

SECTION 15250

Field Applied Grease Duct Insulation Zero Clearance, 2 Hour Rated

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 dust wrap in this section:

- A. NFPA 96 (All Editions, including 2004, 2008, 2011), NFPA 101, 90A
- B. International Code Council Evaluation Service (ICCES)
- C. 1997 ICBO Uniform Mechanical Code (ICBO UMC)
- D. 1997 Uniform Building Code (UBC)
- E. 2006, 2009 and 2012 International Mechanical Code (IMC)
- F. 2006 and 2009 IAPMO Uniform Mechanical Code (IAPMO UMC)
- G. 2010 National Building Code of Canada
- H. ASTM E2336 Internal Fire Test, Zero Clearance to Combustibles, Grease Duct Enclosure
- I. CAN/ULC-S144-09 and -12 Standard Method of Fire Resistance Test – Grease Duct Assemblies.
- 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)

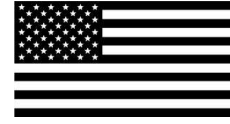
NOTE: The Authority Having Jurisdiction has final responsibility for approving equipment, materials, procedures, and performance requirements for their respective jurisdiction.

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 ASTM E2336.
 - 2. 2-hour fire resistive enclosure assembly per ASTM E-119.
 - 3. Firestop system, tested per ASTM E-814, 2-hour F and T 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, Niagara Falls, 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.