

# SECTION 15250

## Field Applied Grease Duct Insulation Zero Clearance, 2 Hour Rated CANADA



### **Part 1 - GENERAL**

#### **1.01 SUMMARY**

This section specifies material and equipment to provide a 2-hour fire-resistive rated duct enclosure and a method for providing zero clearance to combustibles for commercial kitchen grease duct exhaust systems.

#### **1.02 CODES AND STANDARDS**

The following published specifications, standards, or tests that apply to flexible, fire rated grease duct wrap in this section:

- A. NFPA 96 (All Editions, including 2004, 2008, 2011), NFPA 101, 90A
- B. 2010 National Building Code of Canada
- C. CAN/ULC-S144-09 Standard Method of Fire Resistance Test – Grease Duct Assemblies.
- D. International Code Council Evaluation Service (ICCES)
- E. 1997 ICBO Uniform Mechanical Code (ICBO UMC)
- F. 1997 Uniform Building Code (UBC)
- G. 2006, 2009 and 2012 International Mechanical Code (IMC)
- H. 2006 and 2009 IAPMO Uniform Mechanical Code (IAPMO UMC)
- I. ASTM E2336 Internal Fire Test, Zero Clearance to Combustibles, Grease Duct Enclosure
- J. ASTM E-119 Engulfment Fire Test for 2 Hour Grease Duct Enclosure
- K. ASTM E-119 Fire Wall Test, 2 Hour Rating
- L. ASTM E-84 Standard Test Method for Surface Burning Characteristics of Building Materials
- M. ASTM E-814, UL/ULC 723 Standard Test Method for Fire Tests of Through-Penetration Fire Stops
- N. ASTM E-136 Standard Test Method for Noncombustibility
- O. ASTM E-518 Standard Test Method for Thermal Resistance (Durability)

**NOTE:** The Authority Having Jurisdiction has final responsibility for approving equipment, materials, procedures, and performance requirements for their respective jurisdiction.

#### **1.03 SYSTEM DESCRIPTION**

- A. A lightweight (maximum nominal 6 pcf), non-asbestos, bio-soluble, high temperature, inorganic, noncombustible, foil encapsulated insulation blanket. The blanket material must be capable of performing at 2000°F, matching the internal and external fire test temperature for grease ducts. The duct wrap system shall be a tested and listed system evaluated for reduced clearances to combustibles and as an alternative to a two-hour fire rated grease duct shaft enclosure. Testing shall be conducted at a nationally recognized testing laboratory.
- B. Performance Requirements:
  - 1. Zero clearance to combustibles across the entire surface of the blanket material, per the internal fire test of CAN/ULC-S144-09 and ASTM E2336.
  - 2. 2-hour fire resistive enclosure assembly per CAN/ULC-S144-09 and ASTM E-119.
  - 3. Firestop system, tested per ASTM E-814, 2-hour F, T and H Ratings.

#### **1.04 SUBMITTALS**

Submit product data sheet and installation instructions showing system performance and Code compliance.

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#### **1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver materials in original unopened packages, clearly marked with manufacturer's name, product designation, manufacturer's lot numbers and appropriate third party classification listings.
- B. Store in a covered dry environment.

### **PART 2 - PRODUCT**

#### **2.01 MANUFACTURERS**

- A. Unifrax I LLC, Tonawanda, NY; FyreWrap® Elite® 1.5 Duct Insulation
- B. Approved equal

#### **2.02 MATERIALS**

- A. A lightweight, nominal 1.5" thick, 6pcf, inorganic, non-asbestos, noncombustible, bio-soluble, high temperature, core insulation blanket.
- B. Flexible, fully encapsulated duct wrap to provide 2-hour fire resistive enclosure assembly per codes and standards listed in 1.02 of this document.
- C. Blanket insulation must maintain a 2012°F (1100°C) operating temperature
- D. Blanket fiber materials must be tested per EU regulatory requirements, Directive 97/69/EC for bio-solubility, and verified by an independent laboratory.
- E. Provide rated access doors (for cleanout as required) to maintain 2-hour rating and required clearance.
- F. Provide firestop sealants, tape, insulation pins, clips, banding and other components as per manufacturer's instructions to ensure installation complies with the complete tested system and corresponding Design Listing(s).

### **PART 3 - EXECUTION**

#### **3.01 PREPARATION**

- A. Inspect and verify that ductwork has been tested and installed properly before applying duct wrap material.
- B. Inspect and verify that all surfaces are smooth, dry, clean and free from dust, debris, or other loose materials. Surfaces must be dry before the application of duct wrap materials.

#### **3.02 INSTALLATION**

- A. Install duct wrap system in accordance with manufacturer's installation instructions.