

Part 1 General

1.4 RELATED SECTIONS

- .1 Section 04 22 00 – Concrete masonry unit
- .2 Section 07 92 00 – Joint sealants
- .3 Fire stopping and smoke barrier for mechanical and electrical installations – Engineer's drawings and specifications.

1.5 REFERENCES

- .1 Underwriters laboratories of Canada (ULC)
 - .1 ULC-S115-05, Standard Method of Fire Tests of Firestop Systems.

1.6 DEFINITIONS

- .1 Fire Stop Material: device intended to close off opening or penetration during fire or materials that fill openings in wall or floor assembly where penetration is by cables, cable trays, conduits, ducts and pipes and poke-through termination devices, including electrical outlet boxes along with their means of support through wall or floor openings.
- .2 Single Component Fire Stop System: fire stop material that has Listed Systems Design and is used individually without use of high temperature insulation or other materials to create fire stop system.
- .3 Multiple Component Fire Stop System: exact group of fire stop materials that are identified within Listed Systems Design to create on site fire stop system.
- .4 Tightly Fitted; (ref: NBC Part 3.1.9.1.1 and 9.10.9.6.1): penetrating items that are cast in place in buildings of noncombustible construction or have "0" annular space in buildings of combustible construction.
 - .1 Words "tightly fitted" should ensure that integrity of fire separation is such that it prevents passage of smoke and hot gases to unexposed side of fire separation

1.7 SUBMITTALS

- .1 Provide submittals in accordance with Section 01 33 00 - Submittal Procedures.
 - .2 Product data:
 - .1 Submit manufacturer's printed product literature, specifications and datasheet and include product characteristics, performance criteria, physical size, finish and limitations.
 - .3 Shop drawings:
 - .1 Submit shop drawings to show location, proposed material, reinforcement, anchorage, fastenings and method of installation.
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- .4 Quality assurance submittals: submit following in accordance with Section 01 45 00 - Quality Control.
 - .1 Test reports: in accordance with CAN-ULC-S101 for fire endurance and CAN-ULC-S102 for surface burning characteristics.
 - .1 Submit certified test reports from approved independent testing laboratories, indicating compliance of applied fire stopping with specifications for specified performance characteristics and physical properties.
 - .2 Certificates: submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.
 - .3 Manufacturer's Instructions: submit manufacturer's installation instructions and special handling criteria, installation sequence and cleaning procedures.
 - .4 Manufacturer's Field Reports: submit to manufacturer's written reports within 3 days of review, verifying compliance of Work, as described in Part 3 - Field Quality Control.

1.8 **DELIVERY, STORAGE AND HANDLING**

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Deliver, store and handle materials in accordance with manufacturer's written instructions.
- .3 Deliver materials to the site in undamaged condition and in original unopened containers, marked to indicate brand name, manufacturer, ULC markings.
- .4 Storage and Protection
 - .1 Store materials indoors and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
 - .2 Replace defective or damaged materials with new.
- .5 Waste Management and Disposal:
 - .1 Separate waste materials for recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

Part 2 Products

2.4 **MATERIALS**

- .1 Fire stopping and smoke seal systems: in accordance with ULC-S115.
 - .1 Systems capable of maintaining an effective barrier against flame, smoke and gases in compliance with requirements of ULC-S115 and not to exceed opening sizes for which they are intended.
 - .2 Fire stop system rating: to match wall/floor/roof assembly of rating indicated.
 - .2 Service penetration assemblies: systems tested to CAN-ULC-S115.
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- .3 Service penetration fire stop components: certified by test laboratory to CAN-ULC-S115.
 - .4 Fire-resistance rating of installed fire stopping assembly in accordance with NBC.
 - .5 Fire stopping and smoke seals at openings intended for ease of re-entry such as cables: elastomeric seal.
 - .6 Fire stopping and smoke seals at openings around penetrations for pipes, ductwork and other mechanical items requiring sound and vibration control: elastomeric seal.
 - .7 Primers: to manufacturer's recommendation for specific material, substrate, and end use.
 - .8 Water (if applicable): potable, clean and free from injurious amounts of deleterious substances.
 - .9 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.
 - .10 Sealants for vertical joints: non-sagging.
 - .11 Sealants and caulking for use with non-combustible elements, such as steel or copper tubing, rigid steel conduit and electrical metallic tubing (EMT), the following products are acceptable:
 - .1 Intumescent firestop sealant Hilti FS-ONE
 - .2 Self-Leveling Firestop Sealant Hilti CP 604
 - .3 Fire foam Hilti CP 620
 - .4 Fire Barrier Silicone Sealant 3M 2000
 - .5 3M Fire Barrier CP25 WB
 - .6 Tremco Tremstop Fyre-Sil sealant
 - .7 Equivalent products in the directory «U.L.C Fire Resistance Directory - Volume III " or directory "UL Products Certified for Canada (cUL) " and approved by the architect.
 - .12 Sealants, caulking and spray products for use in fire rated construction joints and other gaps, the following products are acceptable:
 - .1 Firestop Joint Spray Hilti CP 672
 - .2 Elastomeric silicone sealant Hilti CP 601s
 - .3 Flexible firestop sealant Hilti CP 606
 - .4 Self-Leveling Firestop Sealant Hilti CP 604
 - .5 Fire Barrier Silicone Sealant 3M 2000
 - .6 Tremco Tremstop Fyre-Sil sealant
 - .7 Equivalent products in the directory «U.L.C Fire Resistance Directory - Volume III " or directory "UL Products Certified for Canada (cUL) " and approved by the architect.
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Part 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.

3.2 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 openings or joints to ensure continuity and integrity of fire separation are maintained.
- .3 Prepare surfaces in contact with fire stopping materials and smoke seals to manufacturer's instructions.
- .4 Mask where necessary to avoid spillage and over coating onto adjoining surfaces; remove stains on adjacent surfaces.

3.3 INSPECTION

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

3.4 SCHEDULE

- .1 Fire stop and smoke seal at.
 - .1 Penetrations through fire-resistance rated walls, floors and ceilings.
 - .2 Around mechanical and electrical assemblies penetrating fire separations.
 - .3 Rigid ducts: greater than 129 cm²: 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 CLEANING

- .1 Proceed with cleaning in conformity with section 01 74 11– Cleaning.
- .2 Remove excess materials and debris and clean adjacent surfaces immediately after application.

FIN DE LA SECTION
