

Part 1 General

1.1 RELATED SECTIONS

- .1 Section 01 33 00 – Submittal Procedures.
- .2 Section 01 73 00 – Execution.
- .3 Section 01 74 11 – Cleaning.

1.2 REFERENCES

- .1 American Society for Testing and Materials International (ASTM)
 - .1 ASTM C1320-[05], Standard Practice for Installation of Mineral Fiber Batt and Blanket Thermal Insulation for Light Frame Construction.
- .2 Canadian Standards Association (CSA International)
 - .1 CSA B111-[1974(R2003)], Wire Nails, Spikes and Staples.
- .3 Underwriters Laboratories of Canada (ULC)
 - .1 CAN/ULC-S702-[1997], Standard for Mineral Fibre Insulation.

1.3 SUBMITTALS

- .1 Product Data:
 - .1 Submit manufacturer's printed product literature, specifications and data sheet in accordance with Section 01 33 00 - Submittal Procedures.
- .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 Convene pre-installation meeting one week prior to beginning work of this Section and on-site installations.
 - .1 Verify project requirements.
 - .2 Review installation and substrate conditions.
 - .3 Co-ordinate with other building subtrades.
 - .4 Review manufacturer's installation instructions and warranty requirements.

Part 2 Products

2.1 INSULATION

- .1 Batt and blanket mineral fibre: to ASTM C665.
 - .1 Type: Preformed glass fiber batt; friction fit.
 - .2 Thickness: as indicated.
 - .3 Standard of Acceptance:
 - .1 Johns Manville (formaldehyde free)

2.2 Vapour Barrier Film

- .1 .15mm (6mil) polyethylene sheet

2.3 ACCESSORIES

- .1 Staples: 12mm (1/4") minimum leg.
- .2 Tape: as recommended by 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 INSULATION INSTALLATION

- .1 Install insulation to maintain continuity of thermal protection to building elements as indicated on drawings without gaps or voids.
- .2 Fit insulation closely around electrical boxes, pipes, ducts, frames and other objects in or passing through insulation.
- .3 Do not compress insulation to fit into spaces.
- .4 Do not enclose insulation until it has been inspected and approved by Contract Administrator.

3.3 VAPOUR BARRIER INSTALLATION

- .1 Place polyethelene on warm side of insulation and tight to insulation
- .2 Staple and adhere vapour barrier to framing members. Lap joints 40mm (1 1/2") minimum and seal joints with acoustic sealant. Ensure joints occur over framing members
- .3 Seal areas with tape where nails or staples penetrate vapour barrier.
- .4 Extend vapour barrier tight to perimeter of exterior glazing, door frames and other items interrupting continuity of membrane. Seal with sealant.

- .5 Seal vapour barrier at points of penetration.
- .6 Seal at all wall penetrations.
- .7 Seal Vapour barrier to existing vapour barrier areas of demolition. Minimum 6" overlap of existing Vapour Barrier to new Vapour. Seal along connection line.

3.4 CLEANING

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

END OF SECTION

Part 1 General

1.1 SECTION INCLUDES

- .1 Materials, preparation and application for caulking and sealants.

1.2 RELATED SECTIONS

- .1 Section 01 33 00 – Submittal Procedures.
- .2 Section 01 73 00 – Execution.
- .3 Section 01 74 11 – Cleaning.
- .4 Section 07 92 00 – Joint Sealant
- .5 Section 08 11 16 – Aluminum Doors and Frames
- .6 Section 08 44 13 – Glazed Aluminum Curtain Wall
- .7 Section 08 42 29 – Automatic Entrances
- .8 Section 08 80 50 - Glazing

