

## **Part 1 – General**

### **1.01 Work Include**

- A. The work shall consist of furnishing and installing waterproof, fire rated expansion joints in accordance with details shown on the plans and the requirements of the specification. Fire Barrier shall be pre-formed, pre-coated, pre-compressed, self-expanding, open-cell seal system.
- B. Related Work
  - 1. Division 3 - Cast- in- Place Concrete
  - 2. Division 7 - Thermal & Moisture Protection
  - 3. Division 7 - Sealant, Caulking and Waterproofing
  - 4. Division 7 - Joint Firestopping

### **1.02 Submittals**

- A. General – Submit the following according to Division specification section.
- B. Standard submittals packages – submit typical expansion joint drawing(s) indicating pertinent dimension, general construction, expansion joint openings dimensions and product information.
- C. Sample of material to be used in the work.
- D. All product must be tested and certified as per UL 2079.
- E. All product must be certified by independent laboratory test report to be free in composition.
- F. Quality and environmental control: Manufacture shall be certified to both ISO-9001:2015 (quality management) and ISO-14001:2015 (Environmental management), and shall provide written confirmation that formal quality and Environment management system and processes have been adopted.

### **1.03 Product Delivery, Storage and Handling**

Deliver products to site in manufacturer's original, intact, label containers. Handle and protect as necessary to prevent damage or deterioration during shipment, handling and storage. Store in accordance with manufacturer's installation instruction.

#### **1.04 Basis - Of - Design**

- A. All joints shall be designed to meet specified performance criteria of the product as manufactures by Prospec Specialties Inc., Suite 400, Markham ON, L3R 0MR, Canada. [www.prospecspecialties.com](http://www.prospecspecialties.com)
- B. Alternate manufacturers must demonstrate that their products meet or exceed the design criteria and must submit certified performance test report performed by nationally recognized. Independent laboratories as called for in section 1.02 submittals of alternates must be made three weeks prior to bid opening to allow proper evaluation time.

#### **1.05 Quality Assurance**

The general contractor will conduct a preconstruction meeting with all parties and trades involved in the treatment of work and around expansion joints, including, but not limited to, concrete, mechanical electrical, HVAC, landscaping, masonry, curtain wall, water proofing, fire stopping, caulking, flooring and other finish trade subcontractors. All superintendents and foreman with responsibility for oversight and setting of the joint gap must attend this meeting.

**1.06 Warranty** – Manufacturer’s standard warranty shall apply.

#### **1.07 LEED Building Performance Requirements**

- A. Project within 500 miles to Toronto, ON may qualify for additional “ Regional Material ”.
- B. The VOC of the silicon must not exceed 50 grams/litre.
- C. Products must be proved to certify by independent test report to exceed the requirement of curtains wall performance test ASTM E330, E283-04, and E331. Product must meet or exceed hurricane -force wind loading with no deflection at both positive and negative pressures up to 4954 Pascals – equal to 200 mph wind (ASTME330-02-procedure A).
- D. Product must be proved to have been certified by independent test report in accordance with ASTM C518 -04 and demonstrate an R-value per 1inch (25mm) of the depth of not less than 11.03 at as installed nominal joint size compression.
- E. Product must be proved to have been independent test reports to ASTME90-09 and to meet or exceed the STC or OITC rating for the project.

- F. Product must be proved by independent test report to have air permeability not to exceed 0.02 L (s.m<sup>2</sup>) at 75 pascals as required by the Air Barrier Association of America (ABAA) and accordance with ASTM E283-04.

## **Part 2 – PRODUCT**

### **2.01 General**

- A. Provide watertight, energy efficient, 2 hours rated, exterior / interior joints seals in vertical / horizontal plane. Typical applications for wall / floor joints where a 2-hour fire rating is required and desired.
- B. Provide ZAS Self-expanding, Pre-compressed Fire-barrier as manufactured by Prospec Specialties Inc. and indicated drawings for vertical plane expansion joints locations.
- C. Fire Barrier shall be made of open-cell foam pre coated with silicon, pre-formed, pre-compressed, self-expanding, 2 hours fire-rated, seal system. Seal system shall be comprised of the following components: 1. Fire retardant – impregnated foam seal pre-coated at the outer layers with waterproof silicone, 2. Field – applied epoxy adhesive primer, 3. Field – injectable silicone sealant bands.
- D. Material shall be capable of movements of up to +/- 50%, (100% total) of nominal material size.
- E. External silicone color facings to be low – modulus, waterproof silicone factory-applied to the open-cell foam while it is partially pre-compressed to a width greater than maximum joint opening and cured before final installation.
- F. Select the seal system model appropriate to the movement and design requirements at each joint location that meet the projects specification or as defined by the structural engineer of record.
- G. Manufacturer's checklist must be completed by expansion joint subcontractor and returned to manufacturer at time of ordering material.

### **2.02 Fabrication**

ZAS Fire barrier by Prospec Specialties Inc. must be supplied pre-compressed. To less than the joint size, package in shrink wrapped lengths.

Directional changes and terminations into horizontal plane surfaces to be provided by factory manufactured Universal 90-degree single units containing minimum 12-inch long leg and 6-inch-

long leg or custom leg on each side of the direction change or through field fabrication in strict accordance with published installation instructions.

### **Part 3 – Execution**

#### **3.01 Installation**

##### **A. Preparation of the Work Area**

- i. The contractor shall provide properly formed and prepared expansion joint openings constructed to the exact dimensions and elevations shown on manufacturer's standard system drawings or as shown on the contract drawings. Deviations from these dimensions will not be allowed without consent of the engineer of record.
- ii. The contractor shall clean the joint opening of all contaminant immediately prior to installation of expansion joint system.
- iii. No drilling, or screwing or fasteners of any type are permitted to anchor the sealant system into the substrate.
- iv. System to be installed by qualified sub-contractors only according to detailed published installation procedures and/or in accordance with job specific installation instructions of manufacturer's field technician.

##### **B. Clean and Protect**

Protect the system and its components during construction. Subsequent damage to the expansion joints system will be repaired at the general contractor's expense. After work is complete, clean exposed surfaces with a suitable cleaner that will not harm or attack the finish.

**END OF SECTION**