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RESEARCH REPORT: RR 26060
(CSI # 23 07 13)

REEVALUATION DUE

DATE: October 1, 2019
Issued Date: October 1, 2019
Code: 2017 LABC

GENERAL APPROVAL – Correction – FyreWrap® Elite® 1.5 Duct Insulation – Air Distribution System (ADS Ducts)

DETAILS

Unifrax FyreWrap Elite 1.5 Duct Insulation, Air Distribution System is a single layer flexible blanket encapsulated in an aluminum foil, fiberglass-reinforced scrim facing for use with ventilation ducts.

Unifrax FyreWrap Elite 1.5 duct insulation consists of a high-temperature calcium magnesium silicate blanket insulation encapsulated in an aluminum foil fiberglass-reinforced scrim facing. The insulation is supplied at a nominal thickness of 1-1/2 inches, at a minimum density of 6.0 pcf.

Unifrax FyreWrap Elite 1.5 has a flame spread index of not more than 25, and smoke developed index of not more than 50 when tested in accordance with ASTM E84.

Unifrax FyreWrap Elite 1.5 complies with ASTM E136 and is considered a noncombustible material as described in Section 703.5.1 of the 2017 Los Angeles Building Code. Additionally, the FyreWrap Elite 1.5 duct insulation has been tested in accordance with ASTM C518 for durability.

The system is applied directly onto the duct surfaces with a 3” overlap on both perimeter and longitudinal seams and is secured in place using insulation pins or metal bands.

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If the FyreWrap Elite 1.5 is to be secured via pinning it must be done by using either 12 gauge weld pins, 12 gauge cuphead pins or 12 gauge 2 x 2 in. base self-adhesive pins with each self-adhesive pin secured by a single 1/8" stainless steel rivet. The pins are to be of an appropriate length to ensure limited compression of the material and each pin is to have either a 2-1/2 in. square or 1-1/2" round galvanized steel speed clip (washer) installed. In addition, pins are to be space transversely around the duct and secured in accordance with the manufacturer's installation instructions.

Banding material must be minimum 1/2 in. wide, 0.015 in. thick carbon steel or stainless steel in conjunction with minimum 1 in. long steel crimp clips for use with maximum 32 in. wide steel ducts. Banding materials are spaced a maximum of 15 in. on center and 1-1/2 in. from the transverse joints of the duct wrap.

The FyreWrap® Elite® 1.5 Duct Insulation, Air Distribution System has an F-rating of 2 hours and a T-rating of 2 hours.

The FyreWrap Elite 1.5 Duct Insulation, Air Distribution System is listed with Underwriters Laboratories, Inc. and Intertek. The applicable UL Duct Assemblies are V-32, V-34 and V-35. Fire resistance ratings are only applicable when the assembly is constructed in accordance with the referenced, published assemblies.

Where ducts protected by FyreWrap Elite 1.5 duct insulation penetrates a fire-resistance-rated wall and/or floor assemblies and the assemblies requires protection, the annular space of the penetration must be protected as described by UL and Intertek through-penetration Firestop System as listed in Tables 1 2, 3, and 4 below.

Table 1 – Through-penetration Firestop Systems – UL Wall Assemblies

Model (Series) Designation	UL Through-Penetration Firestop System No.	F Rating	T Rating
FyreWrap Elite 1.5	C-AJ-7162, W-L-7230	2 Hr	2 Hr

Table 2 – Through-penetration Firestop Systems – UL Floor/Ceiling Assemblies

Model (Series) Designation	UL Through-penetration Firestop System No.	F Rating	T Rating
FireWrap Elite 1.5	C-AJ-7162	2 Hr	2 Hr
	F-A-7023	2 Hr	1 Hr
	F-C-7057, F-C-7058	1 Hr	1 Hr

Table 3 – Through-penetration Firestop Systems – Intertek Wall Assemblies

Model (Series) Designation	Intertek Through-Penetration Firestop System No.	F Rating	T Rating
FyreWrap Elite 1.5	UNI/PF 180-01	3 Hr	3 Hr
FyreWrap Elite 1.5	UNI/PHV 120-03, UNI/PHV120-04,	2 Hr	2 Hr

Table 4 – Through-penetration Firestop Systems – Intertek Floor/Ceiling Assemblies

Model (Series) Designation	Intertek Through-Penetration Firestop System No.	F Rating	T Rating
FyreWrap Elite 1.5	UNI/FRD 120-23	2 Hr	2 Hr
FyreWrap Elite 1.5	UNI/PF 180-02	3 Hr	3 Hr
FyreWrap Elite 1.5	UNI/PV 60-01	1 Hr	1 Hr

The approval is subject to the following conditions:

1. Unifrax FyreWrap Elite 1.5 Duct Insulation must be installed in accordance with this report and the manufacturer’s published installation instructions, a copy of which must be available at the jobsite.
2. All assemblies shall be built in accordance with the applicable published UL and Intertek designs or as otherwise described in this report.
3. The system shall bear the words “FIRE RESISTIVE DUCT ENCLOSURE – DO NOT REMOVE – LIFE SAFETY APPLICATION” The wording shall be visible after the fire protection system is installed.
4. Substitution of fire protection systems for required fire dampers is limited to horizontal ducts penetrating fire-resistance-rated fire barriers, fire partitions and/or smoke barriers, shaft enclosures, and to vertical ducts each with a maximum fire-resistance rating of 2 hours.
5. Openings are not permitted for a minimum distance of 6 feet from each side of the fire-resistance-rated assembly.
6. When penetrating fire-resistance-rated wall assemblies, the HVAC duct system may be installed with zero clearance from the insulating materials to combustibles only when the ASTM E814 or UL 1479 F-rating equals or exceed the fire-resistance-rating of the wall assembly penetrated, as required by Section 714.3.1.2 of the 2017 Los Angeles Building Code (LABC).
7. When penetrating fire-resistance-rated horizontal assemblies, the HVAC duct system may be installed with zero clearance from the insulating materials to combustibles only when the ASTM E814 or UL 1479 F-rating and T-rating equal or exceed the fire-resistance-rating of the horizontal assembly as required by Section 714.4.1.2 of the 2017 Los Angeles Building Code (LABC).
8. Smoke dampers must be installed as required by the 2017 Los Angeles Building Code.

Unifrax, LLC

RE: FyreWrap® Elite® 1.5 Duct Insulation, Air Distribution System

9. The FyreWrap® Elite® 1.5 Duct Insulation blanket materials shall be packaged in boxes bearing the product name, the company name (Unifrax, LLC) and address, the surface-burning characteristics, and the UL and/or Intertek classification marks.

DISCUSSION

The correction is to delete the previous condition #3 that required the air distribution system to be fabricated in the shop of a licensed fabricator approved by the Los Angeles City Department of Building and Safety.p

The report is in compliance with 2017 Los Angeles Building Code.

The approval is based on data in accordance with the ICC-ES Acceptance Criteria for metallic HVAC duct enclosure assemblies (AC179), editorially revised February 2014 which incorporates compliance with ASTM E2816 – Standard Test Methods for Fire Resistive Metallic HVAC Duct Systems.

Addressee to whom this Research Report is issued is responsible for providing copies of it, complete with any attachments indicated, to architects, engineers and builders using items approved herein in design or construction which must be approved by the Department of Building and Safety Engineers and Inspectors.

This general approval of an equivalent alternate of the Code is only valid where an engineer and/or inspector of this Department has determined that all conditions of this Approval have been met in the project in which it is to be used.

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