1.3 REFERENCES

- .1 American Society for Testing and Materials International, (ASTM)
 - .1 ASTM C919-[02], Standard Practice for Use of Sealants in Acoustical Applications.
- .2 Canadian General Standards Board (CGSB)
 - .1 CGSB 19-GP-5M-[1984], Sealing Compound, One Component, Acrylic Base, Solvent Curing (Issue of 1976 reaffirmed, incorporating Amendment No. 1).
 - .2 CAN/CGSB-19.13-[M87], Sealing Compound, One-component, Elastomeric, Chemical Curing.
 - .3 CGSB 19-GP-14M-[1984], Sealing Compound, One Component, Butyl-Polyisobutylene Polymer Base, Solvent Curing (Reaffirmation of April 1976).
 - .4 CAN/CGSB-19.17-[M90], One-Component Acrylic Emulsion Base Sealing Compound.
 - .5 CAN/CGSB-19.24-[M90], Multi-component, Chemical Curing Sealing Compound.
- .3 Department of Justice Canada (Jus)
 - .1 Canadian Environmental Protection Act, 1999 (CEPA).
- .4 General Services Administration (GSA) - Federal Specifications (FS)
 - .1 FS-SS-S-200-[E(2)1993], Sealants, Joint, Two-Component, Jet-Blast-Resistant, Cold Applied, for Portland Cement Concrete Pavement.

- .5 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .6 Transport Canada (TC)
 - .1 Transportation of Dangerous Goods Act, 1992 (TDGA).

1.4 SUBMITTALS

- .1 Submit product data in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Manufacturer's product to describe.
 - .1 Caulking compound.
 - .2 Primers.
 - .3 Sealing compound, each type, including compatibility when different sealants are in contact with each other.
- .3 Submit samples in accordance with Section 01 33 00 - Submittal Procedures.
- .4 Submit duplicate samples of each type of material and colour.
- .5 Cured samples of exposed sealants for each color where required to match adjacent material.
- .6 Submit manufacturer's instructions in accordance with Section 01 33 00 - Submittal Procedures.
 - .1 Instructions to include installation instructions for each product used.

1.5 QUALITY ASSURANCE

- .1 Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions

1.6 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver and store materials in original wrappings and containers with manufacturer's seals and labels, intact. Protect from freezing, moisture, water and contact with ground or floor.

1.7 PROJECT CONDITIONS

- .1 Environmental Limitations:
 - .1 Do not proceed with installation of joint sealants under following conditions:
 - .1 When ambient and substrate temperature conditions are outside limits permitted by joint sealant manufacturer or are below 4.4 degrees C.
 - .2 When joint substrates are wet.
- .2 Joint-Width Conditions:
 - .1 Do not proceed with installation of joint sealants where joint widths are less than those allowed by joint sealant manufacturer for applications indicated.
- .3 Joint-Substrate Conditions:

- .1 Do not proceed with installation of joint sealants until contaminants capable of interfering with adhesion are removed from joint substrates.

1.8 ENVIRONMENTAL REQUIREMENTS

- .1 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling, storage, and disposal of hazardous materials; and regarding labelling and provision of Material Safety Data Sheets (MSDS) acceptable to Labour Canada.
- .2 Conform to manufacturer's recommended temperatures, relative humidity, and substrate moisture content for application and curing of sealants including special conditions governing use.

Part 2 Products

2.1 SEALANT MATERIALS

- .1 Do not use caulking that emits strong odours, contains toxic chemicals or is not certified as mould resistant in air handling units.
- .2 When low toxicity caulks are not possible, confine usage to areas which offgas to exterior, are contained behind air barriers, or are applied several months before occupancy to maximize offgas time.
- .3 Where sealants are qualified with primers use only these primers.
- .4 **Sealant Colour:** to be selected by the Contract Administrator.
- .5 **Primers:** To be type recommended by sealant manufacturer.
- .6 **Joint backing material:** shall be extruded polyolefin foam.
 - .1 **Standard of Acceptance:** Tremco Sof Rod.
- .7 **Bond Breaker:** Where joint configuration does not allow for proper depth/width ration (See Section 3.2.5) - a pressure sensitive plastic tape, such as 3M #266 or #481 shall be placed on the back of the joint which will not bond to the sealant.
- .8 **Joint Cleaner:** xyol, methylethylketone, or non-corrosive type recommended by sealant manufacturer and compatible with joint forming materials.
- .9 **Sealants:**
 - .1 **Type 1:** Sealant for all locations except where another type is specified in this section. Multi-component, polyepoxide urethane sealant. To meet specified requirements of CGSB Specification CAN2.19-24-M80.
 - .1 **Standard of Acceptance:**
 - .1 Tremco Dymeric 511
 - .2 Sonolastic NP-2
 - .3 Permapol RC-2.
 - .4 Morton Thiokol
 - .5 Sikaflex 2CNS/SL
 - .6 Bostik Chem-Calk 500

