

## ARCHCO™ 403D

### Vinyl Ester Glass Flake Coating

#### Description

Archco™ 403D is a vinyl ester two-part high solids reinforced glass flake coating that offers outstanding resistance to corrosion and abrasion. It is resistant to corrosive acids, alkalis, salts and a range of oxidizing chemicals.

#### Uses

Corrosion protection for oil storage tank linings, filtration vessels, ion exchange vessels, effluent streams and water treatment facilities. Also, used for the protection of process vessels, stacks, ducts, fume scrubbers, fan cases and many other corrosive environments.

#### 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 undercutting resistance
- Excellent cathodic disbondment results
- High build up to 20 mils (508 microns) in one coat

#### Application

Prepare surfaces by grit blasting to a clean near white finish, SSPC-SP10/NACE No. 2. For larger areas the Archco™ 400D Primer shall be used.

To spray Archco™ 403D an air assist airless unit shall be used. The spray equipment shall have at an minimum Graco NXT Xtreme 50:1 ratio resin pump with a super slave catalyst pump adjustable from 1% to 3.5%, Century Air Assist Spray Gun with tungsten carbide needle, pressure gauges, relief valve, flow meter, 2-1/2 gallon (9.5 L) catalyst supply bottle, 7-1/2 gallon (28.5 L) hopper for Part A, catalyst hose, resin hose, regulator, atomizing regulator and manifold. Consult with Denso for recommended supplier of equipment.

Initially mix Part A (Archco™ 403D resin) just prior to pouring Part A into hopper. Adjust catalyst pump from 1% to 3% depending on ambient temperatures. Note: Use of less than 1% Archco™ C3 Catalyst will not produce a full cure of the coating material. Plate edges, corners and weld areas shall be stripe coated by brush prior to application of the first coat to help ensure adequate thickness in these areas. The coating shall be sprayed applied in two coats, each being 17 to 20 mils (432 - 508 microns) thick. A wet film thickness gauge should be used to measure uniform application of each coat. Clean tools and equipment with Acetone.

The dry film thickness of the completed coating shall be measured with an electronic instrument to ensure proper thickness. The finished cured coating shall be tested for holidays using a D.C. spark detector using 100 volts/mil (3937 V/mm).



# Archco™ 403D

## TECHNICAL DATA

PROPERTIES	VALUE
Solids Content	98 - 99%
Specific Gravity	1.2
Maximum Humidity During Application	90% RH
Operating Temperature	-20°C to 100°C (immersed)
Min. Substrate Temperature	50°F (10°C)
Minimum Dewpoint/Substrate Differential	Dewpoint +3°C
Dry Film Thickness Per Coat	17 - 20 mils (432 - 508 microns)
Theoretical Coverage	1.0 m <sup>2</sup> /L @ 1016 microns DFT
Overcoating Times 68°F (20°C)	Min. 6 hrs – Max. 3 days
Preferred Equipment	Consult with Denso
Pot life 73°F (23°C)	30 - 40 minutes
Typical Curing Characteristics	
Substrate Temperature 59°F (15°C)	Touch Dry – approx. 3.5 hrs Full Cure - 2-7 days
Flash Point	88°F (31°C)
Abrasion Resistance ASTM D 4060	0.035gm
Adhesion Properties ASTM D 952	8 MPa
Salt Water Resistance ASTM B 1117-57T	20,000 hrs – No effect
Cathodic Disbondment CSA Z245.02 Clause 12.6 140°F (60°C) – 28 days	10 mm
Tensile Strength ASTM D 638	3975 psi (27.4 MPa)
Flexural Strength ASTM D 790	9425 psi (65 MPa)
Water Soak Adhesion CSA Z245.02 Clause 12.8 140°F (60°C) – 28 days	Rating 2
Standard Atlas Test NACE TM0174 140°F (60°C) – 28 days	Very good adhesion – no blisters
Pressurized Atlas Cell NACE TM0174 140°F (60°C) – 28 days	Very good adhesion – no blisters
Autoclave	
212°F (100°C) – 168 hrs	Good adhesion – no blisters
257°F (125°C) – 168 hrs	Good adhesion – no blisters
Electrochemical Impedance Spectroscopy (EIS)	
140°F (60°C) – 28 days, untested	Log Z = 9.1 ohms/cm <sup>2</sup>
140°F (60°C) – 28 days, Pressurized Atlas Cell	Log Z = 9.0 ohms/cm <sup>2</sup>
VOC	2.75 lbs/gal (1.25 kg/L) (Includes Styrene)

STORAGE/SHELF-LIFE: Minimum 3 months when stored in original containers @ 20°C. 1 year shelf-life when stored at 10°C.

CLEANING: Clean equipment 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.

PACKAGING: 4 kg and 20 kg



**DENSO (AUSTRALIA) PTY LTD**

77 - 95 National Boulevard  
Campbellfield, VIC 3061  
Tel: +61 3 9356 7600  
Fax: +61 3 9356 7699

[www.densoaustralia.com.au](http://www.densoaustralia.com.au)

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