

PART 1 - GENERAL

<u>1.1</u>	<u>WORK INCLUDED</u>	.1	This section specifies requirements for supplying and applying firestopping and smoke seal material as required for wall/floor/ceilings in areas/rooms which are fire-rated.
<u>1.2</u>	<u>RELATED WORK</u>	.1	Firestopping and smoke seals within electrical assemblies (i.e. inside conduits) are specified in Division 26.
<u>1.3</u>	<u>REFERENCES</u>	.1	ASTM E2174-2019, Standard Practice for On-site Inspection of Installed Fire Stops.
		.2	ULC/CAN S115-2018, Standard Method of Fire Tests of Firestop Systems.
		.3	International Firestop Council Guidelines for Evaluating Firestop Systems Engineering Judgements.
		.4	National Building Code.
<u>1.4</u>	<u>SAMPLES</u>	.1	Submit samples in accordance with the Section 01 33 00
		.2	Submit duplicate 300 x 300 mm samples showing actual firestop material proposed for project.
<u>1.5</u>	<u>SUBMITTALS</u>	.1	Submit shop drawings and product and safety data in accordance with the Section 01 33 00.
		.2	Submit shop drawings to show proposed material, including composition and limitations, reinforcement, anchorage, fastenings and method of installation. Construction details should accurately reflect actual job conditions.
		.3	Provide manufacturer's engineering judgements identification number and drawing details when no ULC or UL system are available for an application. Engineered judgements must include both project name and contractor's name who will install firestop system as described in drawing.
		.4	Submit material safety data sheets provided with product delivered to job site.

## PART 2 - PRODUCTS

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| <u>2.1 MATERIALS</u> | <p>.1 Firestopping and smoke seal systems: in accordance with ULC-S115.</p> <p>.1 Asbestos-free materials and systems capable of maintaining an effective barrier in compliance with requirements of ULC-S115 and not to exceed opening sizes for which they are intended.</p> <p>.2 Firestop system rating: F.</p> <p>.2 Service penetration assemblies: certified by ULC in accordance with ULC-S115 and listed in ULC Guide No. 40 U19.</p> <p>.3 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.</p> <p>.4 Fire-resistance rating of installed firestopping assembly in accordance with NBC.</p> <p>.5 Firestopping and smoke seals at openings intended for ease of re-entry such as cables: elastomeric seal.</p> <p>.6 Firestopping and smoke seals at openings around penetrations for pipes, ductwork and other mechanical items requiring sound and vibration control: elastomeric seal.</p> <p>.7 Primers: to manufacturer's recommendation for specific material, substrate, and end use.</p> <p>.8 Water (if applicable): potable, clean and free from injurious amounts of deleterious substances.</p> <p>.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.</p> <p>.10 Sealants for vertical joints: non-sagging.</p> |
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## PART 3 - EXECUTION

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| <u>3.1 PREPARATION</u> | <p>.1 Examine sizes and conditions of voids to be filled to establish</p> |
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correct thicknesses and installation of materials. Confirm substrates and surfaces are clean, dry and frost free.

- .2 Prepare surfaces in contact with firestopping materials and smoke seals to manufacturer's instructions.
- .3 Maintain insulation around pipes and ducts penetrating fire separation without interruption to vapour barrier.
- .4 Mask where necessary to avoid spillage and over coating onto adjoining surfaces; remove stains on adjacent surfaces.

### 3.2 COORDINATION

- .1 Coordinate location and proper selection of cast-in-place firestop devices with trade responsible for the work. Install device before placement of concrete.
- .2 Provide adequate spacing of field run pipes to allow for installation of cast-in-place firestop devices without interference.

### 3.3 INSTALLATION

- .1 Install firestopping material and components in accordance with ULC certification and manufacturer's instructions.
- .2 Install firestopping and smoke seal material and components at all walls, floors and ceilings in fire rated rooms as noted on Room Finish Schedule on Drawings and also for all floor to floor penetrations.
- .3 Install firestopping and smoke seal on both sides of wall or slab where penetration or opening exists in fire rated rooms.
- .4 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.
- .5 Provide temporary forming as required and remove forming only after materials have gained sufficient strength and after initial curing.
- .6 Tool or trowel exposed surfaces to a neat finish.
- .7 Remove excess compound promptly as work progresses and upon completion.

### 3.4 INSPECTION

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

3.5	<u>SCHEDULE</u>	.1	Firestop and smoke seal at: <ul style="list-style-type: none"><li>.1 Penetrations through fire-resistance rated masonry, concrete, and gypsum board partitions and walls.</li><li>.2 Top of fire-resistance rated masonry and gypsum board partitions.</li><li>.3 Intersection of fire-resistance rated masonry and gypsum board partitions.</li><li>.4 Control and sway joints in fire-resistance rated masonry and gypsum board partitions and walls.</li><li>.5 Penetrations through fire-resistance rated floor slabs, ceilings and roofs.</li><li>.6 Openings and sleeves installed for future use through fire separations.</li><li>.7 Around mechanical and electrical assemblies penetrating fire separations.</li><li>.8 Rigid ducts (greater than 129 cm<sup>2</sup>): fire stopping to consist of bead of firestopping material between retaining angle and fire separation and between retaining angle and duct, on each side of fire separation.</li></ul>
3.6	<u>FIELD QUALITY CONTROL</u>	.1	Examine sealed penetration areas to ensure proper installation before concealing or enclosing areas.
		.2	Keep areas of work accessible until inspection by applicable code authorities.
		.3	Perform inspection of through-penetration firestopping in accordance with ASTM E2174.
		.4	Perform under this section patching and repairing of firestopping caused by cutting or penetrating of existing firestop systems already installed by other trades.
		.5	Install a warning card that is clearly visible adjacent to all large and medium openings that may be re-penetrated. This card should contain the following information: <ul style="list-style-type: none"><li>.1 Warning that the opening has been firestop protected.</li><li>.2 Indicate the firestop system used (ULC).</li><li>.3 F rating or FT rating.</li><li>.4 Firestop product(s) used.</li><li>.5 Person to contact and phone number in case of modification or new penetration of firestop system.</li></ul>
3.7	<u>CLEAN UP</u>	.1	Remove excess materials and debris and clean adjacent

surfaces immediately after application.

- .2 Remove temporary dams after initial set of firestopping and smoke seal materials.

**END OF SECTION**