- .2 **Type 2:** Sealant for construction joints in lieu of Type 1 where pre-approved by Consultant. One part elastomeric sealants: to meet specified requirements of NSC/CGSB 25-B-N moisture curing hybrid polyurethane.
 - .1 **Standard of Acceptance:**
 - .1 Tremco Dymonic
 - .2 Sonolastic NP-1
 - .3 Permapol RC-1.
 - .4 Morton Thiokol
 - .5 Sikaflex 1A
 - .6 Bostik Chem-Calk900(Note: Dow Corning 790 low modulus silicone is also acceptable for Type 1 applications)
- .3 **Type 3:** Sealant for glass to glass, sloped glazing systems, glass to metal, and metal to metal joints. One part low modulus silicone elastomeric sealant to meet specified requirements of NSC/CGSB Specification CAN2-19.13-M82.
 - .1 **Standard of Acceptance:**
 - .1 Dow Corning 795
 - .2 Tremco Spectrum 2.
 - .3 GE Silglaze 2800.
 - .4 GE Silpruf 2000.
- .4 **Type 7:** Sealant for finishing interior construction joints subject to minimal movement and not otherwise specified in this section. One part paintable latex.
 - .1 **Standard of Acceptance:**
 - .1 Tremco Latex 100.
 - .2 Bulldog Acrylic Latex

2.2 JOINT CLEANER

- .1 Non-corrosive and non-staining type, compatible with joint forming materials and sealant recommended by sealant manufacturer.
- .2 Primer: as recommended by manufacturer.

Part 3 Execution

3.1 PROTECTION

- .1 Protect installed Work of other trades from staining or contamination.

3.2 SURFACE PREPARATION

- .1 Examine joint sizes and conditions to establish correct depth to width relationship for installation of backup materials and sealants.
- .2 Clean bonding joint surfaces of harmful matter substances including dust, rust, oil grease, and other matter which may impair Work.
- .3 Do not apply sealants to joint surfaces treated with sealer, curing compound, water repellent, or other coatings unless tests have been performed to ensure compatibility of materials. Remove coatings as required.
- .4 Ensure joint surfaces are dry and frost free.
- .5 Prepare surfaces in accordance with manufacturer's directions.

3.3 PRIMING

- .1 Where necessary to prevent staining, mask adjacent surfaces prior to priming and caulking.
- .2 Prime sides of joints in accordance with sealant manufacturer's instructions immediately prior to caulking.

3.4 BACKUP MATERIAL

- .1 Apply bond breaker tape where required to manufacturer's instructions.
- .2 Install joint filler to achieve correct joint depth and shape, with approximately 30% compression.

3.5 MIXING

- .1 Mix materials in strict accordance with sealant manufacturer's instructions.

3.6 APPLICATION

- .1 Sealant.
 - .1 Apply sealant in accordance with manufacturer's written instructions.
 - .2 Mask edges of joint where irregular surface or sensitive joint border exists to provide neat joint.
 - .3 Apply sealant in continuous beads.
 - .4 Apply sealant using gun with proper size nozzle.
 - .5 Use sufficient pressure to fill voids and joints solid.
 - .6 Form surface of sealant with full bead, smooth, free from ridges, wrinkles, sags, air pockets, embedded impurities.
 - .7 Tool exposed surfaces before skinning begins to give slightly concave shape.
 - .8 Remove excess compound promptly as work progresses and upon completion.
- .2 Curing.
 - .1 Cure sealants in accordance with sealant manufacturer's instructions.
 - .2 Do not cover up sealants until proper curing has taken place.
- .3 Cleanup.
 - .1 Clean adjacent surfaces immediately and leave Work neat and clean.
 - .2 Remove excess and droppings, using recommended cleaners as work progresses.
 - .3 Remove masking tape after initial set of sealant.

END OF SECTION