

PROTAL ARO

Abrasion Resistant Pipeline Coating

Description

Protal ARO is a VOC free, 100% solids liquid epoxy coating formulated to be applied over FBE as an ARO coating (abrasion resistant overlay). It is a 3:1 ratio compatible for most plural component spray units coating that can be spray or hand applied in the field or shop.

Uses

Used to protect FBE mainline coatings for directional drilling, bores, river crossings and other rough terrain applications. Protal ARO can be used to provide additional protection to the coating on bends, fittings and fabrication when severe handling or rough terrain persist. The coating should not be applied direct to steel.

Features

- Excellent gouge and abrasion resistance
- Fast touch dry and set times
- High temperature resistance (up to 150°F / 65°C)
- High build (up to 60 mils in one coat)
- Excellent adhesion to FBE and Protal 7200
- Safe and environmentally friendly
- Does not shield cathodic protection
- Can be applied by brush, roller or spray

Application

Brush: Prepare FBE coating with a light sweep blast to remove gloss and roughen surface (approx. 1 mil). After sweep blast wipe entire surface with MEK or approved solvent to remove all dust and other surface contamination. Add the hardener to base and mix at a slow speed until a constant color is achieved making sure all sides of container are scraped. Pour mixed material onto surface and brush, trowel or roll to required mil thickness. A wet film thickness gauge shall be used to measure mil thickness. If surface temperature falls below 50°F (10°C), surface should be preheated to achieve faster cure. Preheat may be achieved with a propane torch or induction coil. Resin and hardener component shall be kept warm, at a minimum of 60°F (15°C), to mix easily.

Spray: Prepare FBE coating with a light sweep blast to remove gloss and roughen surface (approx. 1 mil). After sweep blast wipe entire surface with MEK or approved solvent to remove all dust and other surface contamination. The equipment should be a plural component airless spray unit with a proportioning pump capable of a volume mixing ratio of 3:1. Standard ancillary equipment should include minimum 10 gallon hoppers, 2 ea. static mixers, 25 ft. max x 1/4" whip hose, and mastic gun with a 19 to 35 thou tip. (Applicator should consult with Denso regarding recommended equipment). Part A should be heated to 150°F -160°F (66°C - 71°C) and Part B heated to 110°F -120°F (43°C - 49°C). Hose bundle shall be set at 140°F -150°F (60°C - 66°C). A wet on wet spray technique should be used to achieve a minimum thickness of 30 mils. The coating thickness should be measured using a wet film thickness gauge.

For complete application instructions, please refer to the Protal ARO Brush or Spray Application Specifications.



Protal ARO

TECHNICAL DATA

PROPERTIES	VALUE
Solids Content	100%
Base Component - (Unmixed) @ 77°F (25°C)	
Specific Gravity	1.68
Viscosity	140,000 cps
Color	Red
Hardener - (Unmixed) @ 77°F (25°C)	
Specific Gravity	1.04
Viscosity	25,000 cps
Color	Black
Mixed Material - (Mixed) @ 77°F (25°C)	
Specific Gravity	1.53
Viscosity	100,000 cps
Color	Brick Red
Mixing Ratio (A/B) by Volume	3 Parts Base:1 Part Hardener
Cure Times	
Pot Life @ 77°F (25°C)	20 Minutes
Handling Time @ 77°F (25°C)	4 Hours
Theoretical Coverage	14 ft ² /30 mils/liter
Recommended Thickness	30 to 60 mils
Hardness (Shore D)	85
Impact Resistance (ASTM G-14)	75 in. lb/8.5 J
Flexibility	
75°F (25°C) Procedure A - 31 mils (784 microns) thick	.79°/pd - .69% Pass
Adhesion to FBE (ASTM D 4541-02)	2500 psi
Gouge Resistance (Partech Method - 50 kg)	18 mils depth - pass holiday detection at 67.5 VDC
Abrasion Resistance (ASTM D 4060-01)	
1000 cycles CS-17	400 cycles/mil
Maximum Operating Temperature	150°F (65°C)
Not designed for direct to steel applications.	

STORAGE: Minimum 24 months when stored in original containers @ 40°F (4°C) to 100°F (36°C). On job site where temperatures are below 60°F (15°C) product should be kept warm to mix properly.

CLEANING: Clean equipment with MEK or equivalent solvent cleaner.

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 & 800 liter kits standard.



DENSO NORTH AMERICA

HOUSTON:
9747 Whithorn Drive,
Houston, Texas,
U.S.A. 77095
Tel: 281-821-3355
Fax: 281-821-0304

TORONTO:
90 Ironside Crescent,
Unit 12, Toronto,
Ontario, Canada M1X1M3
Tel: 416-291-3435
Fax: 416-291-0898

www.densona.com

A Member of Winn & Coales International

The information given on this sheet is intended as a general guide only and should not be used for specification purposes. We believe the information to be accurate and reliable but do not guarantee it. We assume no responsibility for the use of this information. Users must, by their own tests, determine the suitability of the products and information supplied by us for their own particular purposes. No patent liability can be assumed.