

ARCHCO™ 403D

Vinyl Ester Glass Flake Coating - High Temperature

Description

Archco™ 403D 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™ 403D is used widely in the water treatment industry for lining filtration vessels, ion exchange vessels and applications involving effluent streams and treatment areas. It is used extensively in the offshore oil industry for lining process vessels and is also used for lining stacks, ducts, fume scrubbers and fan cases in the power generation and chemical process industries.

Features

- Excellent corrosion resistance
- Fast dry and set times
- High temperature tolerance
- High abrasion resistance
- Excellent undercutting resistance
- Very low water permeability
- Excellent water/sea water resistance
- Excellent chemical resistance
- 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 each coat.

Plate edge, corners and weld margins should be stripe coated by brush 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™ 403D

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 403D System	2-3 mil (50-75 micron)
Primer	Archco™ PD2 Primer (DFT 25-50 micron)
Solids Content	98 - 99%
Specific Gravity	1.2
Dry Film Thickness Per Coat	375 - 508 micron
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
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 -100°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
Archco™ Wax Topcoat	0.15 kg	0.35 kg

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™ 403D. 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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