



# EPOXY NOVOLAC COATING

Highly Chemical Resistant Epoxy Coating  
Horizontal and Vertical Applications

## PRODUCT DESCRIPTION

Five Star® Epoxy Novolac Coating is a two-component, 100% solids, highly chemical resistant epoxy coating for horizontal and vertical applications effective on both steel and concrete.

## ADVANTAGES

- High chemical resistance
- Quick return to service—as early as 24 hrs @ 70°F (21°C)
- Resistance to chipping or cracking
- Low permeability
- Low odor
- Roller, brush, squeegee or spray apply

## USES

- Horizontal and vertical applications
- Secondary containment surfaces
- Truck loading and unloading pads
- Floors and trenches in process areas
- Concrete for concrete tanks
- Concrete and steel surfaces
- Process equipment support pads

## PACKAGING AND YIELD

Five Star® Epoxy Novolac Coating is a two-component system consisting of premeasured containers of resin and hardener. It is available as a 3.9 gallon (14.7 liter) unit yielding coverage of approximately 415 sq. ft. @ 15 mils (38.8 sq. m. @ 380 microns), 310 sq. ft. @ 20 mils (29.0 sq. m. @ 510 microns), 260 sq. ft. @ 24 mils (24.2 sq. m. @ 610 microns).

## SHELF LIFE

Two years in original unopened packaging when stored at normal ambient temperatures.

### TYPICAL PROPERTIES AT 70°F (21°C)

<b>Color</b>	Light Gray
<b>Film Thickness</b>	15-24 mils
<b>Pot Life at 70°F (21°C)</b>	35 minutes
<b>Hardness, ASTM D 2240 Shore D</b>	80-90
<b>Tensile Strength, ASTM D 638</b>	5,600 psi (38.6 MPa)
<b>Compressive Strength, ASTM D 695</b>	
7 Days	10,000 psi (70.0 MPa)
<b>In-Service Time</b> (allow 3-5 days for maximum cure)	1-7 days
<b>In-Service Time</b> (hydrocarbons)	24 hours
<b>Tack-Free Time</b>	3 hours

### Cure Schedule & Recoat Window

Substrate Temperature	Minimum Recoat	Maximum Recoat
50°F (10°C)	8 hours	14 days
70°F (21°C)	3 hours	14 days
100°F (38°C)	30 minutes	30 hours

### Chemical Resistance Chart\* at 70°F (21°C)

Solvents	Acids (Conc.)	Bases / Alkalines (Conc.)
Acetaldehyde	Acetic (1-50%)	Ammonia (1-25%)
Acetone	Acid plating solutions	Ammonium Hydroxide (1-25%)
Acetonitrile	Adipic (1-25%)	Aniline
Acrylonitrile	Azotic (1-25%)	Barium Hydroxide (1-sat.)
Butyl acetate	Boric (1-sat.)	Black Pulp Liquor
Cyclohexane	Chromic (1-30%)	Butyl Amine
Ethanol	Chlorohydric (1-37%)	Cadmium Cyanide Plating
Ethyl acetate	Citric (1-sat.)	Calcium Hydroxide (1-25%)
Ethyl alcohol	Dibasic (1-sat.)	Chromium Trioxide (1-25%)
Formaldehyde	Ethanoic (1-50%)	Copper Cyanide Plating
Isopropyl Alcohol	Ethylic (1-50%)	Dimethyl Aniline
Jet Fuel	Engravers (1-50%)	Hydrogen Peroxide (1-30%)
Kerosene	Hydrochloric (1-37%)	Green Pulp Liquor
Methyl Ethyl Ketone	Hydrofluoric (1-20%)	Soap solutions
Methanol	Lactic (1-sat.)	Sodium Cyanide (1-15%)
Methyl Alcohol	Nitric (1-25%)	Sodium Hypochlorite (1-9%)
Rubbing Alcohol	Oleic (100%)	Sodium Hydroxide (1-50%)
Wood Alcohol	Oxalic (1-sat.)	Triethanolamine
1,1,1 Trichloroethane	Phosphoric (1-60%)	Triethylamine
Phenol	Sulfuric (1-98%)	Potassium Hydroxide (1-sat)

\* NOTE: Many factors effect chemical resistance. Application design, service and exposure temperatures, and the type and amount of impurities in the chemical or in the environment are some important considerations. These test results are reported to serve as a guide to the applicability of the Novolac systems.

The data shown above reflects 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:** Surfaces should be clean and sound. Remove dust, laitance, grease, curing compounds, impregnations, and waxes. Concrete should be sandblasted or prepared by other acceptable mechanical means. Steel should be sandblasted to an SSPC-SP6 commercial finish. Five Star® Epoxy Novolac Primer should be applied to concrete surfaces prior to installation of coating.
2. **MIXING:** For optimum performance, all components should be conditioned to between 65°F and 85°F (18°C and 29°C). Premix both Component A (resin) and Component B (hardener) thoroughly before mixing. Place all of Component A and Component B into a suitable container. Component A and Component B are mixed in a 3:1 ratio by volume. Mix Component A and Component B with a slow speed mixer for no more than 3 minutes. Avoid air entrapment. Place mixed material immediately. Mix only that amount of material that can be placed within 35 minutes.
3. **METHODS OF PLACEMENT:** Five Star® Epoxy Novolac Coating may be applied using a squeegee, roller, brush, or may be sprayed using airless equipment. Apply material in even coats.
4. **POST PLACEMENT PROCEDURES:** In-service operation may begin as early as 24 hours assuming proper cure temperature.
5. **CLEAN UP:** Tools with fresh material may be cleaned with MEK, acetone, or a solution of warm water and strong detergent.

**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

- Minimum application temperature of substrate is 40°F (4°C) and rising. Low temperatures adversely affect flowability and strength gain.
- Mix Part A : Part B in a 3:1 ratio by volume.
- Concrete must be a minimum of 7 days and coated with Five Star® Epoxy Novolac Primer prior to application of Five Star® Epoxy Novolac Coating.
- Cold temperatures lengthen cure time, hot temperatures decrease cure time.
- Maximum operating temperature is 350°F (177°C).
- Sulfuric/nitric acids will discolor/stain coating brown/red. Wash after exposure will remove most discoloration.
- Increased slip/skid, chemical, and/or wear resistance with broadcast/topcoat application with dried silica sand.

## CAUTION

FOR INDUSTRIAL USE ONLY. 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.**

For worldwide availability, additional product information and technical support, contact your local Five Star® distributor, local sales representative, or call Five Star Products' Engineering and Technical Service Center at 1-800-243-2206.

SKU/PRODUCT CODE	DESCRIPTION	#UNITS/PALLET	UNIT SIZE
34002	Five Star® Epoxy Novolac Coating	36	Resin (A): 39.6 lbs. (18.0 kg.) pail Hardener (B): 8.1 lbs. (3.7 kg.) pail

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Specifications Subject to Change.

For most current version of datasheet, go to [FiveStarProducts.com](http://FiveStarProducts.com)

**Five Star Products, Inc.**  
**Corporate Headquarters**  
2 Enterprise Drive, Suite 303  
Shelton, CT 06484 USA  
Tel: +1 203-336-7900 • Fax: +1 203-336-7930  
[FiveStarProducts.com](http://FiveStarProducts.com)



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