

1 General

1.1 RELATED SECTIONS

- .1 Section 01 33 00 - Submittal Procedures.
- .2 Section 01 45 00 - Quality Control.
- .3 Section 01 61 00 - Common Product Requirements.
- .4 Section 09 22 16 - Non-Structural Metal Framing.

1.2 REFERENCES

- .1 American Society for Testing and Materials International, (ASTM)
 - .1 ASTM C919-02, Standard Practice for Use of Sealants in Acoustical Applications.
 - .2 ASTM C 834 latex Sealing Compounds.
 - .3 ASTM C 920 Elastomeric Joint Sealants.
 - .4 ASTM C 1184 Structural Silicone Sealants.
 - .5 ASTM C 1311 Solvent Release Sealant.
 - .6 ASTM C 1330 Cylindrical Sealant Backing for Use With Cold Liquid Applied Sealants.
 - .7 ASTM C 1193 Use of Joint Sealants.
 - .8 ASTM C 1299 Selection of liquid Applied Sealants
 - .9 ASTM C 1472 Calculating movement and Other Effects when Establishing Sealant Joint Width.
- .2 Canadian General Standards Board (CGSB)
 - .1 CAN/CGSB-19.17-M90, One-Component Acrylic Emulsion Base Sealing Compound.
- .3 Department of Justice Canada (Jus)
 - .1 Canadian Environmental Protection Act, 1999 (CEPA).
- .4 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).

1.3 SUBMITTALS

- .1 Submit product data in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit manufacturer's instructions in accordance with Section 01 33 00 - Submittal Procedures.
 - .1 Instructions to include installation instructions for each product used.
- .3 Before proceeding with work or ordering of material submit the following to the Consultant for review and acceptance:
 - .1 Name and qualifications of applicator.
 - .2 Confirmation by sealant manufacturer that applicator is an approved applicator.
 - .3 Manufacturer's product data for sealants to be used.
 - .4 Manufacturer's recommended installation procedures.
- .4 Material Safety Data Sheets:
 - .1 Submit MSDS for inclusion in Operation and Maintenance Manual.

1.4 QUALITY ASSURANCE/MOCK-UP

- .1 Construct mock-up in accordance with Section 01 45 00 - Quality Control.
 - .2 Construct mock-up to show location, size, shape and depth of joints complete with back-up material, primer, caulking and sealant.
 - .3 Mock-up will be used:
 - .1 To judge workmanship, substrate preparation, operation of equipment and material application.
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- .4 Locate where directed.
- .5 Allow 24 hours for inspection of mock-up by Consultant before proceeding with sealant work.
- .6 When accepted, mock-up will demonstrate minimum standard of quality required for this Work.
- .7 Approved mock-up may remain as part of finished Work.

1.5 WARRANTY

- .1 Contractor hereby warrants that caulking work will not leak, crack, crumble, melt, shrink, run, lose adhesion or stain adjacent surfaces for 3 years.

1.6 DELIVERY, STORAGE, AND HANDLING

- .1 Deliver, handle, store and protect materials in accordance with Section 01 61 00 - Common Product Requirements.
- .2 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 Conform to manufacturer's recommended temperatures, relative humidity, and substrate moisture content for application and curing of sealants including special conditions governing use.
 - .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 labeling and provision of Material Safety Data Sheets (MSDS) acceptable to Labour Canada.

1.9 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 Owner initiating a clean-up and related costs being deducted from progress claims.
- .4 Handle and dispose of hazardous materials in accordance with the CEPA, TDGA, Provincial and Municipal regulations.

2 Products

2.1 SEALANT MATERIALS

- .1 Do not use caulking that emits strong odors or contains toxic chemicals.
- .2 Where sealants are qualified with primers use only these primers.
- .3 Sealants acceptable for use on this project must be listed on CGSB Qualified Products List, issued by CGSB Qualification Board for Joint Sealants.

2.2 SEALANT MATERIAL DESIGNATIONS

- .1 Sealants for vertical and horizontal non-traffic bearing joints, to Table 1, CGSB 19-GP-23.
- .2 Multi-component, self leveling, chemical curing polyurethane.
 - .1 Tremco "THC-900".
 - .2 Sonneborn "ASL2".
 - .3 Pecora NR 200.
- .3 Urethanes One Part.
 - .1 Non-Sag to CAN/CGSB-19.13, Type 2, MCG-2-25.
 - .2 Acceptable material:
 - .1 Tremco "Dymonic".
 - .2 Sonneborn "NP-1".
 - .3 Pecora Dynatrol I-XL.
- .4 Silicones One Part.
 - .1 To CAN/CGSB-19.13.
 - .2 Acceptable Material:
 - .1 Tremco "Proglaze".
 - .2 Sonneborn "Omniplus"
 - .3 Pecora 860.
- .5 Acrylics One Part.
 - .1 To CGSB 19-GP-5M.
 - .2 Acceptable material:
 - .1 Tremco "Mono 555".
 - .2 Sonneborn "Multi-Purpose"
 - .3 Pecora AC-20.
- .6 Acrylic Latex One Part.
 - .1 To CAN/CGSB-19.17.
 - .2 Acceptable Material:
 - .1 Tremco "Butyl 200"
 - .2 Tremco "Acrylic Latex Caulk"
 - .3 Sonneborn "Sonolac"
 - .4 Pecora BC 158.
- .7 Acoustical Sealant.
 - .1 To CAN/CGSB 19.21 M87.
 - .2 Acceptable Material:
 - .1 Tremco Acoustical Sealant.
 - .2 Pecora AIS-919.
- .8 Butyl.
 - .1 To CGSB 19-GP-14M.
 - .2 Acceptable material:
 - .1 Tremco "Butyl 200"
 - .2 Tremco "Acrylic Latex Caulk"
 - .3 Sonneborn "Sonolac"
 - .4 Pecora BC 158, with silicone.
- .9 Preformed Compressible and Non-Compressible back-up materials, compatible with primers and sealers.
 - .1 Polyethylene, Urethane, Neoprene or Vinyl Foam.
 - .1 Extruded closed cell foam backer rod.
 - .2 Size: oversize 30% to 50%.

- .3 Hardness 20.
- .4 Tensile strength 3000 to 4000 lb/ft².
- .2 Neoprene or Butyl Rubber.
 - .1 Round solid rod, Shore A hardness 70.
- .3 High Density Foam.
 - .1 Extruded closed cell polyvinyl chloride (PVC), extruded polyethylene, closed cell, Shore A hardness 20, tensile strength 140 to 200 kPa, extruded polyolefin foam, 32 kg/m³ density, or neoprene foam backer, size as recommended by manufacturer.
- .4 Bond Breaker Tape.
 - .1 Polyethylene bond breaker tape which will not bond to sealant.
- .10 Seam sealer: one component fast skinning elastomer to CAN2-19.13-M82.
- .11 Color of sealants: to be selected by Consultant.

2.3 JOINT CLEANER

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

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
