

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. x 1/4" (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 (3 lbs /1.4 kg per 5 gal /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
Color	Gray	Black
Hardener — unmixed @ 77°F (25°C)		
Specific Gravity	1.6	1.7
Viscosity	30,000 cP	46,000 cP
Color	White	Red
Mixed Material — mixed @ 77°F (25°C)		
Specific Gravity	1.6	1.5
Viscosity	18,000 cP	24,000 cP
Color	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		
	80 ft ² /20 mls/gallon (2.0m ² /0.50mm/liter)	70 ft ² /20 mls/gallon (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.		
	100 V/mil (3,936 V/mm)	100 V/mil (3,936 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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