

PART 1 - GENERAL

- |                             |    |   |
|-----------------------------|----|---|
| <u>1.1 SECTION INCLUDES</u> | .1 | Materials, preparation and application for caulking and sealants. |
|-----------------------------|----|---|
- 
- |                             |    |   |
|-----------------------------|----|---|
| <u>1.2 RELATED SECTIONS</u> | .1 | Section 01 33 00 - Submittal Procedures.                                  |
|                             | .2 | Section 01 45 00 - Testing and Quality Control.                           |
|                             | .3 | Section 01 61 00 - Common Product Requirements.                           |
|                             | .4 | Section 01 74 21 - Construction/Demolition Waste Management and Disposal. |
|                             | .5 | Section 03 10 00 - Concrete Forming and Accessories.                      |
|                             | .6 | Section 03 30 00 - Cast-in-Place Concrete.                                |
- 
- |                       |    |  |
|-----------------------|----|--|
| <u>1.3 REFERENCES</u> | .1 | Canadian General Standards Board (CGSB)  |
|                       | .2 | CAN/CGSB-19.24-M90, Multi-component, Chemical Curing Sealing Compound.   |
|                       | .3 | Department of Justice Canada (Jus)<br>.1 Canadian Environmental Protection Act, 1999 (CEPA).                     |
|                       | .4 | Health Canada/Workplace Hazardous Materials Information System (WHMIS)<br>.1 Material Safety Data Sheets (MSDS). |
|                       | .5 | Transport Canada (TC)<br>.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 manufacturer's instructions in accordance with Section 01 33 00 - Submittal Procedures.
  - .1 Instructions to include installation instructions for each product used.

#### 1.5 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.

#### 1.6 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
- .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
- .3 Collect and separate for disposal paper, plastic, polystyrene, corrugated cardboard, packaging

material, in appropriate on-site bins, for recycling in accordance with Waste Management Plan.

- .4 Place materials defined as hazardous or toxic in designated containers.
- .5 Handle and dispose of hazardous materials in accordance with the CEPA, TDGA, Regional and Municipal regulations.
- .6 Unused sealant material must not be disposed of into sewer system, into streams, lakes, onto ground or in other location where it will pose health or environmental hazard.
- .7 Divert unused joint sealing material from landfill to official hazardous material collections site approved by Departmental Representative.
- .8 Empty plastic joint sealer containers are not recyclable. Do not dispose of empty containers with plastic materials destined for recycling.
- .9 Fold up metal banding, flatten, and place in designated area for recycling.

#### 1.7 PROJECT CONDITIONS

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

2.2 SEALANT MATERIAL  
DESIGNATIONS

- .1 Polysulfide Two Part.
  - .1 Self-Leveling to CAN/CGSB-19.24, Type 1, Class B, colour to match concrete.

- .2 Polysulfide Two Part.
  - .1 Non-Sag to CAN/CGSB-19.24, Type 2, Class B, colour to match concrete.
- .3 Preformed Compressible and Non-Compressible back-up materials.
  - .1 Polyethylene, Urethane, Neoprene or Vinyl Foam.
    - .1 Extruded closed cell foam backer rod.
    - .2 Size: oversize 30 to 50%.
  - .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/m<sup>3</sup> 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.

### 2.3 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.