EPOXY CHOCK & EPOXY CHOCK EX

High Performance Epoxy Chock

PRODUCT DESCRIPTION

Five Star® Epoxy Chock and Epoxy Chock EX are epoxy chocking systems specifically engineered for use under integral gas compressors, skid mounted equipment, turbines, generators, and other critically aligned machinery. Five Star® Epoxy Chock is a two component, 100% solids, solvent free material providing excellent flowability and high compressive strength at elevated temperatures and loading conditions. Five Star® Epoxy Chock EX is a 3 Part, extended version that is also solvent free with excellent flowability and high compressive strength at elevated temperature and loading conditions. Both systems are economical replacement for steel chocks because it eliminates costly machining and provides virtually 100% contact to machinery base plates.

ADVANTAGES

- Permanent support for machinery requiring precision alignment
- Pourable two component system
- Chemically resistant
- Eliminates costly machining

USES

- Compressors
- Turbines and generators
- Motors and pumps
- Hot-running machinery
- Replacement for steel chocks

PACKAGING AND YIELD

Five Star® Epoxy Chock is a two-component epoxy system consisting of partially filled containers of resin and hardener and is available in a 1.1 gallon unit yielding 0.15 ft^3 (260 in^3, 4.3 L). Epoxy Chock Ex has a third component consisting of a 5 lb. pail of aggregate to extend the Epoxy Chock. The yield, with aggregate extension, is 310 in^3 (5.1L; 0.18 cu. ft.).

SHELF LIFE

One year 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 B	**Epoxy Chock**	**Epoxy Chock EX**
Post Cure @ 140°F (60°C)	20,500 psi (141.3 MPa)	20,500 psi (141.3 MPa)
Compressive Strength, ASTM D 695		
24 Hours	12,000 psi (82.7 MPa)	12,000 psi (82.7 MPa)
7 Days	14,000 psi (96.5 MPa)	14,000 psi (96.5 MPa)
Post Cure @ 140°F (60°C)	19,000 psi (130.9 MPa)	18,000 psi (124.1 MPa)
Compressive Secant Modulus	3.5 x 10^5 psi (0.24 x 10^4 MPa)	5.35 x 10^5 psi (0.37 x 10^4 MPa)
Coefficient of Linear Thermal Expansion, ASTM C 531		
32°F to 140°F (0°C to 60°C)	20.8 x 10^{-6} in/in/°F (37.4 x 10^{-6} mm/mm/°C)	16.0 x 10^{-6} in/in/°F (28.8 x 10^{-6} mm/mm/°C)
Linear Shrinkage, ASTM C 531	0.0002 in/in	0.0002 in/in
Flexural Strength, ASTM C 580	7,000 psi (48.3 MPa)	5,000 psi (34.5 MPa)
Tensile Strength	6,800 psi (46.9 MPa) ASTM D 638	2,300 psi (15.9 MPa) ASTM C 307
Pot Life 70°F (21°C)	30 Minutes	40 minutes
Fire Resistance, ASTM D 635	Self Extinguishing	Self Extinguishing
Maximum Service Temperature	230°F (110°C)	230°F (110°C)

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.

