

ARCHCO™ 423D

Vinyl Ester Glass Flake Coating - Medium Temperature

Description

Archco™ 423D is a vinyl ester two-part high solids reinforced with 0.4 mm glass flakes that offer outstanding resistance to corrosion and abrasion. It is resistant to corrosive acids, alkalis, salts and a range of oxidizing chemicals.

Uses

Archco™ 423D is used widely in the water treatment industry for linings to cooling water wedge and butterfly valves, filtration vessels, and applications involving effluent streams and treatment areas. It is used extensively in the marine industry for lining storage vessels and is also used for lining road tankers and other plant which is subject to flexural movement.

Features

- Excellent corrosion resistance
- Fast dry and set times
- Medium temperature tolerance
- High abrasion resistance
- Excellent undercutting resistance
- Very low water permeability
- Excellent water/seawater resistance
- Good flexibility
- Excellent cathodic disbondment results
- High build up to 508 microns (20 mils) in one coat

Application

Applied to suitably prepared and primed steel substrates (Refer to Archco™ PD2 Primer Product Data Sheet).

The flake filled material should be applied by brush or airless spray in two or more coats, each coat being 375 to 500 microns thick. The first or intermediate coating should be slightly pigmented to provide a colour contrast and regular checks should be carried out with a wet film gauge to ensure uniform application of each coat.

Plate edge, corners and weld margins should be stripe coated by brush or roller prior to application of the first coat and again before application of the finish coat. This will help to ensure adequate coverage of these areas.

The uncatalysed material must be mixed thoroughly using a mechanical whip. The material should then be catalysed according to quantity and ambient conditions (see Doc. Ref 32A/C3). As a general rule, use 1 to 2% catalyst when applying at temperatures between 10°C and 20°C. Use all mixed material immediately. Use of less than 1% catalyst will not produce a full cure of the coating material. If Archco™ Waxed Topcoat is to be used (recommended), it should be applied by brush or roller to a wet film thickness of 50-75 microns after mixing with Archco™ C3 Catalyst. Inadequate mixing will lead to areas of unsatisfactory cure. Dry film thickness should be measured with a calibrated caliper. The lining should be examined for holidays using a holiday detector. A coating test voltage of 4000 V/mm should be used. A Barcol hardness of 30-40 is acceptable to indicate full cure.

When applying by airless spray, refer to the equipment manufacturer's operating procedures. In addition remove pump filter, surge filter, surge and in line filters.



Archco™ 423D

TECHNICAL DATA

PROPERTIES	VALUE
Colour	Off-White
Application Method	Brush or Airless Spray
Catalyst	Archco™ C3 Catalyst
Surface Preparation	Grit blast to SA2½ min.
Anchor Profile 423D System	2-3 mil (50-75 microns)
Primer	Archco™ PD2 Primer (DFT 25-50 microns)
Solids Content	98 - 99%
Specific Gravity	1.2
Dry Film Thickness Per Coat	17 - 20 mils (375 -500 microns)
Theoretical Spreading Rate	1.2 kg/m ² /1 mm DFT
Practical Spreading Rate	2.0 kg/m ² /1 mm DFT
Overcoating Times	Min. 6 h, Max. 7 days
Tool Cleaning Solvent	Archco™ T2 Cleaner
Relative Humidity During Cure	90% Rh
Min. Substrate Temperature	10°C
Min. Dewpoint/Substrate Differential	Dewpoint + 3°C
Preferred Equipment	Graco King 63:1, Airless Spray Unit
Airless Spray Tip Size	0.025"-0.31" (625-775 micron)
Pressure at Tip	2500-3500 psi (175-245 kg/cm ²)
Pot Life	40 - 60 mins
Typical Curing Characteristics at 15°C (approx.)	Touch Dry: 3.5 h, Full Cure: 2-7 Days
Dilution	Not Applicable
Flash Point	31°C
Abrasion Resistance (ASTM D4060)	0.035 gm (smooth)
Adhesion Properties (ASTM D952)	8 MPa
Salt Water Resistance (ASTM B 1117-57T)	20,000 h. No Effect.
Cathodic Disbondment (BS 3900F11)	Compatible
Tensile Strength (ASTM D638)	3975 psi (280 kg/cm ²)
Flexural Strength (ASTM D790)	9425 psi (660 kg/cm ²)
Operating Temperatures	-20°C to 85°C (Immersed) - Refer to Archco™ Chemical Resistance Guide

Estimated Coverages	Theoretical Requirement	Practical Requirement
Archco™ PD2 Primer	0.06 kg	0.15 kg
Resin Mix	1.20 kg	2.00 kg
Archco™ C3 Catalyst	0.02 kg	0.03 kg
Pigment	0.02 kg	0.02 kg
Archco™ T2 Cleaner	0.50 L	0.50 L

STORAGE/SHELF-LIFE: Minimum 6 months when stored in original containers @ 20°C. 1 year shelf-life when stored at 10°C.

CLEANING: Clean equipment with Archco™ T2 Cleaner within the pot life of Archco™ 423D. Take care to not contaminate coating material with Archco™ T2 Cleaner.

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



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