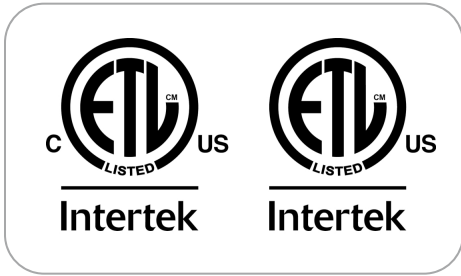


# Certificate of Compliance



This is a certificate of compliance to certify that the bearer has successfully completed the requirements of the above scheme which include the testing of products, the initial assessment, and are subject to continuing annual assessments of their compliance and testing of samples of products taken from production (as applicable to the scheme) and has been registered within the scheme for the products detailed.

You have been awarded:

## **Intertek ETL C + US Mark and Intertek ETL US Mark for Building Materials With Surface Burning Characteristics, Fire Resistant Duct, Non-combustible Materials, Thermal Insulation**


Standards: ISO 6944 (1985), ASTM C411 (2005), UL 2221 (2010), ASTM C518 (2010), CAN / ULC S115 (2011), CAN / ULC S144 (2012), ASTM E84-18a, ASTM C411 (2017), ASTM C518 (2017), UL 1479 (2015) Ed.4, UL 1479 (2012), ASTM E2336 (2016), ASTM E814-13a (R2017), ASTM E136 (2016) Ed.16a, ASTM E119 (2018a), ASTM E84-18

Certificate number: WHI20 - 30351901

**Organization:** EFS Engineering LTD  
393 Harishonim St.  
PO Box 393  
Ein Vered, X 40696  
Israel

**Product:** EFS Engineering Insulation  
*Spec ID: 46247*  
*Listing Information:* See following page(s)

**Certification body:** Intertek Testing Services NA, Inc.  
**Initial registration:** October 5, 2020  
**Date of expiry:** December 31, 2026  
**Issue status:** 5

Authorized By:   
**Jean-Philippe Kayl, Director of Certification**

**Intertek Testing Services NA, Inc.**  
545 E. Algonquin Road, Ste H., Arlington Heights, IL 60005 USA  
Phone: 847-439-5667 Fax: 847-439-7320

[www.intertek.com](http://www.intertek.com)

The certificate and schedule are held in force by regular annual surveillance visits by Intertek Testing Services NA, Inc. and the reader or user should contact Intertek to validate its status. This certificate remains the property of Intertek Testing Services NA, Inc. and must be returned to them on demand. This Certificate is for the exclusive use of Intertek's Client and is provided pursuant to the Certification agreement between Intertek and its Client. Intertek's responsibility and liability are limited to the terms and conditions of the agreement. Intertek assumes no liability to any party, other than to the Client in accordance with the agreement, for any loss, expense or damage occasioned by the use of this certificate. Only the Client is authorized to permit copying or distribution of this certificate and then only in its entirety. Use of Intertek's Certification mark is restricted to the conditions laid out in the agreement. Any further use of the Intertek name for the sale or advertisement of the tested material, product or service must first be approved in writing by Intertek. Initial Factory Assessments and Follow up Services are for the purpose of assuring appropriate usage of the Certification mark in accordance with the agreement, they are not for the purposes of production quality control and do not relieve the Client of their obligations in this respect.

## LISTING INFORMATION

### PRODUCT DESCRIPTION

Ductz+, EFS Wrap, FlameWrap Ductz 120 Model 1.1 and Model 1.2 and Ductz+, EFS Wrap, and FlameWrap Model 1.2 and 2.2 are encapsulated insulation blankets having a nominal thickness of 1-1/2 inches and a nominal density of 6 pcf. The core material is a high temperature fiber. The core insulation blanket is completely encapsulated in an aluminum foil fiberglass reinforced scrim covering.

### MATERIAL RATINGS FOR DUCTZ+, EFS WRAP, FLAMEWRAP DUCTZ120 MODEL 1.1 AND MODEL 1.2

Test Standard	Test Type	Rating
ASTM C518	Thermal Conductivity; Durability (per ASTM E2336); Serviceability-Thermal Transmission Properties (per UL 2221)	Control Specimens: Average 4.29 h-ft <sup>2</sup> ·°F/Btu/in.  Thermally Cycled Specimens: Average 4.37 h-ft <sup>2</sup> ·°F/Btu/in.  Meets related requirements of ASTM E2336 and UL 2221
ASTM E136	Combustibility	Meets requirements for Noncombustibility
ASTM C411	Serviceability - Hot Surface Performance (per UL 2221) @ 479 +/- 23.9 °F	Meets related requirements of UL 2221

### FLAME SPREAD RATINGS FOR DUCTZ+, EFS WRAP, FLAMEWRAP DUCTZ120 MODEL 1.1 AND MODEL 1.2

Test Standard	Flame Spread	Smoke Development
ASTM E84	does not exceed 25	does not exceed 50

### FIRE RESISTANCE RATINGS (REFERENCE PRODUCTS IN RESPECTIVE DESIGN LISTING)

Test Standard	Rating	Design No.
ASTM E2336	2 Hr	EFS/BI 120-01 EFS/BI 120-02
ASTM E119	2 Hr	EFS/BI 120-01 EFS/BI 120-02
CAN/ULC-S144	2 Hr	EFS/BI 120-01 EFS/BI 120-02
UL 2221	2 Hr (Condition A)	EFS/BI 120-02
ASTM E814 and UL 1479	T-Rating: 2 Hr F-Rating: 2 Hr	EFS/BI 120-01 EFS/BI 120-02

CAN/ULC-S115	F-Rating: 2 Hr FT-Rating: 2 Hr FH-Rating: 2 Hr FTH- Rating: 2 Hr	EFS/BI 120-01 EFS/BI 120-02
ISO 6944-1985	Horizontal Condition A Stability: 2 Hr Insulation: 1.5 Hr Integrity: 2 Hr	EFS/BI 90-01
ISO 6944-1985	Vertical Condition A Stability: 2 Hr Insulation: 2 Hr Integrity: 2 Hr	EFS/BI 120-03