PLACEMENT GUIDELINES

1. **SURFACE PREPARATION**: All surfaces to be in contact with Five Star® Epoxy Chock shall be free of oil, grease, and other contaminants. Steel surfaces with sharp edges or frets should be ground smooth prior to grout placement. Areas where bond is not desired should be thoroughly coated with a release agent, grease or wax. Seal all open areas with putty or similar material to contain grout and prevent unwanted leaks.
2. **FORMWORK**: Open celled foam or similar material should be installed on three sides of the chock area. The foam dam must fit firmly between the machinery bedplate and the foundation to provide a liquid-tight seal. Anchor bolts must be sprayed with a suitable release agent. Any jacking bolts that are located inside the chock area must also be treated with a suitable release agent. The entire chock area must be sprayed with release agent prior to installing the front dam. Check the chock area for any possible locations that could cause a leak and seal accordingly. Install a front dam made of steel angle iron or flat bar approximately 3/4 inch (18 mm) to 1 inch (25 mm) away from the machinery bedplate and high enough to allow the chocking material to be poured 1/2 inch (12 mm) above the bottom of the bedplate. Spray the inside of the front dam with release agent. Machinery must be in final alignment position prior to pouring Five Star® Epoxy Chock.
3. **MIXING**: For optimum performance, resin and hardener should be conditioned to between 70°F (21°C) and 80°F (27°C) for at least 12 hours before use. Premix Component A (resin) for approximately one minute. Pour Component B (hardener) into the Component A (resin) container and mix thoroughly for three to four minutes with a slow speed drill and paddle mixer at 200 rpm. Always keep the mixing blade completely submerged in the chocking material to minimize air entrapment. Be certain the mixing blade removes material completely around the sides and bottom of the resin can. This will ensure a uniform mix of the resin and hardener. Use oven-dried aggregate when extending Five Star® Epoxy Chock.
4. **POURING**: Always pour Five Star® Epoxy Chock from the lowest side of the chock area which will force air to escape through the open celled foam at the opposite corner. Continue to pour slowly until the entire chock area is filled and the chock overpour area is filled to a level approximately 1/2 inch (12 mm) above the bottom of the bedplate. NOTE: Do not scrape material from the sides of the container, use only material that flows freely from container. Be sure that all the chocks have hardened before leaving the area of the pour. For pour placements less than 1/2 inch (12 mm) or greater than 2½ inches (63 mm) or 0.15 ft^3 (260 in^3, 4.3 L), contact Five Star Products' Engineering and Technical Service Center at 1-800-243-2206.
5. **POST-PLACEMENT PROCEDURES**: Make sure the chocks have cured properly based on the following steel temperatures and curing times, then remove the front dam, release jacking bolts, tighten anchor bolts to recommended torque or tension.
6. **CLEAN UP**: All tools and equipment may be cleaned with a solvent such as MEK before material hardens. Sand may be used as an abrasive to aid in clean up.

NOTE: PRIOR TO APPLICATION, READ ALL PRODUCT PACKAGING THOROUGHLY. *For more detailed placement procedures, refer to Five Star® Design-A-Spec™ installation guidelines or call Five Star Products' Engineering and Technical Service Center at 1-800-243-2206.*

CONSIDERATIONS

- For pour placements less than 1/2 inch (12 mm) or greater than 2½ inches (63 mm) or exceeding 0.15 ft^3 (260 in^3, 4.3 L), contact Five Star Products' Engineering and Technical Service Center at 1-800-243-2206.

Steel Temperature	Cure Time
13°C to 15°C (55°F to 60°F)	48 hours
16°C to 18°C (61°F to 65°F)	36 hours
19°C to 21°C (66°F to 70°F)	24 hours
Above 23°C (Above 75°F)	18 hours

- Flowability, cure times and strength gain are adversely affected by lower temperatures.

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. **PRIOR TO USE, REFER TO SAFETY DATA SHEET.**

SKU/PRODUCT CODE	DESCRIPTION	#UNITS/PALLET	UNIT SIZE (WEIGHT | VOLUME - A & B)
91750	Five Star® Epoxy Chock	48	Resin (A): 16 lbs. (7.6 kg) | 1.05 gal (3.97 L) Hardener (B): 0.9 lbs. (0.4 kg) | 0.11 gal (0.42 L) 1.1 gallon pail
91775	Five Star® Epoxy Chock EX	48 (packaged on 2 pallets)	Resin (A): 16 lbs. (7.6 kg) | 1.05 gal (3.97 L) Hardener (B): 0.9 lbs. (0.4 kg) | 0.11 gal (0.42 L) 1.1 gallon pail Aggregate (C): One Bag 5 lbs. (2.3 kg)

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Specifications Subject to Change.
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