submit Manufacturer's Field Reports as described in PART 1 - SUBMITTALS.
 - .2 Provide manufacturer's field services consisting of product use recommendations and periodic site visits for inspection of product installation in accordance with manufacturer's instructions.
 - .3 Schedule site visits, to review Work, as directed in PART 1 - QUALITY ASSURANCE.
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- 3.7 CLEANING .1 Proceed in accordance with Section 01 74 11 - Cleaning.
- .2 On completion and verification of performance of installation, remove surplus materials, excess materials, rubbish, tools and equipment.

- 3.8 PROTECTION OF WORK .1 Protect finished work in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Do not permit adjacent work to damage work of this section.
- .3 Ensure finished work is protected from climatic conditions.