

GEL-EPOXY





GEL-EPOXY

Technical Data

Visco elastic gel of epoxy polymer for lasting long life corrosion protection of high performance materials in civil structures.

Kind of Product

Special formulated Gel Epoxy resin and hardener components are mixed at ambient temperatures, easily injected to smallest cavities because of it's high viscosity (like water) with low pressure during 12-24 hours and crosslink during polymerization to a visco elastic polymer with adhesive properties as well as damping properties to the system.

Advantages

- Perfect corrosion protection properties
- Structure damping properties
- · Replacement of individual strands possible
- Stop of strand corrosion
- Simple Mixing and Injection of material with ambient temperatures
- Up to 24 hours injection time of mixed material
- High viscosity to fill smallest cavities and penetrates all interstices
- · Low injection pressure required only
- · High injection quality
- · High Density against water trapping. Material is lipophilic and hydrophobic
- · Best chemical and physical resistance
- No hydrostatic pressure development during or after polymerization
- Volumetric material shrinkage less than 1% during polymerization
- No material diffusion to other materials
- No temperature increase during polymerization

Mixing Ratio

Hardener: Resin Ratio = 3:1

Viscosity

At 23°C 500 Pascal after 5 minutes, 900 Pascal after 5 hours, 5000 Pascal after 24 hours

Material Properties

Color yellow-brown, Density 1,05 Kg/l, No water content, Chloride content <5ppm (same as other Petroleum products), Linear expansion coefficient 5.3^* -4, Shore hardness <A5,

Tests

- Excellent corrosion protection during 3 month exposure in salt spray test
- Excellent corrosion protection during 3 month exposure in intermittent salt-water immersion
- Excellent corrosion protection even with very thin film cover during 3 month salt spray test
- No changes of gel properties at -35°C lab test (beside increased stiffness of course)
- Excellent alkaline resistance during 6 month cement grout compatibility test.
- Excellent corrosion protection of stressed PT strand in 190 days distilled water test
- Excellent mechanical behaviour in 100 cycle thermal test (-25°C to +70°C)

Mixing and Injection

- Mixing of small volumes with electric stirrer and big volumes with automatic mixing devices.
 Injection by gravity for small volumes and pumps for big volumes.
- Maximum injection time 24 hours depending on exposed temperatures.
- Recommended installation temperature above 0°C. Best installation temperature 25-30°C.
- Slow injection speed from the lowest point to make sure every small air bubble can remove is recommended
- For personal health breathing masks and appropriate suits are recommended

Polymerization Time

7 days at 0°c, 72 hours at 20°C, 12-24 hours at 60°C.

Delivery Quantities

Drums of 60 and 200 Liter. IBC container for 1000 Liter

MSDS classification

Hardener: not dangerous. Resin: IMDG/ARD class 9, Kemler number 90, UN number 3082

Contact us for more details.

Discover PESTEC. Discover our ideas.

PESTEC GmbH, Am Limespark 2, D-65843 Sulzbach, Germany Phone ++49 6196-76681- 0 Fax ++49 6196-76681- 20 contact@pes-tec.com www.pes-tec.com