

Part 1 General

1.1 RELATED REQUIREMENTS

- .1 Section 04 21 19 - Clay Tile Masonry.
- .2 Section 04 05 00 - Common Work Results for Masonry.
- .3 Section 07 61 00 - Sheet Metal Roofing.
- .4 Section 07 62 00 - Sheet Metal Flashing and Trim.

1.2 REFERENCES

- .1 Canadian General Standards Board (CGSB)
 - .1 All usual standards with regards to sealants have been withdrawn and have not been replaced.
- .2 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .3 South Coast Air Quality Management District (SCAQMD), California State, Regulation XI. Source Specific Standards
 - .1 SCAQMD Rule 1168, Adhesives and Sealants Applications.

1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
 - .1 Submit manufacturer's instructions, printed product literature and data sheets for joint sealants and include product characteristics, performance criteria, physical size, finish and limitations.
 - .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 2 copies of WHMIS MSDS in accordance with Section 01 35 29.06 - Health and Safety Requirements.
- .3 Samples:
 - .1 Submit 2 samples of each type of material and colour.
 - .2 Cured samples of exposed sealants for each colour where required to match adjacent material.
- .4 Manufacturer's Instructions:
 - .1 Submit instructions to include installation instructions for each product used.

1.4 CLOSEOUT SUBMITTALS

- .1 Submit in accordance with Section 01 78 00 - Closeout Submittals.
- .2 Operation and Maintenance Data: submit operation and maintenance data for incorporation into manual.

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements and with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
 - .1 Store materials off ground, indoors in dry location, and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Store and protect joint sealants from nicks, scratches, and blemishes.
 - .3 Replace defective or damaged materials with new.

1.6 SITE CONDITIONS

- .1 Ambient Conditions:
 - .1 Proceed with installation of joint sealants only when:
 - .1 Ambient and substrate temperature conditions are within limits permitted by joint sealant manufacturer or are above 4.4 degrees C.
 - .2 Joint substrates are dry.
 - .3 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 Proceed with installation of joint sealants only where joint widths are more than those allowed by joint sealant manufacturer for applications indicated.
- .3 Joint-Substrate Conditions:
 - .1 Proceed with installation of joint sealants only after contaminants capable of interfering with adhesion are removed from joint substrates.

1.7 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 Health Canada.

Part 2 Products

2.1 SEALANT MATERIALS

- .1 Where sealants are qualified with primers use only these primers.

2.2 SEALANT MATERIAL DESIGNATIONS

- .1 Type 1: One component, low modulus and high performance elastomeric polyurethane sealant.
- .1 In accordance with the following standards:
- .1 UL certified to CAN/ULC-S115-05: Standard Method of Firestop Systems and to ANSI/UL 2070: Fire Resistance of Building Joint Systems (FF-S-0037, FW-S-0018, HW-S-0095, WW-S-0060) for use in Canada.
- .2 Meets CAN/ONGC 19.13-M87, Classification MCG-2-40-B-N.
- .3 Meets U.S. Federal Specification TT-S-00230C, Type II, Class A.
- .4 Meets U.S. Federal Specification TT-S-00227E.
- .5 ASTM C719 Ext. +100 % Comp. -50 %.
- .6 ASTM C920, type S, grade NS, Class 100/50. Use T, NT, G, A, O, M.
- .7 Meets U.S. Federal Specification for Silicones TT-S-001543A, Type «NON SAG».
- .2 Having the following properties at 23 °C and 50 % relative humidity:
- .1 Service range: -40 to 77 °C
- .2 Curing rate: tack-free time 3 to 6 hrs (TT-S-00230C)
- .3 Tack-free to touch: 3 hrs
- .4 Final cure: 7 to 10 days
- .5 Shore A Hardness ASTM D2240 at 21 days: 20 ± 5
- .6 Tensile properties ASTM D412 at 21 days:
- .1 Tensile stress: 0.86 MPa
- .2 Elongation break: 700 %
- .3 Modulus of elasticity
- .1 25 % : 0,13 MPa
- .2 50 % : 0,24 MPa
- .3 100 % : 0,34 MPa
- .7 Adhesion in peel TT-S-00230C
- .8 Application temperature: 4 to 38 °C
- .3 Colour: to match colour of stone veneer.
- .1 Preformed compressible and non-compressible back-up materials:
- .1 Polyethylene, urethane, neoprene or vinyl foam:
- .1 Extruded open or closed cell foam backer rod.
- .2 Size: oversize 30 to 50 %.

- .2 Bond breaker tape:
 - .1 Polyethylene bond breaker tape which will not bond to sealant.

2.3 SEALANT SELECTION

- .1 Type 1 (indicative listing, but not limitative):
 - .1 in folded joints between roofing copper sheets;
 - .2 in folded joints between roofing copper sheets and flashings;
 - .2 in joints between copper counter-flashings and the masonry (as indicated);
 - .4 in folded joints between stainless steel flashing sheets covering the coping of the chimney stalks;
 - .5 at the junction of stainless steel flashing sheets covering the coping of the chimney stalks and the chimney pots;
 - .6 at the junction of roofing copper sheets and the posts' anchors of new fall protection system.

2.4 JOINT CLEANER

- .1 Non-corrosive and non-staining type, compatible with joint forming materials and sealant in accordance with sealant manufacturer's written recommendations.
- .2 Primer: in accordance with sealant manufacturer's written recommendations.

Part 3 Execution

3.1 EXAMINATION

- .1 Verification of Conditions: verify that conditions of substrate previously installed under other Sections or Contracts are acceptable for joint sealants installation in accordance with manufacturer's written instructions.
 - .1 Visually inspect substrate in presence of Departmental Representative.
 - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
 - .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative.

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.

3.7 CLEANING

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
 - .1 Leave Work area clean at end of each day.
 - .2 Clean adjacent surfaces immediately.
 - .3 Remove excess and droppings, using recommended cleaners as work progresses.
 - .4 Remove masking tape after initial set of sealant.

- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
- .3 Waste Management: separate waste materials in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
 - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

3.8 PROTECTION

- .1 Protect installed products and components from damage during construction.
- .2 Repair damage to adjacent materials caused by joint sealants installation.

END OF SECTION