# QAI LABORATORIES
### CERTIFICATION TESTING INSPECTION

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# BUILDING PRODUCTS LISTING PROGRAM

**Customer:** CL4 Fire.
**Class:** Mineral-fiber Fireproofing Materials – Firestops
**Website:** www.CL4Fire.com

**Listing No.** F476
**Project No.** F476-3

**Effective Date:** Oct 27, 2022
**Last Revised:** September 14, 2023
**Expires:** N/A

**Products:** CL4Fire Blue Label Mineral-fiber Fireproofing Insulation.

**Standard(s):**

| | |
|---|---|
| **CAN/ULC S115** | "Standard Method of Fire Tests of Firestop Systems." |
| **ASTM E814** | "Standard Test Method for Fire Tests of Penetration Firestop Systems." |
| **UL 1479** | "Fire Tests of Through-Penetration Firestops." |
| **CAN/ULC S102** | "Standard Method of Test for Surface Burning Characteristics of building Materials and Assemblies." |

**Model/Ratings:** CL4Fire products have surface burning characteristics determined in accordance with CAN/ULC S102 as outlined below.

| Product | Thickness Inches (mm) | Nominal Density lbs/ft³ (kg/m³) | Flame Spread Index | Smoke Developed Index |
|---|---|---|---|---|
| CL4Fire Blue Label | 1 ½ (38 mm) | 8 (128) | 10 | 10 |

CL4Fire Firestop Assemblies per CAN/ULC S115 and ASTM E814

| Design: | Penetration | Max Pipe Inches (mm) | Wrap Length Inches (mm) | Seam | Layers | FTH Rating |
|---|---|---|---|---|---|---|
| F476-FS-1C4-45 | Copper, Cast Iron Pipe and Tubes | 4 (102) | 18 (457) | 3 Inch (76 mm) overlap | 1 | 45 minutes |
| F476-FS-2C4-120 | Copper, Cast Iron Pipe and Tubes | 4 (102) | 24 (610) | 1 inch (25 mm) overlap) | 2 | 2 Hours |
| F476-FS- | EMT, Steel, Copper, Cast | 6 (152) | 18 (457) | 1 inch (25 mm) overlap) | 1 | 2 Hours |

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| 1EMT6-120 | Iron Pipe and Tubes | | | | | |
|---|---|---|---|---|---|---|

Product is to be installed per this listing.

**Limitations:**

Each product of CL4Fire is ink stamped with the following information:
- QAI Logo with "c" and "us" indicators.
- Manufacturer's name or trademark.
- Country of manufacture.
- QAI file number (F476-1).
- Traceability information.

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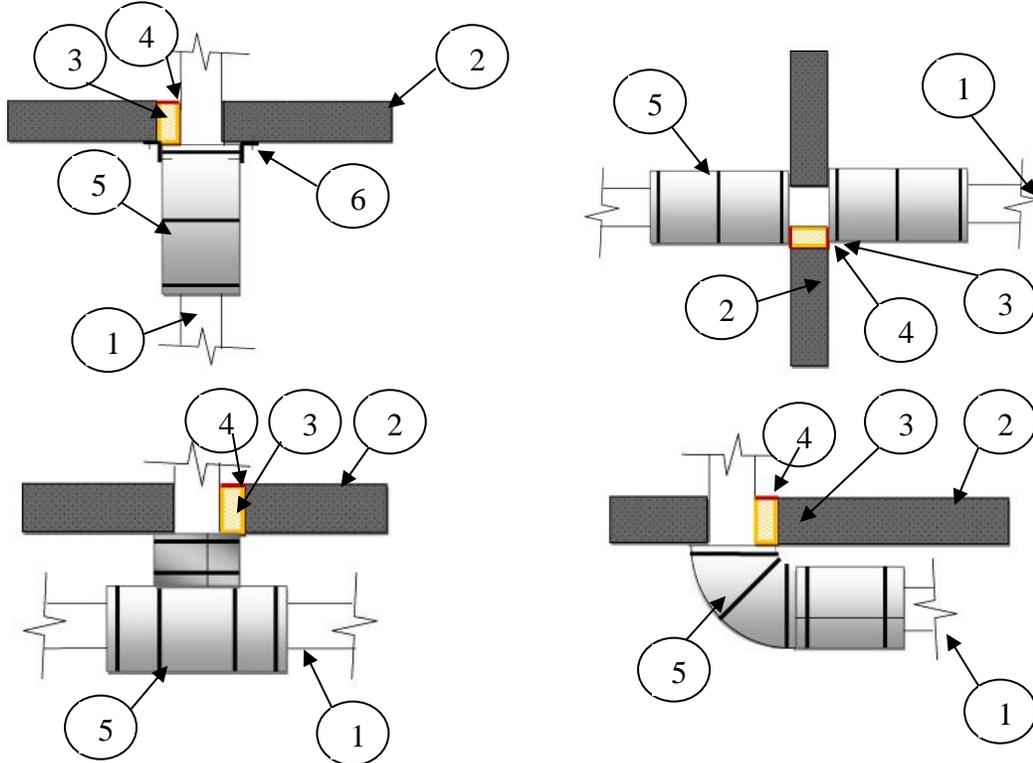TORONTO, ON 905.605.5444
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**CL4FIRE Through Penetration Firestop Assemblies:**

