PINNACLE WEST INC

ECOTITE 3.0

3 LB. CLOSED CELL FOAM

DESCRIPTION

ECOTITE 3.0 is an HFC-blown, Zero Ozone-Depleting (Zero-ODP), closed-cell spray polyurethane foam system. This system improves energy efficiency and offers both a low life-cycle cost and environmental impact with almost no maintenance. ECOTITE 3.0 is part of a technically advanced SPF system intended for use by qualified contractors trained in the processing and application of SPF roofing systems as well as the plural-component polyurethane dispensing equipment.

TYPICAL APPLICATIONS

- Insulation foam for roofing.
- Residential, commercial and industrial building insulation.
- Tank and pipline insulation.
- Spray Foam under a basement slab providing both a thermal and vapor barrier from the cold moist ground.

KEY FEATURES

- Extremely lightweight.
- Improves energy efficiency and offers both a low life cycle cost and environmental impact.
- Seamless, fully-adhering and self-flashing.
- Outstanding insulation characteristics elminates air infiltration.
- Covers complex geometrical shapes and protrusions.
- Covers materials such as glass, concrete, metal, old mortar, brick and Built Up Roof (BUR) composites.
- Applies directly to properly prepared existing substrates in new and retrofit applications.

ECOTITE 3.0 Roofing Application

ECOTITE 3.0 With Silicone Top Coat

ECOTITE 3.0 Roofing Application

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TYPICAL PHYSICAL PROPERTIES

(For components)	COMPONENT A	COMPONENT B
Specific Gravity (grams/cc)	1.23	1.18
Viscosity @ 70° F (21° C), cps	500	700 – 800
Mixing ratio by volume	1	1
Shelf Life - Unopened Containers	6 months	6 months

(For cured material)	TEST METHOD	RESULTS
Density (lb/ft^3 / kg/m^3)	ASTM D-1622	3.0 ± 0.2 / 48 ± 3
Tensile Strength (psi)	ASTM D-1623	60 – 80
Sheer Strength (psi)	ASTM C-273	>20
Compressive Strength (psi)	ASTM D-1621	50 – 65
Closed-Cell Content (%)	ASTM D-2856	>90
Initial K-Factor (Btu in/ft^2 hr °F)	ASTM C-518	0.146
R-value (per inch)	ASTM C-518	6.3
Permeance (perms/inch)	ASTM E-96	1.4
Air Leakage (L/s/m^2)	ASTM E-283	0.002
Dimensional Stability (% volume change)	ASTM D-2126	<14
Wind Uplift (plywood deck psf)	TAS 114-95J	-165
Wind Uplift (steel deck psf)	TAS 114-95D	-1005
Noise Absorption (coefficient)	ASTM C-423	0.20
Sound Transmission Class (STC)	ASTM E-90	34

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	120 – 140°F	49 – 60°C
Component B	120 – 140°F	49 – 60°C
Hose temperature	120 – 140°F	49 – 60°C
Spray pressure	1000 – 1400 PSI	69 – 97 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. It is critical that materials are stored at recommended temperatures before and during application to allow for proper proportioning of materials.

NOT RECOMMENDED FOR

ECOTITE 3.0 is NOT designed for use as an INTERIOR insulation system. ECOTITE 3.0 is neither tested nor represented as suitable for medical or pharmaceutical uses. ECOTITE 3.0 insulation is combustible. High-intensity heat sources such as welding or cutting torches must not be used in contact with or in close proximity to ECOTITE 3.0 or any polyurethane foam.

STORAGE

ECOTITE 3.0 components should be stored in sealed containers at 65 – 85º F (18 – 29º 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 – 85º F (18 – 29º C) while in use. Material temperature should be confirmed with a thermometer or an infrared gun.

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PACKAGING

A set of ECOTITE 3.0 consists of one (1) 55 gallon (208 L) drum of 'A' component and one (1) 55 gallon (208 L) drum of 'B' component. Shipping weight per set is 1040 pounds (471.7 kg).

APPROVALS/COMPLIANCE

ASTM E-108 Class A/B Roof System.
UL Class A/B approval # R9303, Const. # 136,181,206.
UL Class II #R7332: California Fire Marshal Listing No. 040175-1321:100, City of Los Angeles RR-24072.
Miami- Dade County Product Control approved, California Bureau of Home Furnishings.

FIRE RATED ASSEMBLIES

Class A and B - UL Roofing Systems R9303.
Class A Combustible Deck - UL Roofing Systems R9303 Assembly #35.
2 Hour Class A - UL Design P904.
3 Hour Class A - UL Design P733 and P826.

PRECAUTIONS

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

TECHNICAL SUPPORT

We have a dedicated technical support team offering knowledgeable support for everything from preventative maintenance, equipment calibration and servicing through to coating and foam application advice. If you have any questions regarding the use of this product please call us toll free at 1-800-901-0088 or email us info@pinnaclewest.net.

ON-SITE TRAINING

Our on-site training programs provide the necessary equipment and application training, including the health and safety aspects, needed to apply a wide variety of products. The goal of our programs are to give the skills required to be a professional and productive installer.

SAFETY PRECAUTIONS

Health Considerations - Consult the Material 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. Personnel should review the following documents published by Spray Polyurethane Foam Alliance (SPFA): (1) AY-104 Spray Polyurethane Foam Systems for New and Remedial Roofing and (2) AX-171 Course 101-R Chapter 1: Health, Safety and Environmental Aspects of Spray Polyurethane Foam and Coverings. Additionally, following document available from the Center for the Polyurethanes Industry (CPI): Model Respiratory Protection Program for Compliance with the Occupational Safety and Health Administration's Respiratory Protection Program Standard 29 C.F.R. §1910.134. 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 3.0 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.

For Your Protection - 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. Because of numerous factors affecting results, Pinnacle West Enterprises Inc. makes no warranty of any kind, express or implied, other than that the material conforms to its applicable current Standard Specifications. Pinnacle West Enterprises Inc. hereby disclaims any and all other warranties, including but not limited to those of merchantability or fitness for a particular purpose. No statements made herein may be construed as a representation or warranty. The liability of Pinnacle West Enterprises Inc. for any claims arising from or sounding in breach of warranty, negligence, strict liability, or otherwise shall be limited to the purchase price of the material.

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