ENVERGE | ONEPASS® HFO
CLOSED CELL SPRAY FOAM

TECHNICAL DATA SHEET
CSI MASTER SPEC #: 072119

PRODUCT USAGE

Enverge® OnePass HFO spray foam insulation is a spray-applied, two component, closed cell polyurethane foam insulation system compliant with ASTM C-1029 Type II foams. OnePass HFO is used to insulate and seal in walls, attics, ceilings, crawlspaces, ducts, and interior applications.

PHYSICAL PROPERTIES

Property	Test Method	Value
APPARENT DENSITY	ASTM D-1622	2.1 +/- 10% LBS/FT3
R-VALUE (AGED)	ASTM C-518	R 7.2 @ 1" (25.4 MM) R 28 @ 4" (10.6MM)
COMPRESSIVE STRENGTH	ASTM D-1621	25 NOMINAL
TENSILE STRENGTH	ASTM D-1623	50 PSI
CLOSED CELL CONTENT	ASTM D-6226	> 90% (VOL.)
WATER ABSORPTION (96 HRS, 2" HEAD, 70-74 °F (21-23 °C)	ASTM D-2842	0.29% BY VOLUME
WATER VAPOR PERMEANCE	ASTM E-96	≤ 1.0 PERMS @ 1.6"
FUNGI RESISTANCE	ASTM C-1338	PASS - NO GROWTH
FLAME SPREAD INDEX	ASTM E-84	< 25
SMOKE DEVELOPED INDEX	ASTM E-84	< 450
DIMENSIONAL STABILITY, -20°F	ASTM D-2126	< 5% CHANGE
DIMENSIONAL STABILITY, +200°F	ASTM D-2126	< 10% CHANGE
DIMENSIONAL STABILITY, +158°F & 100%RH	ASTM D-2126	<10% CHANGE
AIR PERMEANCE	ASTM E-2178	<.02 L(s•m2) @ 75 PA
GLOBAL WARMING POTENTIAL		1

*Calculated from 3.5" thick sample.

These values are typical. However values will vary and should not be considered part of the product specifications. It is imperative that the trained applicator read and understand this technical data sheet and SDS to process the material correctly and understand environmental and equipment limitations.

LIQUID CHEMICAL PROPERTIES

Property	Test Temp.	ASTM Test	Value/Unit
VISCOSITY - "A" COMPONENT VISCOSITY - "B" COMPONENT	77°F (25°C)	D-2196	200 CPS +/- 50 CPS 700 CPS +/- 200 CPS
WEIGHT/GAL - "A" COMPONENT WEIGHT/GAL - "B" COMPONENT	77°F (25°C)	D-1638	10.3 LBS/GAL 10.3 LBS/GAL
SPECIFIC GRAVITY - "A" COMPONENT SPECIFIC GRAVITY - "B" COMPONENT	77°F (25°C)	N/A	1.24/S.G. 1.23/S.G.

LARGE SCALE FIRE TESTING

Test	Performance	Location	Value
AC377 APPENDIX X	Ignition Barrier	Vertical Surfaces Horizontal or Sloped	UP TO 10" (25.4 CM) NO COATING REQUIRED UP TO 12" (30.5 CM) NO COATING REQUIRED
NFPA 286	Thermal Barrier	Vertical Surfaces Horizontal or Sloped	UP TO 5.5" (14 CM) DC315 - 14 MILS WFT UP TO 10.25" (26 CM) DC315 - 14 MILS WET
NFPA 286	Thermal Barrier	Vertical Surfaces Horizontal or Sloped	UP TO 6" (15.2 CM) NO BURN / 14 MILS WFT UP TO 9.5" (24.3 CM) NO BURN / 14 MILS WFT
NFPA 286	Thermal Barrier	Vertical Surfaces Horizontal or Sloped	UP TO 6" (15.24 CM) FLAME CONTROL - 12 MILS WFT UP TO 10" (25.4 CM) FLAME CONTROL - 12 MILS WFT

NON COMBUSTIBLE CONSTRUCTION (TYPES I-IV)

Enverge OnePass HFO meets or exceeds the IBC requirements for exterior walls in type I, II, III, IV and V construction. This includes NFPA 285 and NFPA 259 testing with Intertek Listings (GWL/FIP 30-02, GWL/FIP 30-01).

