

ARCHCO™ 420 EPOXY

Low Permeability, MIC Resistance & Acid-Resistant Protective Lining

Description

Archco™ 420 is a two-part, high solids, modified epoxy lining provide ultra-low permeability. It has excellent resistance to microbial-induced corrosion (MIC) and acids. Archco™ 420 is suitable for application via single-leg or plural spray equipment.

Uses

Archco™ 420 provides a protective lining for storage tanks and pipelines with ultra-low permeability. The coating will provide excellent protection against MIC and acidic environments. It is also resistant to hydrocarbons where MIC is found.

Features

- Ultra-low permeability/transmission
- Excellent resistance to MIC
- Resistant to hydrocarbons
- Excellent acid resistance
- Long working life
- Good cure response

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 SSPC-SP 10, NACE No. 2 or Sa 2-1/2. Appropriate angular grit shall be used to achieve a 3-5 mil (76 to 127 microns) anchor profile. Remove grit prior to coating.

To spray Archco™ 420 in a plural-component system, an airless spray unit with a proportioning pump capable of a volume mixing ratio of 4:1 shall be used. Standard ancillary equipment should include minimum 10 gallon (38 L) hoppers, 2 each static mixers, 25 ft. (7.6 m) max ¼" (6.35 mm), and mastic gun with a 19 to 25 thou (0.48 - 0.63 mm) tip. A minimum of 2800 psi (19 MPa) fluid pressure at the tip is required for proper atomisation. Part A should be heated to 80°F-100°F (27°C-38°C) and Part B should be heated to 80°F-100°F (27°- 38°C). Hose bundle shall be set at 80°F-100°F (27°C-38°C). A single-leg, airless spray unit may also be used. The unit shall have a minimum of 45:1 airless pump. When using the airless unit, the Archco™ 420 should not be thinned more than 5% with Archco™ 400E Thinner (3 lbs /1.4 kg per 5 gal /19 L kit). Material shall be between 70°F and 90°F (21°C-32°C).

A wet-on-wet spray technique should be used to achieve a thickness of 12-15 mils (305 - 381 microns) WFT. The coating thickness should be measured using a wet-film thickness gauge. The equipment settings are only guidelines and may vary based on equipment and specific application.



Archco™ 420 Epoxy

TECHNICAL DATA

PROPERTIES	VALUE
Solids Content	79%
Base Component — unmixed @ 77°F (25°C)	
Specific Gravity	1.7
Viscosity	30,000 cP
Colour	Light Blue
Hardener — unmixed @ 77°F (25°C)	
Specific Gravity	1.5
Viscosity	1,000 cP
Colour	Amber
Mixed Material — mixed @ 77°F (25°C)	
Specific Gravity	1.6
Viscosity	10,000 cP
Colour	Light Blue
Mixing Ratio (A/B) by Volume	1:1
by Weight	1.2:1
Cure Times	
Pot Life @ 77°F (25°C)	240 minutes
Pot Life @ 97°F (36°C)	100 minutes
Time to Dry @ 35°F (2°C)	10-12 hours
Time to Dry @ 50°F (10°C)	3-5 hours
Time to Dry @ 77°F (25°C)	3-4 hours
Recoat Window @ 77°F (25°C)	Overnight
Theoretical Coverage	80 ft ² /15 mils/gallon (2.1 m ² /381 microns/Liter)
Thickness per coat	8-12 mils DFT (203-305 microns)
Holiday Detection – based on min. thickness	125 volts/mil (4920 volts/mm)
Hardness (ASTM D2240-02)	Shore D 80
Adhesion to Steel	2,200 psi (15.2 MPa)
Application Temperature	20°F-100°F (-7°C-36°C)
Application Temperature – Metal	60°F-100°F (15°C-38°C)
Application Temperature – Material	70°F-90°F (21°C-32°C)
Service Temperature	0°F-200°F (-18°C-93°C)

STORAGE: Minimum 24 months when stored in original container @ 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 isopropyl alcohol, butanol, or equivalent solvent cleaner.

HEALTH AND SAFETY: Wear protective clothing and ensure adequate ventilation. Avoid contact with skin and eyes. See Safety Data Sheet for further information.

PACKAGING: 5 Gallon (19 liters) and 10 gallon (38 liters) kits. Other sizes available upon request.



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