

EURIPARE ES 4

LOW VISCOSITY, TWO-PACK NON SOLVENT EPOXY RESIN FOR CRACK SEALING

DESCRIPTION

EURIPARE ES 4 is a low viscosity, two-pack, clear, non-solvent, liquid epoxy resin with high bond strength and exceptional penetrative capabilities. These attributes make it well-suited for a wide range of applications.

EURIPARE ES 4 complies with ASTM C881-78 Grade 1, Class B, and Class C standards.

USES

EURIPAREES 4 offers a wide range of applications. It is an excellent choice for crack sealing, providing low viscosity with effective penetrative power at low pressures. This makes it particularly suitable for sealing and bonding in gaps ranging from 0.5 mm to 5 mm. Additionally, it can be utilized for reinforcement protection, concrete priming to prepare for epoxy mortars, and as a protective coating for these mortars.

Moreover, EURIPARE ES 4 serves as an ideal solution for creating non-slip flooring on surfaces like walkways and bridges by incorporating broadcast aggregates. Furthermore, it demonstrates exceptional adhesive properties, facilitating a strong bond between new and old concrete.

ADVANTAGES

- Low viscosity with excellent penetrative power at low pressures, making it ideal for crack sealing.
- Rapid strength development ensures an early return to service.
- High early strength development for quick service resumption.
- Exceptional bond strength to concrete, steel, and a wide range of building materials.
- Highly resistant to acids, alkalies, oils, grease, and other aggressive materials.

TYPICAL PROPERTIES

Appearance	Amber liquid	
Specific Gravity	1.3 g/cm ³ ± 0.02	
Bond Strength (BS 6319, Part 4)	≥ 40 MPa	
Flexural Strength (BS 6319, Part 2)	≥ 40 MPa	
Compressive Strength (BS 6319, Part 2)	≥ 75 MPa	
Pot Life	@10°C	60 min.
	@30°C	20 min.
Viscosity (poise)	@20°C	6.5
	@30°C	2.5

Chemical Resistance

Typical data for a two-coat film, tested at a solution temperature of 20°C over a three-month period, are provided below:

Solution	EUNIGROUT ES 4
Caustic soda (30%)	E
Sulphuric acid (10%)	G
Fuel oil	E
Petrol	G
Hydrochloric acid (10%)	G
Bleach	G
Salt water	E
Trichloroethylene	P
Methylethyl ketone	D
Toulene	D

Key

E = Excellent; no change

P = Poor; heavy attack

D = Destroyed

G = Good; slight attack

APPLICATION

Application Conditions: Temperature above 5°C.

Surface Preparation

Clean metals to a bright finish. In all cases, ensure a clean, sound, and dust-free surface.

For crack bonding on horizontal surfaces, make sure crack edges are sound and clean, and remove any dust and debris. Use mastic, putty, or a sand/cement mixture to create 25mm high walls along the cracks, which will establish a pressure head and prevent resin loss.

When performing crack injection on horizontal surfaces, it is crucial to follow these steps:

Ensure that the cause of the cracking is identified and resolved before injection.

Two preparation methods are used depending on the crack type:

1. **Whole Mounting (2 mm - 5 mm cracks not diffused):**

- a. Drill 6-8mm x 4-5cm deep holes at 30-40cm intervals along the crack.
- b. Vacuum and clean out debris.
- c. Insert 5 cm - 7 cm x 3 mm - 4 mm diameter solid metal, copper, or aluminum tubes to 75% of the hole's depth.
- d. Secure thick wall nylon tubes over the insert pipes using jubilee clips.
- e. Seal all cracks on both sides of the structure.
- f. Use low-pressure air to blow through the system, starting at one end, to clear debris and dust.

2. **Surface Mounting (0.5 mm - 2 mm cracks diffused)**

- a. Wire brush the surface around the crack and remove dust.
- b. Bond a flanged tube to the resin using a wire to position it over the crack.
- c. Attach a nylon tube to the flanged tube.
- d. Seal all cracks on both sides of the structure.
- e. Allow the resin seal to harden and cure before injecting EURIPARE ES 4.

Application Instructions

For bonding, priming, and protection, use a brush with a scrubbing action to apply the product, ensuring thorough penetration for a coverage of around 46 m²/kg. Apply onto wet resin only when placing epoxy mortars or items for bonding.

To address crack bonding, pour mixed resin into and along the crack, allowing it to penetrate. Add more resin as needed and remove any excess before it hardens.

For crack injection, use metal grease guns adapted to fit filling tubes or disposable cartridge guns. Start from the lowest injection point, pumping resin until it appears at the next point. Repeat along the crack, wire tying the plastic tube, and flush out the cartridge and nozzle before hardening.

Finish by striking off injection tubes and power grinding the surface for a smooth finish.

MIXING

Mixing Ratio: 1:2 (hardener:resin)

Ensure you have enough material to cover your estimated requirements. For injection purposes, store the materials at temperatures between 10°C and 15°C for 48 hours before use to extend the pot life. Avoid mixing large quantities at once, and aim to minimize the interval between mixes. To prepare the mixture, combine the hardener with the resin using a slow-speed drill and stirrer, and use the mixture immediately.

COVERAGE

The coverage of EURIPARE ES 4 is (3 - 6 m²/kg) for a single coat when applying with a brush. The dry film thickness is typically (150 - 300 μm)per coat.

PACKAGING

EURIPARE ES 4 is supplied in 7.2 L and 36 L kits.



STORAGE

EURIPARE ES 4 should be stored and maintained in closed containers and protect it from extreme temperature conditions. Pre-cool the product before use in hot climates. Ensure that it is stored away from food items.

The shelf life of EURIPARE ES 4 is 12 months from the date of production.

HEALTH AND SAFETY

For more information, please check the Material Safety Data Sheet.

CONTACT

Al-Faiha for Engineering Products is the exclusive licensee manufacturer for ECA.

For more information, please contact us at techsupport@alfaihaengineering.com.

DISCLAIMER

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