EUNICOTE ES2

Water Based Epoxy Coating ES2

Product Description

EUNICOTE ES2 is a water thin able two part epoxy resin system. It is odor free, nonflammable and non-toxic when dry. Pigmented and clear types suitable for potable water contact are available.

Uses

Specifically designed as a low coating/sealer for protection of concrete, particularly in potable water reservoirs, dairies, abattoirs and other food processing areas.it 'is also recommended for use as a protective sealer on nuclear power plants, bridges, tunnels walls, as a light duty floor sealer and waterproof membrane below floor screeds, and as a new to old concrete bonder. Pigmented versions in a range of colors are supplied as decorative and protective sealers for flooring and similar applications.

Advantages

• Solvent free, low application hazard formula.
• Non-toxic, low odor, water research council approved for use in contact with foodstuffs and potable.
• Excellent adhesion on dry or slightly damp surfaces, giving good chemical and abrasion resistance.
• Can be applied by spray, brush or roller onto most of types of building substrates.
• Easy cleaning of equipment and tools with water.
• Available in a range of colors as a decorative and light wearing sealer.

Chemical Resistance

Typical data shown below is for 3 coat system at 20°C ambient temperature, for 3 months. The EUNICOTE technical department should be contacted for additional information.

Result

Solution	Sealer	Colour coat
Acetic acid	P	P
Anti-Freeze	E	E
Aviation gasoline	VG	VG
Detergent Solution	E	E
Diesel Fuel	E	E
Ethanol	E	G
Glycerol	E	E
Hydraulic fluid	G	G
Salt Solutions	E	VG
10% Sodium Hydroxide	G	VG
10%Sulphuric acid	G	G
Drinking Water	E	E

Key:
E=Excellent, no change
VG=Very Good
G= Good, Slight attack
P=Poor, heavy attack

Typical Properties

Appearance	Sealer	Color Coat
Wet	White Emulsion	Range of colors
Dry	Clear, Pale yellow film	
Specific Gravity as applied	Concrete failure	
Viscosity at 20°C	25 cp	Thixotropic, brushable
Mix Ratio	Resin 1 part: Hardner 2 parts: water 3 parts	Water, max 15%

Service

	Sealer	Color Coat
Bond strength, pull off to dry concrete	Concrete failure	
Max. temp:		
Wet, long term	55°C	50°C
WetPeak(short time)	80°C	70°C
Dry,Long term	70°C	70°C
Dry,Peak(short time)	100°C	90°C

Application

	Sealer	Color Coat
Coverage as applied	5-6 m^2/kg	4-5 m^2/kg
Film thickness Dry Wet	40-60 microns 170-200 microns	90-110 microns 180-200 microns
Pot life: At 30°C At 10°C	 1h 2h	 1h 2h
Re-coating time: Min at 30°C Min at 10°C	 4h 14h	 4h 14h
Water Contact: Min at 30°C Min at 10°C	 4 days 14 days	 4 days 14 days

Method of Use

Surface Preparation: Thorough surface preparation is essential to obtain optimum performance. All surfaces should be sound, clean, and free from oil, grease, other contaminants and standing water. All concrete and other cementitious substrates must be at least 7 days old before application. Wherever possible the surface should be mechanically abraded before application or alternatively treated with a 10% hydrochloric acid solution followed by clean water washing. Make good all surface defects such as below holes with EURIPARE BA9 latex mortar or EURIPARE ES6 epoxy filler. Metals should be grit/sand blasted and degreased prior to priming with an appropriate epoxy system.

EUNICOTE ES2 Sealer System: Mixing EUNICOTE ES2 is supplied in pre-weighed quantities. The contents of the hardener and resin packs should be put into a large vessel and mixed using a slow speed drill and paddle blade. Continue mixing until a creamy emulsion is obtained (3-5 minutes). To this mix add 7.5 liters of clean water, again using mechanical stirring, until a thin homogeneous emulsion is given. EUNICOTE ES2 Sealer is now ready to use.

