

ARCHCO™ 436 EPOXY

Epoxy Coating for Internal Pipe Lining

Description

Archco™ 436 Epoxy is a multi-purpose, surface tolerant, two-part, epoxy coating system designed for internal pipe coatings. Archco™ 436 is available as a single leg (88% solids) or plural component (100% solids) spray system. The single leg version is suitable for in-situ pipe lining.

Uses

Corrosion protection for internal steel and steel pipes in a variety of industries. The lining will protect piping against seawater, wastewater, and any other water piping offering chemical, fuel, and solvent resistance up to 160°F (65°C).

Features

- Excellent adhesion
- Cathodic disbondment resistance
- Excellent flexibility
- Excellent abrasion and impact resistance
- Suitable for salt and fresh water immersion
- Good adhesion to damp surfaces and tight rust
- Surface tolerant

Application

All contaminants shall be removed from the steel surface to be coated. Oil and grease should be removed in accordance to SSPC-SP-1. Surfaces shall be free from projections. Sharp edges, high points and fillets must be ground smooth including all corners. Prepare surfaces by grit blasting to a clean, near-white finish, per SSOC-SO 10, NACE No. 2 or Sa 2-1/2. Appropriate angular grit shall be used to achieve a 3-5 mil (76 - 127 microns) anchor profile. Remove grit prior to coating. In-situ pipe lining normally uses a 1.5 mil (38 microns) anchor profile due to the small application thickness.

To spray the 100% solids version of Archco™ 436 Epoxy, a plural-component, airless spray unit with a proportioning pump capable of a volume mixing ratio of 1:1 shall be used. Standard ancillary equipment should include minimum 10 gallon (38 L) hoppers, 2 each static mixers, 25 ft. max. ¼" (7.6 m x 6.3 mm) whip hose, and mastic gun with a 23 to 31 thou tip. Part A should be heated to 80°F - 100°F (26°C - 38°C) and Part B should be heated to 90°F - 110°F (32°C - 43°C). Hose bundle shall be set at 90°F - 110°F (32°C - 43°C). A single-leg, airless spray unit shall be used with the 88% solids version (unless using for in-situ pipe lining). The unit shall have a minimum of 68:1 airless pump. When using the airless unit, the Archco™ 436 should not be thinned more than 5% with Archco™ 400E Thinner (1.4 kg per 19 L kit).

A wet-on-wet spray technique should be used to achieve a thickness of 10 - 30 mils (254 - 762 microns) DFT. In-situ pipe lining normally applies 3 - 4 mils (76 - 102 microns) DFT per pass for a final thickness of 10 - 12 mil (254 - 305 microns) DFT. The coating thickness should be measured using a wet-film thickness gauge. Holiday testing shall be performed to ensure a pinhole free lining. The equipment settings are only guidelines and may vary based on equipment and specific application.



Archco™ 436 Epoxy

TECHNICAL DATA

PROPERTIES	VALUE	VALUE
Solids Content, by volume	100%	88%
Base Component — unmixed @ 77°F (25°C)		
Specific Gravity	1.5	1.3
Viscosity	6,000 cP	2,000 cP
Colour	Gray	Black
Hardener — unmixed @ 77°F (25°C)		
Specific Gravity	1.6	1.7
Viscosity	30,000 cP	46,000 cP
Colour	White	Red
Mixed Material — mixed @ 77°F (25°C)		
Specific Gravity	1.6	1.5
Viscosity	18,000 cP	24,000 cP
Colour	Off-white	Red
Mixing Ratio (A/B) by Volume	1:1	1:1
by Weight	0.9:1	0.8:1
Cure Times		
Pot Life @ 77°F (25°C)	90 minutes	240 minutes
Pot Life @ 97°F (36°C)	40 minutes	150 minutes
Time to Dry @ 35°F (2°C)	24 - 36 hours	24 - 36 hours
Time to Dry @ 50°F (10°C)	12 - 16 hours	16 - 20 hours
Time to Dry @ 77°F (25°C)	4 - 6 hours	6 - 8 hours
Cure for Immersion (crude oil) @ 77°F (25°C)	8 hours	10 hours
Theoretical Coverage	(2.0m ² /0.50mm/liter)	(1.7m ² /0.50mm/liter)
Thickness per coat	10-30 mils (254 - 762 microns)	10-30 mils (254 - 762 microns)
Holiday Detection – based on min. mil.	125 V/mil (4,920 V/mm)	125 V/mil (4,920 V/mm)
Hardness (ASTM D2240-02)	Shore D 80	Shore D 80
Adhesion to Steel	3,200 psi (22 MPa)	3,200 psi (22 MPa)
Application Temperature	40 - 100°F (4 - 36°C)	40 - 100°F (4 - 36°C)
Service Temperature	0 - 150°F (-18 - 65°C)	0 - 150°F (-18 - 65°C)

STORAGE: Minimum 24 months when stored in original containers @ 40°F (4°C) to 105°F (41°C). On job site where temperatures are below 50°F (10°C) product should be kept warm to allow for easy transfer into storage hoppers for warming to proper spraying temperatures.

CLEANING: Clean equipment with MEK or equivalent solvent cleaner, such as Archco™ 400E Thinner.

HEALTH AND SAFETY: Wear protective clothing and ensure adequate ventilation. Avoid contact with skin and eyes. See material safety data sheet for further information.

PACKAGING: 1 Gallon (3.8 L), 2 gallon (7.6 L), and 5 gallon (19 L) kits. Other sizes available upon request.



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