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**1 GENERAL**

**1.1 General Requirements**

- .1 All requirements of the Contract apply to and govern all work of this Section.
- .2 Comply with the requirements of Division 1.

**1.2 Related Work Specified in Other Sections**

- .1 Fire stopping and smoke seals within mechanical assemblies (i.e inside ducts, dampers) and electrical assemblies. (i.e. inside cable trays)

**1.3 Standards Referred to in this Section**

- .1 Underwriter's Laboratories of Canada (ULC)
  - .1 ULC-S115-11, Standard Method of Fire Tests of Firestop Systems.

**1.4 Submittals**

- .1 Samples
  - .1 Submit samples in accordance with Section 01 33 00 - Submittal Procedures, if requested by Departmental Representative.
  - .2 Submit duplicate 300 x 300 mm samples showing actual firestop material proposed for project.
- .2 Shop Drawings
  - .1 Submit shop drawings in accordance with Section 01 33 00 - Submittal Procedures.
  - .2 Submit shop drawings to show proposed material, reinforcement, anchorage, fastenings and method of installation. Construction details should accurately reflect actual job conditions.
- .3 Product Data
  - .1 Submit product data in accordance with Section 01 33 00 - Submittal Procedures.
  - .2 Submit manufacturer's product data for materials and prefabricated devices, providing descriptions are sufficient for identification at job site. Include manufacturer's printed instructions for installation.

**2 PRODUCTS**

**2.1 Materials**

- .1 Fire stopping and smoke seal systems: in accordance with ULC-S115.
- .2 Asbestos-free materials and systems capable of maintaining an effective barrier against

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- flame, smoke and gases in compliance with requirements of ULC-S115 and not to exceed opening sizes for which they are intended and conforming to special requirements specified in 3.4.
- .3 Firestop system rating: match rating of system passing through.
  - .4 Service penetration assemblies: certified by ULC in accordance with ULC-S115 and listed in ULC Guide No.40 U19.
  - .5 Service penetration firestop components: certified by ULC in accordance with ULC-S115 and listed in ULC Guide No.40 U19.13 and ULC Guide No.40 U19.15 under the Label Service of ULC.
  - .6 Fire-resistance rating of installed fire stopping assembly in accordance with NBC.
  - .7 Fire stopping and smoke seals at openings intended for ease of re-entry such as cables: elastomeric seal.
  - .8 Fire stopping and smoke seals at openings around penetrations for pipes, ductwork and other mechanical items requiring sound and vibration control: elastomeric seal.
  - .9 Primers: to manufacturer's recommendation for specific material, substrate, and end use.
  - .10 Water (if applicable): potable, clean and free from injurious amounts of deleterious substances.
  - .11 Damming and backup materials, supports and anchoring devices: to manufacturer's recommendations, and in accordance with tested assembly being installed as acceptable to authorities having jurisdiction.
  - .12 Sealants for vertical joints: non-sagging.

### **3 EXECUTION**

#### **3.1 Preparation**

- .1 Examine sizes and conditions of voids to be filled to establish correct thicknesses and installation of materials. Ensure that substrates and surfaces are clean, dry and frost free.
- .2 Prepare surfaces in contact with fire stopping materials and smoke seals to manufacturer's instructions.
- .3 Maintain insulation around pipes and ducts penetrating fire separation.
- .4 Mask where necessary to avoid spillage and over coating onto adjoining surfaces;

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remove stains on adjacent surfaces.

### **3.2 Installation**

- .1 Install fire stopping and smoke seal material and components in accordance with ULC certification and manufacturer's instructions.
- .2 Seal holes or voids made by through penetrations, poke-through termination devices, and unpenetrated openings or joints to ensure continuity and integrity of fire separation are maintained.
- .3 Provide temporary forming as required and remove forming only after materials have gained sufficient strength and after initial curing.
- .4 Tool or trowel exposed surfaces to a neat finish.
- .5 Remove excess compound promptly as work progresses and upon completion.

### **3.3 Inspection**

- .1 Notify Departmental Representative when ready for inspection and prior to concealing or enclosing firestopping materials and service penetration assemblies.

### **3.4 Schedule**

- .1 Firestop and smoke seal at:
  - .1 Penetrations through existing fire-resistance rated gypsum board partitions and walls.
  - .2 Penetrations through fire-resistance rated floor slabs, and ceilings.
  - .3 Around mechanical and electrical assemblies penetrating fire separations.
  - .4 Rigid ducts: greater than 129 cm<sup>2</sup>: fire stopping to consist of bead of fire stopping material between retaining angle and fire separation and between retaining angle and duct, on each side of fire separation.

### **3.5 Clean Up**

- .1 Remove excess materials and debris and clean adjacent surfaces immediately after application.
- .2 Remove temporary dams after initial set of fire stopping and smoke seal materials.

**END OF SECTION**