

Part 1 General

1.1 RELATED SECTIONS

- .1 Section 01 33 00 – Submittal Procedures
- .2 Section 01 74 19 – Construction/Demolition Waste Management And Disposal
- .3 Section 04 05 19 – Masonry Anchorage and Reinforcing
- .4 Section 07 21 16 – Blanket Insulation

1.2 REFERENCES

- .1 Canadian General Standards Board (CGSB):
 - .1 CGSB 71-GP-24M-77(R1983) – Adhesive, Flexible, for Bonding Cellular polystyrene Insulation.
- .2 Underwriters Laboratories of Canada (ULC):
 - .1 CAN/ULC-S701-05 – Thermal Insulation, Polystyrene, Boards and Pipe Coverings
 - .2 CAN/ULC-S702-09 – Thermal Insulation, Mineral Fibre, for Buildings
 - .3 CAN/ULC-S704-03 – Thermal Insulation Polyurethane and Polyisocyanurate, Boards, Faced

1.3 SUBMITTALS

- .1 Product Data:
 - .1 Submit manufacturer's printed product literature, specifications and data sheets in accordance with Section 01 33 00.
 - .2 Submit two (2) copies of WHMIS MSDS - Material Safety Data Sheets in accordance with Section 01 33 00. Indicate VOC's for insulation products and adhesive.
- .2 Manufacturer's Instructions:
 - .1 Submit manufacturer's installation instructions.

1.4 QUALITY ASSURANCE

- .1 Test Reports: certified test reports showing compliance with specified performance characteristics and physical properties.
- .2 Certificates: product certificates signed by manufacturer certifying materials comply with specified performance characteristics and criteria and physical requirements.
- .3 Pre-Installation Meetings: conduct pre-installation meeting to verify project requirements, manufacturer's installation instructions and manufacturer's warranty requirements.

1.5 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials in accordance with Section 01 74 19.
- .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
- .3 Collect and separate for disposal paper, plastic, polystyrene, corrugated cardboard, and other packaging material in appropriate on-site bins for recycling in accordance with Waste Management Plan.

Part 2 Products

2.1 INSULATION

- .1 Insulation (A): polystyrene board to CAN/ULC S701; Type 3; minimum LTTR of 0.70 RSI (4.27 R) value per 25 mm thickness; minimum 140 kPa compressive strength; edges square; acceptable products:
 - .1 Styrofoam Cavitymate manufactured by Dow Chemical Company.
 - .2 Celfort 200 manufactured by Owens Corning Canada Inc.
 - .3 PlastiSpan Type 3 manufactured by Plasti-Fab.
- .2 Insulation (B): polystyrene board to CAN/ULC S701, Type 4; minimum LTTR of 0.82 RSI (5.0 R) value per 25 mm thickness; minimum 210 kPa compressive strength; edges shiplapped; acceptable products:
 - .1 Styrofoam SM manufactured by Dow Chemical Company.
 - .2 Celfort 300 manufactured by Owens Corning Canada Inc.
- .3 Insulation (C): fibrous glass or mineral fiber board to CAN/ULC S702; 0.73 RSI (4.3 R) value per 25 mm thickness; minimum 48 kg/m³ density; edges square; acceptable products:
 - .1 700 Series manufactured by Owens Corning Canada Inc.
 - .2 CavityRock manufactured by Roxul Inc.
- .4 Insulation (D): polyisocyanurate board to CAN/ULC S704, Type 2, Class 3; HCFC-free construction; minimum LTTR of 1.04 RSI (6.0 R) value per 25 mm thickness; with fiber-reinforced facers; minimum 138 kPa compressive strength; edges square; acceptable products:
 - .1 IKOTherm manufactured by IKO Roofing Products.
 - .2 Foam-II manufactured by Atlas Roofing Corporation and distributed by Diplast Products.

2.2 ADHESIVE

- .1 Adhesive (for polystyrene below grade): to CGSB 71-GP-24M, Type 2.

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; with 25 mm diameter self locking type washers.

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 EXAMINATION

- .1 Site verification of conditions:
 - .1 Ensure substrates are firm, straight, smooth, dry, free of snow, ice or frost, and clean of dust and debris.
 - .2 Do not install insulation over air seal membrane until it is properly installed and has been reviewed and approved by Departmental Representative.

3.3 INSTALLATION

- .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 electrical boxes, plumbing and heating components, and tight to Z-girts, furring and framing members, and other items that protrude through the plane of insulation.
- .4 Cut and trim insulation neatly to fit spaces.
 - .1 Butt joints tightly, offset vertical joints.
 - .2 Use only insulation boards free from chipped or broken edges.
 - .3 Use largest possible dimensions to reduce number of joints.
 - .4 Do not force insulation in place.
- .5 So as to avoid cutting air seal membrane, do not cut and trim insulation when in place. Cut and trim insulation to required size and shape on flat working tables or platforms before installing in place.
- .6 Offset both vertical and horizontal joints in multiple layer applications.
- .7 Do not enclose insulation until it has been reviewed and approved by Departmental Representative.
- .8 Installation of insulation on foundation walls:
 - .1 From Elevation 100.00, use insulation B.
 - .2 Install using adhesive, in accordance with adhesive manufacturer's directions. Use sufficient adhesive to hold insulation in place until backfill or other overlying building component holds it in place.
 - .3 Ensure backfill does not displace insulation or get between joints of insulation boards. Protect insulation from damage and displacement.

- .9 Installation of insulation in exterior masonry cavity wall construction:
 - .1 Above Elevation 100.00, use insulation A or C.
 - .2 Fasten insulation in place using masonry anchors specified in Section 04 05 19. If additional fastening is necessary to keep insulation secure in place and tight to face of substrate, use insulation clips.
- .10 Installation of insulation in exterior wall cladding construction:
 - .1 Use insulation A or C.
 - .2 If fastening is necessary to keep insulation secure in place and tight to face of substrate, prior to application of overlying sheathing board, use insulation clips.
 - .1 Use in sufficient quantity to hold insulation securely in place.
 - .2 Cut off fastener spindle approximately 2 mm beyond disk.
- .11 Installation of insulation in roof construction:
 - .1 Use insulation B or D.

3.4 CLEANING

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

END OF SECTION