**Product Assembly:**



1. **Single or multiple penetrations:** (see table of ratings)
   Nominal 6 inches (152 mm) diameter or smaller schedule 10 steel pipe, EMT, or cast iron pipe. Nominal 4 inch (101 mm) or smaller copper tube (Type K) or pipe. Note: for multiple penetrations pack open spaces between CL4Fire insulated pipes to a minimum depth of 6 inches (152 mm). Foil tape is approved for use.
2. **Floor or Wall Assemblies:**
   Code conforming 1 or 2-hour rated floor or wall assembly constructed of normal or low-density concrete, hollow core concrete or masonry walls.
3. **Firestop Insulation:**
   Minimum 4 inches (101 mm) thickness of CL4Fire fire protection thermal insulation, or mineral wool insulation tightly compressed into concrete opening, recessed ¼ inches (6 mm) from the top and flushes with the bottom of a gypsum ceiling / wood floor assembly, or recessed ¼ inches (6 mm) from both sides of a concrete or framed gypsum wall assembly.
4. **Firestop Sealant:**
   Approved Firestop Sealant installed a minimum of ¼ inches (6 mm) deep, flush with the top surface of a floor assembly or both sides of a wall assembly. Installation can consist of one of the approved caulking products (refer to F476-1 - Evaluation Report).
5. **Pipe Insulation:**

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Standard thickness of CL4Fire insulation installed snugly between layers and tight to the substrate to the length as shown in chart above banded with stainless steel hose clamps or tie wires installed within 1 ½ inches (38 mm) around both sides of insulation joints and maximum 12 inches (305 mm) apart.   Alternately, 3 continuous or non-continuous layers (with snugly butted seams staggered between layers) of ½ inches (13 mm) thickness CL4Fire plenum style wrap.  Open cut ends of insulation and seams should be foil taped for additional integrity.

6. **Substrate Bracket:**
Installations abutting the underside of a ceiling must be fastened and pinned to ensure integrity to the substrate.  CL4Fire assembly must be secured within 4 inches (102 mm) below the ceiling height through the installation of minimum 2 weld pins installed maximum 4 inches (102 mm) apart around the pipe.  Pin are attached to 4 inches (102 mm) wide sheet metal that is steel banded to the bare pipe using a minimum of 2 bands installed 1 above and 1 below the insulation pins.  Alternately, the insulation may be supported by equally spaced steel 'L' shaped brackets fastened to the substrate with steel fasteners and supporting the CL4Fire insulation with minimum 1 inch (25 mm) length impaling pins or screws for a 1-hour fire rating and minimum 2 ½ inch (64 mm) long for a 2-hour fire rating.

**CL4Fire ISO 6944 Ventilation Duct Assemblies:**

For use with ISO 6944 ventilation duct assemblies, see QAI listing F476-1-1.

**CL4Fire CAN/ULC S144 Grease Duct Assemblies:**

For use with CAN/ULC S144 grease duct assemblies, see QAI listing F476-1-1.

**CL4Fire ASTM E2336 Grease Duct Assemblies:**

For use with ASTM E2336 assemblies, see QAI listing F476-1-2.

Final acceptance of the product in the intended application is to be determined by the authority having jurisdiction.

The materials, products or systems listed herein have been qualified to bear the QAI Listing Mark under the conditions stated with each Listing. Only those products bearing the QAI Listing Mark are considered to be listed by QAI.

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