

Denso Protal ARO

Abrasion resistant pipeline coating

Composition

Denso Protal ARO is a liquid epoxy coating.

Uses

Denso Protal ARO is specially formulated for protection of FBE mainline coatings for directional drilling, bores, river crossings and other rough terrain applications. Denso Protal ARO can be used to provide additional protection to the factory coating on bends and fittings in areas of severe handling or rough terrain.

Denso Protal ARO is not for use directly on steel.

Characteristics

Denso Protal ARO is:

- Abrasion resistant,
- Quick drying,
- VOC free,
- Suitable for service up to 65°C,
- High build (up to 1500 µm), and
- Adherent to both FBE and Protal 7200.

Surface Preparation

see Instructions for Use for additional detail

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.

Brush Application

see Instructions for Use for additional detail

Add the hardener to base and mix at a slow speed until a constant colour is achieved – ensure all sides of the container are scraped. Pour mixed material onto surface and brush, trowel or roll to required thickness. A wet-film thickness gauge shall be used to measure thickness. If surface temperature falls below 10°C, surface should be pre-heated to achieve faster cure. Preheat may be achieved with a propane torch or induction coil. Resin and hardener components shall be kept warm, at a minimum of 15°C to ensure easy mixing.

Typical Properties

Spray Application

See Instructions for Use for additional detail

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 38 litre hoppers, 2 static mixers, 7.6 m (max) x 6 mm whip hose, and mastic gun with a 0.5-0.9 mm tip.

Please consult Denso for recommended equipment.

Part A should be heated to 19-54°C
Part B should be heated to 38-43°C
Hose bundle shall be set at 49-54°C

A wet-on-wet spray technique should be used to achieve a minimum thickness of 762 µm. The coating thickness should be measured using a wet-film thickness gauge.

Availability

Denso Protal ARO is available in pre-measured kits:

1 L, 75 L, 800 L

Additional sizes may be available on request

Cleaning

Clean equipment with MEK or equivalent solvent cleaner.

Storage conditions

Store Denso Protal ARO in original containers, at 4°C to 36°C. On job sites where temperatures are below 15°C, product should be kept warm to mix properly.

Waste material

Please avoid or minimise waste wherever possible. Please do not discard waste material, including packaging, in the surrounding environment. Follow all relevant legislation for disposal.

Denso Protal ARO

Colour	
Part A (Base)	Red
Part B (Hardener)	Black
Mixed	Dark Red
Solids content	100%
Mixing ratio (volume)	3:1
Specific gravity	
Part A (Base)	1.76
Part B (Hardener)	1.62
Mixed	1.72
Viscosity	
Part A (Base)	41,000 cPs
Part B (Hardener)	34,500 cPs
Mixed	40,000 cPs
Cure Times	
Gel time at 25°C	30 minutes
Handling time at 25°C	4 hours
Theoretical coverage at 762 µm	1.3 m ² / l
Recommended thickness	762-1254 µm
Hardness (Shore D)	85
Adhesion to FBE (ASTM D 4541-02)	17 MPa
Gouge Resistance (Partech Method – 50 kg)	264 µm depth
Holiday detection at 67.5 V (DC)	pass
Abrasion Resistance (ASTM D 4060-01)	
1000 cycles CS-17	99 mg
Holiday detection	5 kV/mm

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