



FLUID EPOXY

High Performance Fluid Epoxy

PRODUCT DESCRIPTION

Five Star Fluid Epoxy is a two component, all-purpose, rapid cure fluid epoxy system. Five Star Fluid Epoxy is designed for adhesive grouting, anchoring, anchor bolts, setting of bolts and wedges, and small repairs to concrete.

ADVANTAGES

- High early strength
- Fluid, self-leveling consistency
- Excellent adhesion to steel
- Good impact resistance
- Chemically resistant
- Convenient packaging

USES

- Anchoring machines, baseplates and other equipment
- Repair of spalled and cracked concrete
- Installation of bolts, anchors and dowels
- Dynamic loads
- Skid resistant surfaces
- Operating temperatures up to 150°F (65°C)

PACKAGING AND YIELD

Five Star Fluid Epoxy is a two component system consisting of a resin/aggregate preblend and hardener packaged separately inside a pail and is available in a unit yielding approximately 0.20 cubic feet (5.7 liters) of hardened material.

SHELF LIFE

Two years in original unopened packaging when stored in dry conditions; high relative humidity will reduce shelf life.

| TYPICAL PROPERTIES AT 70°F (21°C) | | |
|---|--|---|
| Compressive Strength, ASTM C 579 A* | Compressive Strength | Compressive Secant Modulus |
| 6 Hours | 11000 psi (75.8 MPa) | 3.5 x 10 ⁵ psi (2.4 x 10 ³ MPa) |
| 1 Day | 13000 psi (89.6 MPa) | 4.3 x 10 ⁵ psi (2.9 x 10 ³ MPa) |
| 7 Days | 14000 psi (96.5 MPa) | 4.8 x 10 ⁵ psi (3.3 x 10 ³ MPa) |
| Creep, ASTM C 1181, 1 year | 10 x 10 ⁻³ in/in (mm/mm) at 140°F (60°C), 400 psi (2.8 MPa) | |
| Tensile Strength, ASTM C 307 | 2500 psi (17.2 MPa) | |
| Flexural Strength, ASTM C 580 | 6800 psi (46.9 MPa) | |
| Flexural Secant Modulus, ASTM C 580 | 1.0 x 10 ⁶ psi (6.9 x 10 ³ MPa) | |
| Coefficient of Expansion, ASTM C 531 | 32 x 10 ⁻⁶ in/in/°F (57.6 x 10 ⁻⁶ mm/mm/°C) | |
| Bond to Concrete, ASTM C 882 | Concrete Failure | |
| Working Time at 70°F (21°C) | 30 minutes | |

* Rate of loading 0.125 inches per minute. The data shown above reflect typical results based on laboratory testing under controlled conditions. Reasonable variations from the data shown above may result. Test methods are modified where applicable.

PLACEMENT GUIDELINES

1. **SURFACE PREPARATION:** All surfaces to be in contact with Five Star® Fluid Epoxy shall be free of oil, grease, laitance and other contaminants. Concrete must be clean, sound, dry and roughened to ensure a good bond. An SSPC-SP6 commercial finish on all metal surfaces will optimize bond development to steel.
2. **FORMWORK:** Formwork shall be constructed of rigid non-absorbent materials, securely anchored, liquid-tight and strong enough to resist forces developed during grout placement. The clearance between formwork and baseplate shall be sufficient to allow for a headbox. The clearance for remaining sides shall be 1 to 2 inches (25 - 50 mm). Areas where bond is not desired must be treated with paste wax or polyethylene. Isolation joints may be necessary depending on pour dimensions. Contact the Five Star Engineering and Technical Service Center for further information.
3. **MIXING:** For optimum performance, all components should be conditioned to between 70°F and 80°F (21°C and 27°C) prior to use. Use mixing paddle and a slow speed drill for mixing. Pre-mix Component A (resin and aggregate preblend) until uniform color and consistency is observed. Pour all of Component B (hardener) into pail containing resin and aggregate blend and mix until a uniform color is achieved. Use immediately after mixing. Working time is approximately 30 minutes when temperatures are at 70°F (21°C).
4. **METHODS OF PLACEMENT:** Five Star Fluid Epoxy may be poured in place at a thickness of 1/8 inch (3 mm) to 1 ½ inches (38 mm). A self-leveling product, Five Star Fluid Epoxy needs little or no finishing.
5. **POST-PLACEMENT PROCEDURES:** In-service operation may begin immediately after minimum required strength and modulus have been achieved. Where a skid resistant surface is required, broadcast sand on fresh uncured epoxy surface. Sweeping away excess sand after epoxy cures leaves a skid resistant finish.
6. **CLEAN UP:** All tools and equipment may be cleaned with solvents or water and strong detergent solution or suitable solvent before material hardens. Sand may be used as an abrasive.

NOTE: PRIOR TO APPLICATION, READ ALL PRODUCT PACKAGING THOROUGHLY. For more detailed placement procedures, refer to Design-A-Spec™ installation guidelines or call the Five Star Products Engineering and Technical Service Center at (800) 243-2206.

CONSIDERATIONS

- Flowability and strength gain are adversely affected by lower temperatures.
- To obtain bond, concrete shall be visibly free of surface moisture.
- For placement temperatures below 50°F (10°C) or above 90°F (32°C) contact the Five Star Products Engineering and Technical Service Center at (800) 243-2206.
- For placements greater than 1 ½ inches (38 mm), or greater than 0.20 cubic feet (5.7 liters) contact the Five Star Products Engineering and Technical Service Center at (800) 243-2206.

CAUTION

Irritant, toxic, strong sensitizer. Contains epoxy resin and amine. This product may cause skin irritation. Do not inhale vapors. Provide adequate ventilation. Protect against contact with skin and eyes. Wear rubber gloves, long sleeve shirt, goggles with side shields. In case of contact with eyes, flush repeatedly with water and contact a physician. Areas of skin contact should be promptly washed with soap and water. Do not take internally. Keep product out of reach of children. PRIOR TO USE, REFER TO MATERIAL SAFETY DATA SHEET.

For worldwide availability, additional product information and technical support, contact your local Five Star distributor, local sales representative, or you may call Five Star's Engineering and Technical Service Center at (800) 243-2206.

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