

1 General

1.1 RELATED REQUIREMENTS

- .1 Section 07 21 13 - Board Insulation.
- .2 Section 08 31 00 - Access Doors & Panels.
- .3 Section 09 21 16.08 - Gypsum Board Assemblies for Minor Works.

1.2 REFERENCES

- .1 American Society for Testing and Materials International, (ASTM).
 - .1 ASTM C167, Standard Test Method for Thickness and Density of Blanket or Batt Thermal Insulations.
 - .2 ASTM C356, Standard Test Method for Linear Shrinkage of Performed High-Temperature Thermal Insulation Subjected to Soaking Heat.
 - .3 ASTM C423, Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
 - .4 ASTM C518, Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus.
 - .5 ASTM C553-02, Specification for Mineral Fiber Blanket Thermal Insulation for Commercial and Industrial Applications.
 - .6 ASTM C665-01e1, Specification for Mineral-Fiber Blanket Thermal Insulation for Light Frame Construction and Manufactured Housing.
 - .7 ASTM C1320-99, Standard Practice for Installation of Mineral Fiber Batt and Blanket Thermal Insulation for Light Frame Construction.
 - .8 ASTM E90, Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Elements.
 - .9 ASTM E413, Classification for Rating Sound Insulation.
 - .10 ASTM E1050, Standard Test Method for Impedance and Absorption of Acoustical Materials using a Tube, Two Microphones and a Digital Frequency Analysis System.
- .2 Underwriters Laboratories of Canada (ULC).
 - .1 CAN/ULC S102, Standard Method of Test for Surface Burning Characteristics of Building Materials and Assemblies.
 - .2 CAN/ULC S114, Standard Method of Test for Determination of Non-Combustibility in Building Materials.
 - .3 CAN/ULC S115, Standard Method of Test Firestop Systems.
 - .4 CAN/ULC-S604, Type A Chimneys.
 - .5 CAN/ULC-S702, Standard for Thermal Insulation Mineral Fiber for Buildings.

1.3 SUBMITTALS

- .1 Make submittals in accordance with Contract conditions and Section 01 33 00 - Submittal Procedures.
 - .2 Product Data: Submit project data including manufacturer's literature for insulation materials and accessories, indicating compliance with specified requirements and material characteristics.
 - .1 Submit list on insulation manufacturer's letterhead of materials and accessories to be incorporated into the Work.
 - .2 MSDS report.
 - .3 Include product name.
 - .4 Include preparation instructions and recommendations, installation methods and storage and handling requirements.
 - .5 Include contact information for manufacturer and their representative for this
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- project.
- .3 Samples:
 - .1 If requested, submit 140mm x 190mm minimum sample of insulation in thickness used on project.
 - .4 Test Reports:
 - .1 Submit evaluation service reports or other independent testing agency reports, showing compliance with specified performance characteristics and physical properties.
 - .5 Field Reports:
 - .1 Submit manufacturer's field reports within three (3) days of each manufacturer representative's site visit and inspection.
 - .6 Insulation Installer Qualifications:
 - .1 Submit letter verifying insulation installer's experience with work similar to work of this Section.

1.4 CLOSEOUT SUBMITTALS

- .1 Operation and Maintenance Data: Supply maintenance data for insulation materials for incorporation into manual specified in Section 01 78 00 - Closeout Submittals.
- .2 Record Documentation: In accordance with Section 01 78 00 - Closeout Submittals.
 - .1 List materials used in insulation work.
 - .2 Warranty: Submit warranty documents specified.

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Deliver and acceptance requirements:
 - .1 Deliver material in accordance with Section 01 61 00 - Common Product Requirements.
 - .2 Deliver materials and accessories in insulation manufacturer's original packaging with identification labels intact and in sizes to suit project.
 - .3 Ensure insulation materials are not exposed to moisture during delivery.
 - .4 Replace wet or damaged insulation materials.
- .2 Storage and handling requirements: Store materials off ground in dry location and protected from exposure to harmful weather conditions and at temperature conditions recommended by manufacturer.
 - .1 Store in original packaging until installed.

1.6 QUALITY ASSURANCE

- .1 Pre-installation Meetings: attend pre-installation meeting to verify project requirements, manufacturer's installation instructions and manufacturer's warranty requirements.

1.7 WARRANTY

- .1 Manufacturer's warranty: Submit for Departmental Representative's acceptance, manufacturer's standard warranty document executed by authorized company official. Manufacturer's warranty is in addition to and not intended to limit other rights the Departmental Representative may have under Contract conditions.
- .2 Warranty period, one (1) year commencing on date of Substantial Performance of Work.

1.8 WASTE MANAGEMENT AND DISPOSAL

- .1 Collect and separate for disposal waste material generated by this Section.
 - .2 Place in appropriate on-site bins in accordance with Waste Management Plan.
 - .3 A clean worksite is mandatory at all times. Failure to maintain the site in a clean, safe condition shall result in the Departmental Representative initiating a clean-up and related costs being deducted from progress claims.
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2 Products

2.1 INSULATION - THERMAL

- .1 Thermal batt insulation for attics: To CAN/ULC S702, Type 1.
 - .1 Fire performance:
 - .1 Non-combustibility: To CAN/ULC S114.
 - .2 Surface burning characteristics: To CAN/ULC S102.
 - .1 Flame spread: 0.
 - .2 Smoke developed: 0.
 - .3 Thermal resistance: to RSI 4.2 (R24)
 - .4 Recycled content, 40% minimum.

3 Execution

3.1 INSULATION INSTALLATION

- .1 Install thermal insulation above ceiling at locations shown.
- .2 Install insulation in areas as indicated. Friction-fit in position installed as recommended by manufacturer.
- .3 Fit insulation closely around electrical boxes, pipes, ducts, frames and other objects in or passing through insulation.
- .4 Do not compress insulation to fit into spaces.
- .5 Keep insulation minimum 75mm from heat emitting devices such as recessed light fixtures, and minimum 50mm from sidewalls of CAN/CGA-B149.1 and CAN/CGA-B149.2 Type B vents.
- .6 Do not enclose insulation until it has been inspected and approved by Departmental Representative.
- .7 Upon completion of installation, remove surplus materials, rubbish, tools and equipment barriers.

3.2 MANUFACTURER'S INSTRUCTIONS

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

END OF SECTION
