



BONDING ADHESIVE

Multi-Purpose Epoxy Adhesive

PRODUCT DESCRIPTION

Five Star® Bonding Adhesive is a multi-purpose, two component, 100% solids, moisture insensitive structural epoxy adhesive. Five Star® Bonding Adhesive is excellent for bonding fresh high-early concrete or rapid-setting repair materials to cured concrete and/or steel, and as a coating for corrosion protection of steel. Five Star® Bonding Adhesive meets ASTM C 881 Type I, II, IV and V, Grade 2, Classes B and C and can be used in food processing areas.

ADVANTAGES

- High strength bonding adhesive
- Moisture insensitive before, during, and after cure
- Excellent adhesion to masonry, concrete, wood, steel and most structural materials
- Convenient 1:1 mixing ratio
- Low odor

USES

- Bonding fresh concrete to hardened concrete or reinforcing steel
- Corrosion protection for reinforcing steel
- Epoxy mortar
- Vapor barrier after cure

PACKAGING AND YIELD

Five Star® Bonding Adhesive is available in a one gallon (3.7 liters) unit yielding a coverage rate of approximately 80 square feet at 20 mil thickness.

SHELF LIFE

Two years in original unopened packaging when stored in dry conditions at 40°F to 95°F (5°C to 35°C).

TYPICAL PROPERTIES AT 70°F (21°C)

Color	Gray
Viscosity , ASTM D2393	6,000 cps
Tensile Strength , ASTM D638	7,000 psi (48.3 MPa)
% Elongation at Break	3.8%
Water Absorption , ASTM D570	0.10%
Heat Deflection Temperature , ASTM D648	125°F (52°C)
Bond Strength , ASTM C882, Grade 2	
2 Day	4,300 psi (29.6 MPa)
14 Day	5,200 psi (35.8 MPa)
Compressive Properties , ASTM D695	
Compressive Strength	10,000 psi (68.9 MPa)
Compressive Modulus	2.3 x 10 ⁵ (1,580 MPa)
Gel Time , ASTM C881	25 minutes

The data shown above reflects typical results based on laboratory testing under controlled conditions. Reasonable variations from the data shown may result. Test methods are modified where applicable.

APPLICATION INFORMATION

Open Time 1 - 4 hours (dependent on job site conditions)

Maximum In-Service Temperature 200°F (93°C)

PLACEMENT GUIDELINES

Prior to application, the minimum age of concrete must be 21 - 28 days depending on curing and drying conditions. Five Star® Bonding Adhesive is capable of being installed when the minimum application temperature of the substrate is 40°F (4°C) and rising and all surfaces in contact with epoxy adhesives are conditioned to below 90°F (32°C); however for optimum performance, the bonding adhesive, environment, mixing equipment, and all surfaces in contact with the bonding adhesive should be at temperatures between 65°F and 85°F (18°C and 29°C). Conditioning of the material for 24 - 48 hours may be required, depending upon the quantity. Flowability and strength gain are affected by lower and higher temperatures. Gel and open time are increased at cold temperatures and decreased at hot temperatures. After cure, the bonding adhesive acts as a vapor barrier. For installation temperatures outside recommended ranges, contact Five Star Products.

- 1. SURFACE PREPARATION:** All concrete surfaces in contact with Five Star® Bonding Adhesive must be clean and sound. Completely remove all loose, delaminated / weak concrete, oil, grease, laitance and other bond-inhibiting contaminants. For best results, surfaces should be dry prior to application of the bonding adhesive. All exposed reinforcing steel shall be free of all loose scale, rust and other contaminants. Concrete or reinforcing steel may be sandblasted or other approved mechanical means. Prior to adhesive application, all concrete cracks and the condition of the reinforcing steel shall be brought to the attention of the project engineer.
- 2. MIXING:** Pre-mix each component thoroughly. Place one part by volume of Component A and one part by volume of Component B into a clean, dry pail. Mix thoroughly for three minutes with a low speed drill (400-600 rpm) to avoid air entrapment. Do not mix more material than can be placed in 25 minutes at 70°F (21°C). Do not add or thin with solvents.
- 3. PLACEMENT:**

Use as a Bonding Agent: Five Star® Bonding Adhesive may be brushed or rolled approximately 80 sq. ft. per gallon at 20 mil thickness. Place fresh concrete or repair material while Five Star® Bonding Adhesive is still tacky which can range from **one to four hours** dependent upon jobsite temperature conditions. If coating becomes glossy and loses tackiness, remove any surface contaminants by wiping down with an appropriate solvent (e.g. acetone, xylene), then recoat with additional Five Star® Bonding Adhesive and proceed. **Complete placement of concrete while Five Star® Bonding Adhesive is still tacky.**

Use as Corrosion Protection for Reinforcing Steel: Brush Five Star® Bonding Adhesive on steel to a 20 mil thickness, leaving no voids, pinholes, or uncoated areas. Allow to cure.

Use as an Epoxy Mortar: Add 1.5 parts oven-dried sand to 1-part mixed Five Star® Bonding Adhesive. Mix until uniform consistency is achieved and apply into repair area.
- 4. CLEAN-UP:** Use an appropriate solvent (e.g. acetone, xylene) to clean uncured material. Cured material can only be removed mechanically.

For further questions, or if additional information is required, visit FiveStarProducts.com or contact your local Five Star® Technical Sales Representative at 1-800-243-2206.

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 SAFETY DATA SHEET.**

SKU/PRODUCT CODE	DESCRIPTION	# UNITS/PALLET	UNIT SIZE
30806	Five Star® Bonding Adhesive 1 gallon	60	Resin (A): 4.6 lbs. (2.1 kg) Hardener (B): 7.4 lbs. (3.6 kg)

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Specifications Subject to Change.

For most current version of datasheet, go to FiveStarProducts.com

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