

ANDEK FIREGARD™

Fire Resistant Waterproofing Coating



DESCRIPTION

ANDEK FIREGARD is a liquid applied, single component coating that contains highly effective fire retardants to reduce flame spread in the event of fire. It is listed by the Asbestos Information Center and the United States Government as a suitable sealant for encapsulation of low density asbestos lagging and asbestos insulation. ANDEK FIREGARD is also approved by many United States' state Departments of Transportation for fire and waterproofing protection of wood structures. ANDEK FIREGARD has been incorporated into the United States Navy as the specified material for thermal barrier protection of millboard and insulation. Available in white and other standard or custom colors, ANDEK FIREGARD may be used as a waterproof, fire resistant coating, as well as an ignition barrier and thermal barrier over all types of insulation and other combustible substrates. ANDEK FIREGARD has been in constant use for over 30 years, protecting chimneys, ducts, pipes, tanks, wooden structures, building components, boilers, freezers, factories and storage facilities in all types of climates. Manufactured in New Jersey and Pennsylvania, USA, it contains 95% United States sourced raw materials.

HISTORY

ANDEK FIREGARD was originally manufactured in the 1970's under the name POLAROOFF

FIREGARD, where it was used to protect chimney installations. A progression from roofing applications to many types of construction installations has led to the use of ANDEK FIREGARD in many demanding situations from covered bridges to attics and crawl spaces.

Originally designed for exterior surface protection, ANDEK FIREGARD has increasingly been used for protection of interior surfaces and insulation, including polyurethane foam (PUF). Furthermore ANDEK FIREGARD protects both indoor and outdoor PUF insulated tanks that need to be protected from wet penetration by chemicals and process fluids as well as fire. Walk-in freezers and coolers used for storage of food products in humidity and temperature controlled environments also provided a challenge met by ANDEK FIREGARD, which successfully provides protection to the foam surfaces of the walls and ceilings. Over the many years that ANDEK FIREGARD has been in service, every square foot installed on a building or structure that currently exists is still functioning as originally intended.

CHEMISTRY

ANDEK FIREGARD is designed as a waterproof coating using PVC/PVDC/ethylene terpolymer resins coupled with a hydrophobic mineral to form a fire resistant, water repellent composite. Its fire resistant thermal and

ignition barrier properties are achieved using complex interactions between insoluble, inorganic, and organic components that produce endothermic reactions (lowering surface temperature) and inert gas-filled char layers to deny access of oxygen to the substrate. This protects against flame spread by distancing the surface from the auto-ignition temperature. Also, since combustion is the act of a substance combining with oxygen, the prevention of fire spread is also achieved. Smoke suppressants are also incorporated so that, in a fire situation, visibility is maintained for a safe exit. Finally, for long term protection, a strong mixture of biocides and fungicides are incorporated to prevent mold, fungus and bacteria from reducing the lifetime and effectiveness of ANDEK FIREGARD.

OUTSTANDING FEATURES

- √ Can be used over all insulation types including polyurethane foam (PUF), mineral composites, wood, and other surfaces.
- √ Produces a fully adhered, fire resistant thermal and ignition barrier.
- √ Fluid-applied seamless coating that provides waterproof fire protection.
- √ Protects substrate against fire, corrosion, UV damage, and acid rain, and will resist mold and fungus.

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- √ Extremely low smoke emission.
- √ Easy to apply directly out of the container by brush, roller or airless sprayer without runs, drips and splash back.
- √ Produces no unpleasant odors during or after application.
- √ May be used on vertical, pitched and horizontal surfaces.
- √ Remains flexible, tough and waterproof at low temperatures and will not flow at high temperatures.
- √ Water-based formula means quick and easy cleanup of tools and equipment.
- √ Sets quickly and begins to cure immediately after application.
- √ Single component formula means no measuring or mixing of separate components or the need for special equipment.
- √ Available in 24 standard colors. Custom colors are also available.
- √ Attractive, low-sheen finish is easily cleaned.

APPLICATION

All surfaces to be coated must be clean, dry and free of loose particles, oils, grease or any substance that could interfere with proper bond. A careful inspection of the surface should be made to detect any signs of

damage or defects, and all repairs should be completed before application begins. Application to all types of polyurethane foam may be accomplished without use of a primer. Most non-porous, non-metallic surfaces will not need to be primed. Metals should be primed with POLAPRIME 21. Porous surfaces should be primed with POLAPRIME 2. Once preparation is completed and the primer is thoroughly dry, ANDEK FIREGARD may be applied.

ANDEK FIREGARD may be applied using brush, roller or airless spray technique. The Graco Ultra Max II 795, Graco GH733, and Graco GH833 airless sprayers are used for high volume, large size applications. Smaller units from other manufacturers may be used provided they can achieve a minimum of 2,000 PSI at the tip. 3/8" diameter hose is ideal. Tip sizes mostly used are 21 to 29.

