TECHNICAL BULLETIN

EPMAR

Epoxy & Polyurethane Manufacturing and Research

TECHNICAL BULLETIN

Oxy-Shield

Potable Water & Show Aquaria Coating

Description

Oxy-Shield, commonly known as Sta-Crete 1500/18R Flex, is a surface tolerant, abrasion resistant aliphatic amine cured epoxy coating that offers 0-VOC, has excellent adhesion, resistant to the fats on sea mammals, approved and listed under UL ANSI/NSF Standard 61 for potable water, is available in highly decorative colors, and cures to a resilient porcelain-type gloss film. Oxy-Shield is self-priming on most surfaces subject to listed immersion service conditions. Oxy-Shield has over 35-years successful case history file in fresh, chlorinated and salt-water immersion service. Oxy-Shield is also specified as a resistant lining for interior food processing and wine processing tanks.

Applications

Oxy-Shield is applied to properly prepared concrete, fiberglass, and steel surfaces subject to continuous abrasion service, chlorine water immersion, salt water immersion, secondary ozone treatment water immersion, chloramine treated water, and many other immersion service chemicals associated with potable water treatment facilities, tanks, pipes, pumps, valves, theme park aquariums, fountains, and water slides. Oxy-Shield produces a very resilient lining which cures rapidly for minimum down time and is applied by brush, roller and spray applications.

Performance

VOC	0 g/l
Tensile Strength	4,200 psi
Adhesion	Excellent. psi ASTM D-4541 (Concrete failure)
Chemical Resistance	Immersion in Show Aquaria & Water Park Chlorinated Water, Salt Water & Diluted Treatment Chemicals.
Tensile Elongation	28.0%
Coefficient Linear Expansion	41°F - 67°F = 4.8×10^{-5} in/in°F. 67°F - 140°F = 1.6×10^{-4} in/in°F.
Hardness Shore D	80

Physical Characteristics

Volume Solids	100%
Packaging	1ˢ, 5ˢ (premeasured kits)
Flash Point	>200°F.
Temp. Resistance	180°F (Wet), 250°F (Dry)
Gloss	High Gloss
Mix Ratio	2.2:1 (A:B) by volume.
Dry Time	@50°F. 30% RH - Recoat Min. in 6 hours, Max in 48 hours @70°F. 50% RH - Recoat Min. in 4 hours, Max in 24 hours @90°F. 50% RH - Recoat Min. in 2 hours, Max in 12 hours Full cure in 3 days - immerson (70°F. average temperature)
Film Thickness	6-8 mils/coat, 12-16 mils total DFT.
Coverage	100-125 ft²/gal/coat
Thinning	None Required. Acetone or PCBTF for clean up.
Primers	Self priming
Colors	Blue and White
Pot Life	20 minutes at 70°F, 50% RH

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Surface Preparation

Concrete –

All visible oil, grease, sludge, and any other contaminants shall be removed prior to any abrasive surface preparation and water washing. Surface shall be cured, dry and free from alkali stain and laitance. Prepare surfaces in accordance with SSPC-SP7 Brush-Off Blast Cleaning, Blas-Trac or other approved mechanical method to achieve a 60-80 grit profile for long term adhesion and non-slip surface on floors.

Metals –

All visible oil, grease, sludge, and any other contaminants shall be removed prior to any abrasive surface preparation. Prepare carbon steel in accordance with SSPC-SP10 and achieve 3-4 mil surface profile. Small surfaces may be prepared in accordance with SSPC-SP2 and SSPC-SP3 followed by SSPC-SP1.

Application Methods

Mixing (Brush and Roll Applications) –

Mix base component until a homogeneous mixture is obtained. Next, pour activator into base component and mix using mechanical jiffy mixer for 2-3 minutes. Make sure all material is thoroughly mixed. Pouring mixed material into a clean container and re-mixing insures complete reaction of 100% solids epoxy.

Brush –

Use top-quality china bristle brush for best film properties.

Roller –

Lambswool or similar cover with phenolic core, ¼ - ½ inch nap thickness.

Spray –

Airless Spray – Use Graco “Xtreme Mix” 68:1 equipment or equal designed for plural-component, high-pressure spray application. High-pressure equipment shall have the capability to apply product to a maximum 7500 psi from the proportioner to meet job conditions. Recirculating system and solvent purge equipment is necessary to keep material maintained and spray equipment cleaned during application delays and/or periods when exceeding product pot life. Use Graco “Xtrm” spray gun utilizing .027-.029 spray tips to control material application thickness.

Environment –

Apply between 50°F. – 100°F. and 5°F. above dew point.

Contact EPMAR for any additional application information.

Warranty

The following warranty is made in lieu of all other warranties, either expressed or implied. This product is manufactured of selected raw materials by skilled technicians. Neither seller nor manufacturer has any knowledge or control concerning the purchaser’s use of this product and no warranty is made as to the results of any use. The only obligation of either seller or manufacturer shall be to replace any quantity of this product, which is proved to be defective. Any claim of defective product must be received in writing within one (1) year from date of shipment. Neither seller nor manufacturer assumes any liability for injury, loss, or damage resulting from use of this product.

Service is part of our formula

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