

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 and over Protal 7200 on girth welds during 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.

Features

- Excellent gouge and abrasion resistance
- Fast touch dry and set times
- High temperature resistance (up to 150°F)
- 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 with brush, roller or spray
- Not applied direct to steel

Application

Spray: Prepare FBE coating with a light sweep blast to remove gloss and roughen surface. 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 of 3:1. Standard ancillary equipment should include minimum 10 gallon hoppers, static mixers, whip hose and spray gun. (Applicator should consult with Denso regarding recommended equipment). A wet on wet spray technique should be used to achieve the required film thickness. A wet film thickness gauge should be used to measure mil thickness.

Brush: Prepare FBE coating with a light sweep blast to remove gloss and roughen surface. 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 until a constant color is achieved making sure all sides of container are scraped. Pour mixed material onto surface and apply to required mil thickness. A wet film thickness gauge shall be used to measure mil thickness.

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



Protal ARO

Technical Data

PROPERTIES

Solids Content	100%
Base Component (Unmixed) @ 77°F (25°C)	
Specific Gravity	1.68
Viscosity	140,000 cps
Hardener Component (Unmixed) @ 77°F (25°C)	
Specific Gravity	1.04
Viscosity	20,000 cps
Mixed Material (Mixed) @ 77°F (25°C)	
Specific Gravity	1.53
Viscosity	100,000 cps
Mixing Ratio (A/B) by Volume	3 Parts Base:1 Part Hardener
Cure Times	
Pot Life @ 77°F (25°C)	14 - 17 Minutes
Handling Time @ 77°F (25°C)	2 - 3 Hours
Theoretical Coverage	14 ft ² /30 mils/liter
Thickness	20 to 40 mils
Impact (ASTM G-14-88)	75 in. lb/8.5 J
Flexibility (NACE RP0394-2002)	
75°F Procedure A - 31 mils thick	.79°/pd - .69% Pass
Gouge Resistance (Partech Method) 50 kg load	18 mils depth – pass holiday detection at 67.5 VDC
Abrasion Resistance (ASTM D 4060-01)	
1000 cycles CS-17	1400 cycles/mil
Water Absorption (ASTM D 570-98)	.24%
Adhesion to FBE (ASTM D 4541-02)	2500 psi
Hardness (Shore D)	85 +/-2
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 50°F (10°C) product should be kept warm to mix properly.

CLEANING: Clean equipment with solvent cleaner (MEK, Acetone, or Xylene).

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, 2, 75 & 800 liter kits standard.



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