The coverage rate for an ignition barrier in crawl spaces is 135 sq. ft. per gallon; the coverage rate for a 30 minute flame spread (index 5) and ignition barrier in attics is 100 sq. ft. per gallon; the coverage rate for a 15 minute thermal barrier (UBC 26-2) is 73 sq. ft. per gallon. Tools may be cleaned using water while the product is still wet. If the material has dried, a suitable cleaning solvent may be used.

Do not apply to frozen or saturated surfaces. Protect product from freezing until fully cured. Any exterior application should not commence or proceed when precipitation is forecast within 4 hours. Store container away from direct sunlight and do not allow to freeze. Stored correctly in factory sealed containers, the shelf life is two years from date of manufacture.

PRECAUTIONS

During handling of this product, it is recommended that normal safety equipment, such as rubber gloves and chemical splash goggles, be worn. Do not ingest. In case of ingestion, induce vomiting and seek immediate medical attention. Avoid contact with skin and eyes. In case of contact, flush with clear water for at least 15 minutes. In case of contact with eyes, seek immediate medical attention in addition to flushing.

Keep out of reach of children and pets.

For more information, contact Andek's Technical Services Department.

SPECIFICATIONS		<i>Thicknesses</i>		
		22 mil wet 14 mil dry	16 mil wet 10 mil dry	8 mil wet 5 mil dry
Cov- erage	Coverage Area sq ft/gal Coverage Area sq ft/5 gal	73 365	100 500	200 1000
Fire Resistance	Ignition Barrier—30 min Ignition Barrier—15 min Flame Spread—30 min Index 5 Flame Spread—15 min Thermal Barrier—15 min Smoke Emission (visibility)	Yes Yes Yes Yes Yes <100	Yes Yes Yes Yes - <100	- Yes - Yes - <100
Certificates Received/ Tests Passed	N.V.S.E.S. - Heat and Fire Resistance NFPA 286 - IBC Code AATCC 127 - Water Resistance ASTM E 96 - Vapor Performance BS 476 - Fire Resistance UBC 26-2 Test-Thermal Barrier-Open Cell Foam UBC 26-2 Test-Thermal Barrier-Closed Cell Foam ASTM E-84 30 Minute Flame Spread Test ASTM E-84 30 Minute Smoke Emission Test	Yes Yes Yes Yes Yes Yes Yes - -	Yes Yes Yes Yes Yes - - Yes Yes	- - Yes Yes - - - - -
Water & Mold Resistance	Water Resistance -% absorption Mold Resistance -1.7x10(7) cfus/ml	<5% 0%	<5% 0%	<5% 0%
Other Qualifications	Warranty Duration Duration in the Market Waterproof and Vapor Barrier Properties Resistance to UV Damage, Acid Rain & Fungal Attack All Manufactured in USA Applicable over Polyurethane Foam Compatible with Most Paintable Construction Materials Single Component Seamless & Fully Adhered Rust and Corrosion Resistant Meets LEED Resquirements Applicable over Vertical, Pitched & Horizontal Surfaces Closed Cell Foam and Open Cell Foam Application Tough at low Temp and does not Flow at High Temp Resistant to Most Common Chemicals Recoatable and Repairable Interior and Exterior Use VOC Contents Odor After Application No Primer Required for Urethane Foam Elongation Solid Contents Tensile Strength Flash Point Shore 'A' Hardness Impact Resistance 4 mm indent Water Based & Easy to Clean Up Shipping Weight (5 gal) Shelf Life Colors Available Spray Equipment Tip Size	10 Years Exterior and Lifetime Interior 30 Years Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Yes Zero g/l None Yes 1000% @ 75°F - ASTM D-412 71% (B.W.); 60% (B.V.) 520 psi - ASTM D-412 Non-flammable 52 - ASTM D-2240 No cracking or loss of adhesion-BC 3900 Part E3 Yes 70 lb 2 Years 24 standard colors Graco 795 Airless Pump or Equivalent Equipment 21 to 29 Tip Size		

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TECHNICAL DATA		
Moisture Vapor Transmission	0.38 perms @ 10 mils dft	ASTM E-96
Tensile Strength	520 psi	ASTM D-412
Elongation	1000% @ 75°F	ASTM D-412
Solids	71% (B.W.); 60% (B.V.)	ASTM D-1044
Shore 'A' Hardness	52	ASTM D-2240
Thermal Barrier Properties	15 min.	UBC 26-2; ASTM E-119
External Flame Resistance		
-On Class 4 on PUF	Ext. SAA (Class 1)	BS 476 Part 3
-On Asbestos Sheet	Ext. SAA (Class 1)	BS 476 Part 3
-On Polystyrene Foam	Class 0	BS 476 Part 6
-On Class 4 Polyurethane Foam	Class 1	BS 476 Part 7
-On Asbestos	Class 1	BS 476 Part 7
Interior Flame Spread	Index 5	ASTM E-84
Smoke Developed	Index 30	ASTM E-84
Chemical Resistance	Resists most common chemicals	
Mold Resistance	Zero growth @ 1.7 x 10(7) cfus/ml	AC5168

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