

**Part 1        General**

**1.1        REFERENCES**

- .1 American Society for Testing and Materials International (ASTM)
  - .1 ASTM C612-14, Standard Specification for Mineral Fibre Block and Board Thermal Insulation.
  - .2 ASTM C518-10, Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
  - .3 ASTM D1621-10, Standard Test Method for Compressive Properties Of Rigid Cellular Plastics
- .2 Underwriters Laboratories of Canada (ULC)
  - .1 CAN/ULC-S701-11, Standard for Thermal Insulation, Polystyrene, Boards and Pipe Coverings.
  - .2 CAN/ULC-S702-14, Standard for Thermal Insulation, Mineral Fibre, for Buildings.

**1.2        SUBMITTALS**

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures
- .2 Product Data: Provide manufacturer's printed product literature, specifications and data sheets
- .3 Provide manufacturer's installation instructions
- .4 Test Reports: Provide certified test reports demonstrating compliance with specified performance characteristics and physical properties

**1.3        WASTE MANAGEMENT**

- .1 Separate waste materials for recycling in accordance with Section 01 00 10 - General Instructions.

**Part 2        Products**

**2.1        INSULATION**

- .1 Extruded Polystyrene (XPS): to ASTM C518 and CAN/ULC-S701 for exterior wall applications:
  - .1 Type: 3 to CAN/ULC-S701
  - .2 Compressive strength: minimum 120 kPa to ASTM D1621
  - .3 Long term thermal resistance: minimum RSI 0.85 per 25.4mm thickness @ 24 °C
  - .4 Thickness: as indicated.

- .2 Semi-rigid mineral fibre board: basalt rock slag fibers, to ASTM C612 and ULC S-702
  - .1 Type: IVB to ASTM C612
  - .2 Compressive strength: minimum 130 kPa to ASTM D1621
  - .3 Long term thermal resistance: minimum RSI 0.74 per 25.4mm thickness @ 24 °C
  - .4 Thickness: as indicated.
  - .5 Density: minimum 65 kg/m3.

## **2.2 ADHESIVE**

- .1 Adhesive: type as recommended by insulation manufacturer

## **Part 3 Execution**

### **3.1 MANUFACTURER'S INSTRUCTIONS**

- .1 Compliance: comply with manufacturer's written data, including product technical bulletins, product catalogue installation instructions, product carton installation instructions, and data sheets.

### **3.2 WORKMANSHIP**

- .1 Install insulation after building substrate materials are dry.
- .2 Install insulation to maintain continuity of thermal protection to building elements and spaces.
- .3 Fit insulation tight around Z-girts, exterior doors and windows and other protrusions.
- .4 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.
- .5 Offset both vertical and horizontal joints in multiple layer applications.
- .6 Do not enclose insulation until it has been reviewed by Departmental Representative.

### **3.3 EXAMINATION**

- .1 Examine substrates and immediately inform Departmental Representative in writing of defects.
- .2 Prior to commencement of work ensure substrates are firm, straight, smooth, dry, free of snow, ice or frost, and clean of dust and debris

**3.4 EXTERIOR WALL INSTALLATION**

- .1 Apply adhesive to substrate in accordance with manufacturer's recommendations with notched trowel
- .2 Embed insulation into substrate adhesive.
- .3 Leave insulation board joints unbonded over line of expansion and control joints. Bond a continuous 150 mm wide strip of modified bituminous membrane over expansion and control joints using compatible adhesive and primer before application of insulation.

**3.5 CLEANING**

- .1 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

**END OF SECTION**