

**PART 1 GENERAL**

- 1.1 Related Sections
  - .1 Vapour and Air Barriers Section 07 27 00
- 1.2 References
  - .1 American Society for Testing and Materials (ASTM)
    - .1 ASTM E96-96, Test methods for Water Vapour Transmission of Materials.
    - .2 ASTM C208-95, Standard Specification for Cellulosic Fibre Insulating Board.
    - .3 ASTM C591-94, Standard Specification for Unfaced Preformed Rigid Polyisocyanurate Thermal Insulation.
    - .4 ASTM C726-93, Standard Specification for Mineral Fibre Roof Insulation Board.
    - .5 ASTM C728-97, Standard Specification for Perlite Thermal Insulation Board.
    - .6 ASTM C1126-98, Standard Specification for Faced or Unfaced Rigid Cellular Phenolic Thermal Insulation.
    - .7 ASTM C1289-98, Standard Specification for Faced Rigid Cellular Polyisocyanurate Thermal Insulation Board.
  - .2 Canadian Gas Association (CGA)
    - .1 CAN/CGA-B149.1-M95, Natural Gas Installation Code.
    - .2 CAN/CGA-B149.2-95, Propane Installation Code.
  - .3 Canadian General Standards Board (CGSB)
    - .1 CGSB 71-GP-24M-77, Adhesive, Flexible, for Bonding Cellular Polystyrene Insulation.
  - .4 Underwriters Laboratories of Canada (ULC)
    - .1 CAN/ULC-S701-97, Thermal Insulation, Polystyrene, Boards and Pipe Coverings.
    - .2 CAN/ULC-S702-97, Thermal Insulation, Mineral Fibre, for buildings.

**PART 2 PRODUCTS**

2.1 Insulation

PROPERTIES	TYPE				
	1	2	3	4	5
Thermal Resistance Minimum (R-Value/inch)	3.7	4.0	4.75	5	4.2
Moisture Absorption Maximum (% by Volume)	6%	4%	<2%	<1%	<1%
Compressive Strength Minimum (psi)	8psi	16psi	20psi	30psi	-
Flexural Strength Minimum (psi)	25psi	35psi	44psi	50psi	-
Standard of Acceptance	Beadboard  Expanded Polystyrene I	Cladmate* Wallmate* Deckmate*  Expanded Polystyrene II	Styrospan* Cavitymate* Cavitymate Ultra*  Cellfort 200	Styrofoam*SM Perimate* HI-40-60-100 Roofmate*CT  Cellfort 300	Roxul Curtain Rock  FBX 1240 Fibrex

2.2 Adhesive

- .1 Adhesive (for polystyrene): to CGSB 71-GP-24, Type Bulldog Wetstick/Bulldog Grip PL 200.

2.3 Accessories

- .1 Insulation clips: impale type, perforated 50 x 50 mm cold rolled carbon steel 0.8 mm thick, adhesive back, spindle of 2.5 mm diameter annealed steel, length to suit insulation, 25 mm diameter washers of self locking type.

**PART 3 EXECUTION**

3.1 Workmanship

- .1 Install insulation after building materials are dry.
- .2 Install insulation to maintain continuity of thermal protection to building elements and spaces.
- .3 Fit insulation tight around electrical boxes, plumbing and heating pipes and ducts, around exterior doors and windows and other protrusions.
- .4 Keep insulation minimum 75 mm from heat emitting devices such as recessed light fixtures, and minimum 50 mm from sidewalls of CAN4-S604 type A chimneys or as required by code, whichever is more stringent.

- 
- .5 Cut and trim insulation neatly to fit spaces. Butt joints tightly, offset vertical joints. Use only insulation boards free from chipped or broken edges. Use largest possible dimensions to reduce number of joints.
  - .6 Offset both vertical and horizontal joints in multiple layer applications.
  - .7 Do not enclose insulation until it has been inspected and approved by Contract Administrator.
- 3.2 Examination
- .1 Examine substrates and immediately inform Contract Administrator in writing of defects.
  - .2 Prior to commencement of Work ensure:
    - .1 Substrates are firm, straight, smooth, dry, free of snow, ice or frost, and clean of dust and debris.
- 3.3 Rigid Insulation Installation
- .1 Imbed insulation boards into vapour barrier type adhesive, applied as specified, prior to skinning of adhesive.
  - .2 Leave insulation board joints unbonded over line of expansion and control joints. Bond a continuous 150 mm wide 0.15 mm polyethylene strip over expansion and control joints using compatible adhesive before application of insulation.
- 3.4 Perimeter Foundation Insulation
- .1 Exterior application: extend boards full height of grade beams as indicated. Install on exterior face of perimeter foundation wall with adhesive.