

PART 1 - GENERAL

- 1.1 REFERENCES
- .1 Canada Green Building Council (CaGBC)
    - .1 LEED Canada 2009 for Design and Construction-2010, LEED Canada 2009 for Design and Construction Leadership in Energy and Environmental Design Green Building Rating System Reference Guide.
  - .2 Canadian General Standards Board (CGSB)
    - .1 CAN/CGSB-51.33-M89, Vapour Barrier Sheet, Excluding Polyethylene, for Use in Building Construction.
    - .2 CAN/CGSB-51.34-M86, Vapour Barrier, Polyethylene Sheet, for Use in Building Construction.
- 1.2 ACTION AND INFORMATIONAL SUBMITTALS
- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
  - .2 Product Data:
    - .1 Submit manufacturer's instructions, printed product literature and data sheets for vapour retarders and include product characteristics, performance criteria, physical size, finish and limitations.
    - .2 Submit electronic copies of WHMIS MSDS in accordance with Section 01 35 29.06 - Health and Safety Requirements.
  - .3 Certificates:
    - .1 Submit product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
  - .4 Sustainable Design Submittals:
    - .1 LEED Canada submittals: in accordance with Section 01 35 21 - LEED Requirements.
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1.3 QUALITY  
ASSURANCE

- .1 Mock-Ups:
  - .1 Submit mock-ups in accordance with Section 01 45 00 - Quality Control.
  - .2 Construct mock-up of sheet vapour barrier installation including one lap joint, one inside corner and at one electrical box. Mock-up may be part of finished work.
  - .3 Mock-up will be used to judge quality of work, substrate preparation, and material application.
  - .4 Locate where directed.
  - .5 Allow 48 hours for inspection of mock-up by Departmental Representative before proceeding with vapour barrier work.
  - .6 When accepted, mock-up will demonstrate minimum standard of quality required for this work. Approved mock-up may remain as part of finished work.

1.4 DELIVERY,  
STORAGE AND  
HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.
  - .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
  - .3 Develop Construction Waste Management Plan related to Work of this Section and in accordance with Section 01 35 21 - LEED Requirements.
  - .4 Packaging Waste Management: remove for reuse and return by manufacturer of pallets, crates, padding, and packaging materials as specified in Construction Waste Management Plan in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal and Section 01 35 21 - LEED Requirements.
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PART 2 - PRODUCTS

- 2.1 EXTERIOR WALL SHEET VAPOUR RETARDER .1 Polyethylene film: to CAN/CGSB-51.34, 0.15 mm thick.
- 2.2 UNDERSLAB VAPOUR RETARDER .1 0.38 MM (15 MIL) underslab vapour retarder, high puncture resistance polyolefin based resin/chemical sheet material to ASTM E1745-11, Class A, B and C.
- .2 Water vapour permeance rating: to ASTM E96, water method: 0.018 penns.
- .3 Tensile strength to ASTM E154, Section 9: 84 lb. force/inch.
- .4 Punction Resistance: to ASTM D1709, Method B: 4135 grams.
- 2.3 ACCESSORIES .1 Sealant: for exterior wall sheet vapour retarder: compatible with vapour retarder materials, recommended by vapour retarder manufacturer. To Section 07 92 00 - Joint Sealants.
- .2 Moulded box vapour barrier: factory-moulded polyethylene box for use with recessed electric switch and outlet device boxes.
- .3 Joint sealing tape for underslab vapour retarder: 100 mm wide pressure sensitive tape as supplied by manufacturer.
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PART 3 - EXECUTION

- 3.1 EXAMINATION .1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for vapour retarder installation in accordance with manufacturer's written instructions.
- .1 Visually inspect substrate in presence of Departmental Representative.
  - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
  - .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative.
- 3.2 EXTERIOR WALL SHEET VAPOUR RETARDER INSTALLATION .1 Ensure services are installed and inspected prior to installation of retarder.
- .2 Install sheet vapour retarder on warm side of exterior wall assemblies prior to installation of gypsum board to form continuous retarder.
  - .3 Use sheets of largest practical size to minimize joints.
  - .4 Inspect for continuity. Repair punctures and tears with sealing tape before work is concealed.
- 3.3 EXTERIOR SURFACE OPENINGS .1 Cut sheet vapour retarder to form openings and ensure material is lapped and sealed to frame.
- 3.4 PERIMETER SEALS .1 Seal perimeter of sheet vapour barrier as follows:
- .1 Apply continuous bead of sealant to substrate at perimeter of sheets.
  - .2 Lap sheet over sealant and press into sealant bead.
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- 3.4 PERIMETER SEALS .1 (Cont'd)  
(Cont'd) .3 Ensure that no gaps exist in sealant bead. Smooth out folds and ripples occurring in sheet over sealant.
- 3.5 LAP JOINT SEALS .1 Seal lap joints of sheet vapour barrier as follows:  
LAP JOINT SEALS .1 Attach first sheet to substrate.  
.2 Apply continuous bead of sealant over solid backing at joint.  
.3 Lap adjoining sheet minimum 150 mm and press into sealant bead.  
.4 Ensure that no gaps exist in sealant bead. Smooth out folds and ripples occurring in sheet over sealant.
- 3.6 ELECTRICAL .1 Seal electrical switch and outlet device  
BOXES boxes that penetrate vapour barrier as follows:  
.1 Install moulded box vapour barrier. Wrap boxes with film sheet providing minimum 300 mm perimeter lap flange.  
.2 Apply sealant to seal edges of flange to main vapour barrier and seal wiring penetrations through box cover.
- 3.7 INSTALLATION .1 Roll out material over compacted under slab  
UNDERSLAB VAPOUR fill.  
RETARDER .2 Lap joints 150 mm.  
.3 Tape joints using 100 mm wide tape supplied by vapour retarder manufacturer.  
.4 Seal penetrations as per manufacturer's written instructions.  
.5 Terminate at slab edges and interruptions as per manufacturer's guidelines.
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- 3.8 CLEANING
- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
    - .1 Leave Work area clean at end of each day.
  
  - .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
    - .1 Remove insulation material spilled during installation and leave work area ready for application of wall board.
  
  - .3 Waste Management: separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal 01 35 21 - LEED Requirements.
    - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.