STORAGE AND SHELF LIFE

A COMPONENT - 12 MONTHS | B COMPONENT - 6 MONTHS

Store drums at 50°F to 70°F (10°C to 21°C) for optimal shelf life. Excessively high temperatures may reduce shelf life. Cold or very hot chemicals can cause pump cavitation and, therefore, incorrect metering.

MATERIAL TEMPERATURE

1. Storage recommendations for maximum shelf life:
- Temperature 50°F to 70°F (10°C to 21°C)
- Humidity <85% do not allow material to freeze.
2. Store material at 60°F to 80°F (15°C to 32°C)for 48 hours prior to application of the product.

SERVICE TEMPERATURES

Enverge OnePass HFO spray foam insulation is designed to be used in ambient temperatures from -40°F and 200°F (-40°C and 93°C). It is strongly recommended that test sprays be conducted before installation for use in extreme temperatures.

SAFETY AND HANDLING INFORMATION

It is critical to read and become familiar with the safety data sheets prior to working with Enverge OnePass HFO spray foam liquid components. During application, respiratory protection is required for the applicator, assistant, or bystanders. For more information consult safety data sheets, www.EnvergeSprayFoam.com or www.spraypolyurethane.org

THERMAL BARRIERS

Enverge OnePass HFO spray foam must be separated from the interior of the building (occupied space) by an approved 15 minute thermal barrier such as ½" inch gypsum board or other equivalent material. Consult local building codes for requirements and restrictions.

INDOOR AIR QUALITY

Enverge OnePass HFO is a low VOC emitting material in compliance with the California Department of Public Health (CDPH) standard 01350. This program demands strict certification criteria and considers safety factors to account for sensitive individuals (such as children and the elderly), and ensures that a product is acceptable for use in environments such as schools and healthcare facilities. It is referenced by both the Collaborative for High Performance Schools (CHPS) and the Leadership in Energy and Environmental Design (LEED) Building Rating System.

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AIR BARRIER PERFORMANCE

Enverge OnePass HFO is an air impermeable insulation and an air barrier material based on testing in accordance with ASTM E2178 at 1" (25.4 mm) depth or more and has passed air barrier assembly testing in accordance with ASTM E2357 and has been evaluated by the Air Barrier Association of America in accordance with ABAA D-115-010.

SURFACE BURNING CHARACTERISTICS

Enverge OnePass HFO meets Class A (Class 1) requirements when tested in accordance with ASTM E84 (UL 723) as defined in NFPA 101 and Section 803 of the International Building Code (2009, 2012, 2015).

Flame Spread Index <25
Smoke Developed Index <450

1 Sample tested at 4" (10.2 cm) thickness. May be installed at unlimited thicknesses when covered with 0.5" (12.7 mm) gypsum board.

VAPOR RETARDER

Enverge OnePass HFO meets the requirement of one perm or less for a Class II vapor retarder per the International Code Council and ASHRAE when installed at 1-5/8" (41.3 mm) in depth. However, the minimum installed thickness recommended by Enverge is 2" (5.08 mm) in depth.

LEED® INFORMATION

VOC Compliance:	Low emitting insulation by CA Section 01350	
Pre Consumer:	Recycled Content:	1.2%
Post Consumer:	Recycled Content:	5.3%
Rapidly Renewable Content:	5.7%	
Manufacturing Location:	Waukesha, WI	

Qualifies for LEED® Credit 1, Credit 2, Credit 4.1, Credit 4.2, Credit 5.2, and Credit 7

NOTE: LEED® is a registered trademark of the U.S. Green Building Council

IAPMO QCC CLIENT ™

air barrier association of america abaa EVALUATED

UL CERTIFIED

Seal and Insulate with ENERGY STAR
LEARN MORE AT energystar.gov
Insulation saves energy when installed according to ENERGY STAR guidelines.

The descriptions, data, designs and information contained herein are presented in good faith and believed to be accurate. This information is provided for guidance ONLY. Many factors will affect the processing or application of Enverge products, it is necessary that you make tests to determine ultimate suitability for Enverge products for your particular application. No warranties of any kind, either expressed or implied, including warranties of merchantability or fitness for a particular purpose, are made regarding products described, data or designs presented. In no case shall the descriptions, information, data or designs provided be considered a part of our terms and conditions of sale. All information and technical assistance is given without warranty or guarantee and is subject to change without notice. You expressly agree to release Enverge from all liability in tort or contract based on the technical information provided. All such information is accepted at your own risk.