

ERATM250

Structural Perfusion Epoxy Resin Adhesive



Building
&
Transportation



Oil, Gas
&
Industrial



Offshore
&
Onshore



Water
&
Wastewater



PRODUCT DESCRIPTION

The CTech-LLC[®] ERATM250 is a low viscosity, two -component, high performance, structural epoxy adhesive. The ERATM250 epoxy adhesive is specifically designed for martial-bonding applications using pressure injection methods. The CTech-LLC[®] perfusion epoxy resin adhesive (ERATM250) is generally used for gap filling applications and externally bonding steel plates to concrete (steel jacketing).

ADVANTAGES

- Structural perfusion epoxy adhesive
- Low viscosity
- Gap filling capability
- Exceptional adhesion properties
- Good high and low temperature properties
- High Strength
- Moisture Insensitive
- Ambient cure
- Uniform stress distribution
- Easy application
- Long-term durability
- Resistant to extreme shock, vibration, and flexing
- High fatigue strength.
- Low odor improves workplace environment

TYPICAL USES

- External bonding of steel plates to concrete using pressure injection methods.
- Rigid pick-proof sealant for windows doors, joints, and more.
- Cap seal for crack injection and repair of concrete defects.
- Paste new concrete on old concrete sections.
- Use in passages, streets, bridges, sidewalks and factory loading locations.

INSTALLATION PROCEDURE

This section outlines the procedure of external bonding of steel plates to concrete (steel jacketing) by injection of ERATM250 structural epoxy adhesives.

SURFACE PREPRATION

- For retrofitting applications, substrate preparation can highly effect on the quality of the performance of systems.
- All the surfaces must be cleaned from dirt, grime, dust, curing compounds, oils, grease, waxes and all the other contaminated materials.
- Repair mortar must be used to repair all the eroded or damaged concrete surfaces.
- An industrial vacuum cleaner must be used to remove dust and dirt.
- All the surfaces need grinding, Sandblasting, shot blasting, pressure wash or other common mechanical methods to reach an even concrete substrate.
- Note that concrete surfaces must be fully dried or cured so adhesive can properly dry.

STEEL FRAME INISTALLATION

Install steel plates around the concrete member using total encasement technique or stage cage technique.

MIXING

Epoxy compounds are usually supplied in two different containers. Before pouring the contents of component B into contents of component A, each part should be stirred separately to avoid deposit in container. Then part A and B should be mixed together. Process of mixing should take 2-3 minutes with a low speed mixer.

APPLICATION

After mixing resin and hardener, fill the spaces between the concrete member and the steel jacket with ERA™250 structural epoxy adhesive using pressure injection methods.

PHYSICAL PROPERTIES

Chemical Base	Epoxy resin
Mixing Ratio	100:50 Part A: 100 Part B: 50
Viscosity ASTM D 1475	Component A = 550 cps Component B = 70 cps Mixed = 250 cps
Gel Time, 1 Quart ASTM D 2471	2.25 Hours
Density at 22o C ASTM D792	Component A = 1.130 kg/L Component B = 1.04 kg/L Mixed product = 1.08 kg/L
Application Methods	Pressure Injection
Shelf Time	18 months
Storage Condition	Store dry and away from direct sunlight 15-35o C

MECHANICAL PROPERTIES

Property	ASTM Method	Test Value*
Hardness	D2240	80 Shore D
Tensile Strength	D638	43.5 MPa
Elongation Percent	D638	2.5 %
Compressive Strength	D695	70 MPa
Compressive Modulus	D695	1.89 GPa

* Curing schedule 14 Days post cure at 22° C.

* Testing temperature: 22°C

STORAGE & SHELF LIFE

- Epoxy resin adhesive can be stored for 18 months in its original packaging. Lid of the container should be kept closed. Moisture can decrease shelf life of epoxy adhesive.
- ERA™420 should be stored in a dry and cool place at 15° to 35° C. Avoid freezing the product and keep it away from direct sunlight, flame or other hazards.

CTech-LLC[®]

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IMPORTANT NOTE:

Before using any CTech-LLC[®] product, the user must review the most recent version of the product's technical data sheet, material safety data sheet and other applicable documents, available at www.ctech-llc.com.

WARANTY:

CTech-LLC[®] warrants its products to be free from manufacturing defects. Buyer determines suitability of product for use and assumes all risks. Buyer's sole remedy shall be limited to replacement of product. Any claim for breach of this warranty must be brought within one month of the date of purchase. CTech-LLC[®] shall not be liable for any consequential or special damages of any kind, resulting from any claim or breach of warranty, breach of contract, negligence or any legal theory. The Buyer, by accepting the products described herein, agrees to be responsible for thoroughly testing any application to determine its suitability before utilizing.

CAUTION

All components of epoxy resin systems may cause skin irritation and sensitization. Use of chemical resistant gloves is recommended.

Avoid breathing vapors and dust. Get medical attention if you are breathing with difficulty.

Resin products can cause strong eye irritation. Avoiding eye contact and using safety goggles is necessary.