

DESCRIPTION

ECOTITE™ HFO is a medium-density closed cell insulation for use in residential, commercial, industrial and institutional structures, both new and retrofit. ECOTITE™ HFO creates a bond to almost every kind of construction material on market. It can be applied to walls, roof, rim joists, crawl space foundations and most difficult spaces.

TYPICAL APPLICATIONS

- Residential, commercial, industrial and institutional building insulation.
- Interior perimeter stud wall insulation.
- Exterior, below grade and under slab applications.
- Freezers & Coolers.

KEY FEATURES

- Superior air and water vapor barrier at 2".
- Rigidity increases structural integrity.
- Helps increase performance, while reducing heating costs.
- Is dimensionally stable and will not shrink or expand
- May be used in interior, exterior, or subterranean applications.
- Safe for electrical wiring, can be applied over typical electrical wiring without affecting wire coverings.
- Safe for plumbing, can be applied over PVC (polyvinyl chloride), ABS (acrylonitrile butadiene styrene), PEX (cross-linked polyethylene), copper and steel piping systems.



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TYPICAL PHYSICAL PROPERTIES

(For components)

Mixing ratio by volume
 Viscosity at 77°F (25°C)
 Specific Gravity at 77°F (25°C)
 Shelf Life - Unopened Containers

COMPONENT A

1
 200 cps
 1.05
 12 months

COMPONENT B

1
 400 cps
 1.15
 6 months

(For cured material)

Core Density (lb/ft³ / kg/m³)
 Initial Thermal Resistance, per Inch
 Tensile Strength (psi / kpa)
 Compressive Strength (psi / kpa)
 Open-Cell Content (%)
 Fungi Resistance
 Air Permeation @ 75Pa
 Water Vapor Permeance 50 mm sample
 Water Absorption %
 Dimensional Stability % Volume Change after 28 days

TEST METHOD

ASTM D-1622
 ASTM C-518
 ASTM D-1623
 ASTM D-1621
 ASTM D-6226
 ASTM G-21
 ASTM E-2178
 ASTM E-96
 ASTM D-2842
 ASTM D-2126

RESULTS

2.18 ± 0.1 / 35 ± 1.5
 R-Value 7.1
 31.3 / 216
 26.5 / 183
 >5
 Pass
 0.004 L/s
 47 ng/Pa.s.m²
 0.7%
 -1 % @ -4°F (-20°C)
 2 % @ 176°F (80°C)
 6 % @ 158°F (70°C), 97 % RH

REACTIVITY PROFILE

CREAM TIME

0-1 seconds

GEL TIME

2-3 seconds

RISE TIME

4-5 seconds

PROCESS SPECIFICATIONS

The system settings required to achieve quality spray foam application will vary depending on environmental and substrate conditions. The following recommended parameters will help ensure optimum foam quality. DO NOT MIX OR RECIRCULATE.

Equipment pre-heater temperature

Component A

95°F – 112°F

35 – 44°C

Component B

95°F – 112°F

35 – 44°C

Hose temperature

95°F – 112°F

35 – 44°C

Spray pressure

900 – 1500 PSI

62 – 103 BAR

APPLICATION INSTRUCTIONS

Designed for an application rate of ½ inch (13 mm) minimum to 2 inches (50 mm) maximum. Once installed and material has cooled, it is possible to add additional applications in order to increase the overall installed thickness of SPF. Before spraying another pass, please give a cooling time of at least 30 minutes between passes for dissipation of heat after spraying a pass. The risk of spontaneous combustion and poor over spraying quality would arise if not adequate cooling time allowed. It is critical that materials are stored at recommended temperatures before and during application to allow for proper proportioning of materials.

SAFETY PRECAUTIONS

Direct contact with ECOTITE™ HFO leads to eye and skin irritation. Repeated inhalation of volatile gas will cause respiratory allergy-sseek immediate medical treatment. Always wear protective equipment when handling product gloves, protective goggles, protective clothing. If exposed to eyes: immediately rinse with water for at least 15 minutes. If exposed to skin: wash with soapy water. If swallowed: SEEK EMERGENCY MEDICAL TREATMENT IMMEDIATELY!

STORAGE

ECOTITE™ HFO components should be stored in sealed containers at 65 – 85° F (18 – 29° C) in a dry area. Avoid exposure to freezing temperatures. Store on wooden pallets to avoid direct contact with the ground. Material in containers should be maintained at 65 – 85° F (18 – 29° C) while in use. Material temperature should be confirmed with a thermometer or an infrared gun.

SITE CONDITIONS

ECOTITE™ HFO Insulation is available in two seasonal grades. Recommended and acceptable substrate temperatures:

Summer Formula

50°F to 100°F (10°C to 38°C) Recommended
32° to 122°F (0° to 50°C) Acceptable Range

Winter Formula

5°F to 50°F (-15°C to 10°C) Recommended
0° to 79°F (-18° to 25°C) Acceptable Range

PACKAGING

A set of ECOTITE™ HFO consists of one (1) 55 gallon (208 Liter) drum of 'A' component and one (1) 55 gallon (208 Liter) drum of 'B' component. Net weight per set is 1090 pounds (494.5 kg).

PRECAUTIONS

Protect from exposure to moisture. Water will cause the "A" component (ISO) to generate carbon dioxide with resulting high pressure in closed containers.

SAFETY

Health Considerations - Consult the Safety Data Sheets. This chemical system requires the use of proper safety equipment and procedures. Please follow the product MSDS for detailed information and handling guidelines. In addition to reading and understanding the MSDS, all contractors and applicators must use appropriate respiratory, skin and eye Personal Protective Equipment (PPE) when handling and processing polyurethane chemical systems. Consistent use of personal proper protective equipment to prevent exposure during spraying and within the 24 hour-period after spraying is completed is critical to eliminating the health hazard. As with all SPF systems, improper application techniques such as: excessive thickness of SPF, spraying into or under rising SPF and off-ratio material, potential results of improperly installed SPF include: dangerously high reaction temperatures that may result in fire and offensive odors that may or may not dissipate. Improperly installed SPF must be removed and replaced with properly installed materials. Large masses of ECOTITE™ HFO should be removed to an outside safe area cut into smaller pieces and allowed to cool before discarding into any trash receptacle. AIR INTAKE UNITS SHOULD BE SHUT DOWN AND VENTS SEALED DURING POLYURETHANE SPRAY APPLICATIONS.

WARRANTY

When installed properly in accordance with instructions, Pinnacle West Enterprises Inc. warrants that the properties of the product meet product specifications as outlined in this technical data sheet. Save and except any exclusions referenced in the warranty.

The information and recommendations in this publication are, to the best of our knowledge, reliable. Suggestions made concerning the products and their uses, applications, storage and handling are only the opinion of Pinnacle West Enterprises Inc. Users should conduct their own tests to determine the suitability of these products for their own particular purposes and of the storage and handling methods herein suggested. The toxicity and risk characteristics of products distributed by Pinnacle West Enterprises Inc. will necessarily differ from the toxicity and risk characteristics developed when such products are used with other materials during a manufacturing process. The resulting risk characteristics should be determined and made known to ultimate end-users and processors.