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**Partie 1      General**

**1.1            RELATED REQUIREMENTS**

- .1      Section 06 10 00      Rough Carpentry
- .2      Section 06 10 01      Structural Carpentry
- .3      Section 07 26 00      Vapour Retarders

**1.2            REFERENCES**

- .1      American Society for Testing and Materials International (ASTM)
  - .1      ASTM C516-02, Standard Specification for Vermiculite Loose Fill Thermal Insulation.
  - .2      ASTM C549-02, Standard Specification for Perlite Loose Fill Insulation.
  - .3      ASTM C739-03e1, Standard Specification for Cellulosic Fiber Loose-Fill Thermal Insulation.
  - .4      ASTM D6164-05, Standard Specification for Styrene Butadiene Styrene (SBS) Modified Bituminous Sheet Materials Using Polyester Reinforcements
- .2      Canadian General Standards Board (CGSB)
  - .1      CAN/CGSB 51.34-M86(C1988), Vapour Barrier, Polyethylene Sheet for Use in Building Construction.
- .3      Canadian Standards Association (CSA)/CSA International
  - .1      CAN/CSA-B149.1-F05, Natural Gas and Propane Installation Code.
  - .2      CAN/CSA-B149.2-F05, Propane Storage and Handling Code.
- .4      Health Canada/Workplace Hazardous Materials Information System (WHMIS)
  - .1      Material Safety Data Sheets (MSDS).
- .5      National Research Council Canada (NRC)/Institute for Research in Construction (IRC) - Canadian Construction Materials Centre (CCMC)
  - .1      CCMC-2002, Registry of Product Evaluations.
- .6      Underwriters' Laboratories of Canada (ULC)
  - .1      CAN/ULC-S702-97, Thermal Insulation, Mineral Fibre, for Buildings (Supersedes CSA A101-M1993).
  - .2      CAN/ULC-S703-2001, Standard for Thermal Insulation, Cellulose Fibre Insulation (CFI) for Buildings (Supersedes CAN/CGSB-61.60-M90).
  - .3      CAN/ULC-S604-M1991, Type A Chimneys.

**1.3            ACTION AND INFORMATIONAL SUBMITTALS**

- .1      Submit proof of manufacturer's CCMC Listing and listing number to Departmental Representative.

- .2 Manufacturer's Instructions: provide to indicate special handling criteria, installation sequence and cleaning procedures.
- .3 Submit product data in accordance with Section 01 33 00 - Submittal Procedures.
- .4 Submit WHMIS MSDS - Material Safety Data Sheets.
- .5 Submit product data sheets for system materials. Include product characteristics, performance criteria, and limitations.

#### **1.4 QUALITY ASSURANCE**

- .1 Provide 1 copy of Certification of Coverage and Application Chart in accordance with CAN/ULC-S702 to Departmental Representative, certified by Applicator's signature that the information is correct.
- .2 Health and Safety Requirements: do construction occupational health and safety in accordance with Section 01 35 29.06 - Health and Safety Requirements.

#### **1.5 WASTE MANAGEMENT AND DISPOSAL**

- .1 Separate waste materials for reuse / recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

#### **1.6 SITE ENVIRONMENTAL REQUIREMENTS**

- .1 Apply insulation only when surfaces and ambient temperatures are within manufacturers' prescribed limits.
- .2 Safety: comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of insulation materials.
- .3 Ventilation:
  - .1 Arrange for ventilation system to be operated during installation of insulation, by use of approved portable supply and exhaust fans.
  - .2 Ventilate enclosed spaces in accordance with Section 01 51 00 - Temporary Utilities.
  - .3 Provide continuous ventilation during and after insulation application. Run ventilation system 24 hours per day during installation; provide continuous ventilation for 7 days after completion of insulation installation.
- .4 Protection:
  - .1 Provide temporary enclosures to prevent dust from contaminating air beyond application area.
  - .2 Protect adjacent surfaces and equipment from damage by fall-out, and dust.

#### **1.7 ACCEPTABLE PRODUCTS AND MATERIALS**

- .1 Where a particular brand name is stipulated, see Instructions to Bidders for procedure for requesting approval of substitute materials and products

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**Partie 2      Products**

**2.1            MATERIALS**

- .1 Mineral fibre insulation: to CAN/ULC-S702, Ecolabel certified, containing a minimum of 75% recycled content, asbestos-free mineral fibre.
  - .1 Type 4 - pouring wool, suitable for manual application.
  - .2 Thickness: as indicated.
  - .3 RSI value: 0.52 per 25 mm.
  - .4 Density: 32 Kg/m<sup>3</sup>.
  - .5 To CAN/ULC-S114 Test for Noncombustibility: noncombustible.
  - .6 Surface burning characteristics to CAN/ULC-S102-M, UL 723 and ASTM E84: flame spread: 0 and smoke developed: 0

**Partie 3      Execution**

**3.1            INSPECTION**

- .1 Ensure that wall cavity is not obstructed.

**3.2            LOOSE FIBRE INSTALLATION**

- .1 Pneumatically place loose fibre insulation above ceiling between joists to provide minimum thermal resistance value RSI as indicated. Apply in two phases, each phase equal to half the total thickness.
- .2 Ensure roof areas exposed to outside air are insulated.
- .3 Ensure unobstructed air circulation to eave vents.
- .4 Install baffles as indicated to prevent insulation from spilling over top of exterior wall and causing blockage of soffit vents, and to prevent displacement of insulation by wind entering vents.
- .5 Keep insulation minimum 75 mm from heat emitting devices and recessed light fixtures, and minimum 50 mm from sidewalls of CAN/ULC-S604 chimneys and CSA-B149.1 and CSA-B149.2 type B and L vents.
- .6 Caulk and seal joints and edges.

**3.3            CLEANING**

- .1 Remove insulation material spilled during installation and leave work area ready for application of wall board.

**END OF SECTION**