It is not recommended that packs are split, but if this is essential and ONLY IF accurate control and weighing can be obtained then the proportions by weight are Resin 1: Hardener 2: Water 3. Total weight from a 7.5kg pack of EUNICOTE ES2 is 15 kg of finished product.

EUNICOTE ES2 Color Coat Mixing: EUNICOTE ES2 EUNICOTE ES2 colour coat issue applied in pre weighed quantities. Use a slow speed drill and paddle mixer blade to mix the resin pack into the hardener pack. Continue mixing until a homogenous emulsion is obtained (3-5 minutes). Up to 1 liter of water may be added after mixing as a thinning agent. EUNICOTE ES2 colour coat is now ready to use. It is not recommended that packs are split, but if this essential and only if accurate control and weighing can be obtained then the proportions by weight are resin 1: Hardener 5: Water up to 1.

Application

Bonding fresh concrete: Add 4 liters of water to the EUNICOTE ES2 resin/hardener packs and apply the mixed product to the prepared substrate using a brush. Fresh concrete should be placed while the bond coat is still tacky. If the bond coat dries before placing, abrade the surface with sandpaper and apply a further coat. Compact the fresh concrete well.

Concrete floor and tank coatings: Application can be by brush or roller onto the prepared surface. On porous substrates it is advisable to use a priming coat of EUNICOTE ES2 sealer, to seal the surface and ensure an adequate bond for the EUNICOTE ES2 colour coat. Greater coverage of the colour coat is obtained if applied onto baa sealed base. Two coats are required to achieve maximum depth of colour and ensure optimum protection of the substrate. The second coat can be applied as soon as the first is touch dry, approx. 3 hours. The appearance of freshly applied material is slightly lighter in shade than the design colour but the coating darkens on driving.

1st Coat: Mixed Resin/hardener/Water 0.20kg/m^2

2nd coat: Mixed Resin/Hardener Only 0.25 kg/m^2

Average application rate is 20-25 kg/m^2 Per man hours. Protect the coatings from contact with water or rain for at least 24 hours after application, to avoid damage.

Coatings
Application can be made by brush, roller or airless spray. A minimum 2 coats are required since the mix contains a large proportion of water. Apply the prime coat and when touch dry apply the next coat. Protect the coatings from contact with water or rain for at least 24 hours after application to avoid emulsification and subsequent damage. Under aggressive conditions for example where a substrate is to be protected from staining or chemical attack, 3 coats are recommended.

Anti-Slip Floor Coatings
Brush or roller a prime coat of EUNICOTE ES2 sealer onto the prepared surface, at a coverage rate of 6m^2/kg. Leave for several hours or overnight, before applying the base coat of EUNICOTE ES2 colour coat, by brush or roller. While the base is still freshly laid, broadcast silica aggregate onto the surface to give complete, dry coverage and leave overnight. Brush off any unbounded aggregate for later use and seal the surface with a brush or roller applied finish coat. Average application rate is 12-15 m^2 per man hours.
The correct use of our products and its resources are at your disposal entirely without obligation.

		Kg/m^2
Seal coat	ES2 Primer	0.12-0.16
Base coat	ES2 color coat	0.25
Sand	Silica Aggregate	1.00
Finish coat	ES2 colour coat	0.25

Colours
EUNICOTE ES2 colour coat is available in a range of five standard colours-buff, blue, grey, red and green. Other colours, including pastel shades, can be produced on request.

Storage
Store in closed containers protected from extremes of temperature. EUNICOTE ES2 is non-flammable.

Handling
As with all epoxy resins work cleanly at all times. Skin and eye contact should be prevented by the use of plastic or rubber gloves, barrier creams, eye protection and protective clothing. Any resin or hardener in contact with the skin should be removed with warm soapy water or resin removal cream, not solvents. In case of eye contact wash copiously with water, and as in the case of accidental attention. Provide good work area ventilation.

Technical Service
The Technical Department is available to assist you in the correct use of our products and its resources are at your disposal entirely without obligation.

Contact Information
Al-Faiha for Engineering Products
techsupport@alfaihaengineering.com
www.alfaihaengineering.com