PART 1 - GENERAL

1.1 SECTION INCLUDES

.1 Materials and installation methods providing primary air/vapour barrier materials and assemblies.

.2 Air/vapour barrier materials to provide continuous seal between components of building envelope and building penetrations.

1.2 REFERENCES

.1 Canadian General Standard Board (CGSB)
- .1 CANCGSB-19.13M, Sealing Compound, One Component, Elastomeric Chemical Curing.
- .2 CAN/CGSB-19.18M, Sealing Compound, One Component, Silicone Base Solvent Curing.
- .3 CAN/CGSB-19.24M, Multi-Component, Chemical Curing Sealing Compound.
- .4 CGSB 19-GP-14M, Sealing Compound, One Component, Butyl-Polyisobutylene Polymer Base, Solvent Curing.

.2 National Building Code of Canada (NBCC)
- .1 NBCC, Part 5 – Environmental Separation.

.3 Sealant and Waterproofer's Institute - Sealant and Caulking Guide Specification.

1.3 SUBMITTALS

.1 Submit manufacturer’s product data sheets.

.2 Submit manufacturer’s installation instructions.

1.4 QUALITY ASSURANCE

.1 Perform Work in accordance with Sealant and Waterproofer's Institute - Sealant and Caulking Guide Specification requirements for materials and installation.

.2 Perform work in accordance with National Air Barrier Association - Professional Contractor Quality Assurance Program and requirements for materials and installation.

1.5 QUALIFICATIONS

.1 Applicator: Company specializing in performing work of this section with minimum 5 years documented experience with installation of air/vapour barrier systems. Complete installation must be approved by the material manufacturer.

.2 Applicator: Company who is currently licensed by certifying organization must maintain their license throughout the duration of the project.

1.6 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.

1.7 WASTE MANAGEMENT AND DISPOSAL

.1 Place materials defined as hazardous or toxic waste in designated containers.

.2 Ensure emptied containers are sealed and stored safely for disposal away from children.

1.8 PROJECT ENVIRONMENTAL REQUIREMENTS

.1 Do not install solvent curing sealants or vapour release adhesive materials in enclosed spaces without ventilation.

.2 Ventilate enclosed spaces in accordance with Section 01 56 00 - Temporary Barriers and Enclosure.

1.9 SEQUENCING

.1 Sequence work to permit installation of materials in conjunction with related materials and seals.

1.10 WARRANTY

.1 Provide three year warranty under provisions of Section 01 78 00 - Closeout Submittals and the General Conditions.

.2 Warranty: include coverage of installed sealant and sheet materials which fail to achieve air tight and watertight seal, exhibit loss of adhesion or cohesion, do not cure.

1.11 MEASUREMENT FOR PAYMENT

.1 No separate measurement for payment shall be made for items under this section. Include costs incidental in the Lump Sum Amount of work on the Combined Price Form.

PART 2 - PRODUCTS

2.1 SHEET MEMBRANE AIR BARRIER

.1 Sheet Seal: Self-Adhesive bitumen laminated to high-density polyethylene film, nominal total thickness of 1.0 mm.

.1 Membrane physical properties:

.1	Application	min. 5◦C.
.2	Service Temperature	-40◦C to 70◦.
.3	Elongation	min. 200%.
.4	Tensile Strength	min. 2.4 Mpa.
.5	Puncture Resistance	Min. 178 N.
.6	Water Vapour Transmission	2.8mg/Pa.s.m^2 (0.05 perms)
.7	Moisture Absorption	0.1%.
.8	Air leakage at 75 Pa	0.02L/Sm^2.
.9	Air leakage of the 3000 Pa Test	No change.

2.2 SEALANTS

.1 Sealants: as recommended by air barrier manufacturer.

.2 Primers: as recommended by air barrier manufacturer.

PART 3 - EXECUTION

3.1 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. Commencement of Work implies acceptance of conditions.

3.2 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 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 adhesive and sealants in accordance with manufacturer's instructions.

3.3 INSTALLATION

.1 Install materials in accordance with manufacturer’s instructions.

.2 Over the properly prepared substrate surface apply primer with a roller and allow drying to a tacky surface. Prime only area to be covered in a working day. Re-prime area not covered with membrane within twenty-four (24) hours.

.3 After primer has dried, using a hand roller firmly press the entire membrane into the primed surface, in strict accordance with membrane manufacturer’s written instructions.

.4 Ensure complete coverage of and adhesion of all substrates to receive membrane, including wall penetrations. Co-operate with other trades to ensure continuity of membrane.

.5 Overlap membrane 50 mm and carefully smooth out with a roller to ensure full continuous bond throughout overlaps without fissures or fishmouthing.

.6 It is important that a complete air seal be achieved. Be responsible for the

completeness of membrane wherever it is not specifically detailed. Consult with Departmental Representative if there is any doubt as to the integrity of membrane, whether detailed or not.

.7 In order to ensure a complete seal, seal membrane to all penetrations in an approved manner.

.8 Apply a trowelled bead of mastic to all terminations of the membrane at the end of a day's work.

.9 Do not enclose membrane until it has been inspected and approved by Departmental Representative. Inform Departmental Representative fourty-eight (48) hrs prior to required inspection.

3.4 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.

END