



FIVE STAR[®] EPOXY NOVOLAC COATING

PRODUCT DESCRIPTION

Five Star Epoxy Novolac Coating is a two component, 100% solids, highly chemical resistant epoxy coating. Five Star Epoxy Novolac Coating has excellent flowability, is moisture insensitive and highly chemical resistant.

- ADVANTAGES**
- High Chemical Resistance
 - Excellent thermal shock, impact and wear resistance
 - Resistant to chipping or cracking
 - Low permeability
 - Low odor

- USES**
- High chemical resistance requirements
 - Secondary containment surfaces
 - Chemical vapor barrier for structural steel
 - Coatings for concrete or steel tanks

TECHNICAL SUPPORT Five Star Products maintains the industry's foremost Engineering and Technical Support Group: with over 30 years of experience in concrete restoration

- Technical Center staffed with experienced engineers available for consultation
- Design-A-Spec[™] for engineering specification assistance
- Experienced representatives for field service
- Corporate research laboratory available to customize products for unique applications

PACKAGING AND YIELD: Five Star Epoxy Novolac Coating is packaged in 2.5 gallon, 5 gallon and 15 gallon units. Each unit consists of a measured container of component A resin and component B hardener.

Coverage: Approximately 80 sq. ft per gallon at 20 mil thickness. Note that coverage is affected by several factors including; condition of substrate, temperature, waste and jobsite conditions.

SHELF LIFE Two years in original unopened packaging.

TYPICAL PROPERTIES AT 73°F (23°C)

Color		Tile Red, Concrete Gray
Film Thickness		20 mils
Pot Life @ 72°F/21°C		20 minutes
Hardness	ASTM D-2240 Shore D	75
Tensile Strength	ASTM D 638	7,200 psi
Compressive Strength	ASTM D 695	12,000 psi
In-Service Time (allow 3-5 days for maximum cure)		72 hours

CHEMICAL RESISTANCE CHART#

Solvents/Organics

Acetaldehyde
Acetone
Acetonitrile
Acrylonitrile
Butyl acetate
Cyclohexane
Ethanol
Ethyl acetate
Ethyl alcohol
Formaldehyde
Isopropyl Alcohol
Jet Fuel
Kerosene
Methyl Ethyl Ketone
Methanol
Methyl Alcohol
Rubbing alcohol
Wood Alcohol
1,1,1 Trichloroethane

Acids (Conc.)

Acetic (1-50%)
Acid plating solutions
Adipic (1-25%)
Azotic (1-50%)
Battery (1-98%)
Chromic (1-30%)
Chlorohydric (1-37%)
Dibasic (1-sat.)
Ethanoic (1-50%)
Ethylic (1-50%)
Engravers (1-50%)
Hydrochloric (1-37%)
Hydrofluoric (1-40%)
Mattling (1-98%)
Nitric (1-50%)
Oil of vitriol (1-98%)
Oleic
Phosphoric (1-85%)
Sulfuric (1-98%)
Vitriol (1-98%)

Bases/Alkalines (Conc.)

Ammonia (1-25%)
Ammonium Hydroxide (1-25%)
Aniline
Barium Hydroxide (1-sat.)
Black Pulp Liquor
Butyl amine
Cadmium Cyanide Plating
Calcium Hydroxide (1-25%)
Chromium Trioxide (1-25%)
Copper Cyanide Plating
Dimethyl aniline
Hydrogen Peroxide (1-30%)
Green Pulp Liquor
Soap solutions
Sodium Cyanide (1-15%)
Sodium Hypochlorite (1-9%)
Sodium Hydroxide (1-50%)
Triethanolamine
Triethylamine
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 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:** Surface must be clean and sound. Remove dust, laitance, grease, curing compounds, impregnations and waxes. Concrete may be sandblasted or prepared by other approved mechanical means. Steel should be sandblasted to an SSPC-SP-5 commercial finish.
2. **MIXING:** For optimum performance, all components should be conditioned to between 65°F and 85°F (18° 29°C). Premix both Component A and Component B thoroughly before mixing. Place all of Component A (resin) and Component B (hardener) into a suitable container. Component A and Component B are mixed in a 1.5:1.0 ratio by volume. Mix Component A and Component B with a slow speed mixer for no more than 3 minutes to avoid air entrapment. Place mixed material immediately-mix only that amount of material that can be placed within 20 minutes.
3. **METHODS OF PLACEMENT:** Five Star Epoxy Novolac Coating may be applied using a squeegee, roller or brush. Apply material in even coats.
4. **VERTICAL APPLICATIONS:** Some vertical applications may require the use of a thixotropic or rheological additive to thicken the coating. For further assistance on vertical applications contact Five Star Technical Services at 800 243-2206.
5. **POST PLACEMENT PROCEDURES:** In-service operation may begin after 72 hours cure.
6. **CLEAN UP:** Tools with fresh material maybe cleaned with M.E.K , Xylene or a solution of water and strong detergent.

NOTE: PRIOR TO APPLICATION, READ ALL PRODUCT PACKAGING THOROUGHLY. For more detailed placement procedures call the Five Star Products Engineering and Technical Center at 203-336-7900.

LIMITATIONS

- Minimum application temperature of substrate is 40°F (4°C) and rising. Low temperatures adversely affect flowability and strength gain.
- Do not thin with solvents.
- Minimum age of concrete must be 21 to 28 days, depending on curing and drying conditions prior to application.
- Cold temperatures lengthen cure time, hot temperatures decrease cure time.
- Maximum operating temperature is 200°F (93°C).

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 MATERIAL SAFETY DATA SHEET.**

WARRANTY: "FIVE STAR PRODUCTS, INC. (FSP) PRODUCTS ARE MANUFACTURED TO BE FREE OF MANUFACTURING DEFECTS AND TO MEET FSP'S CURRENT PUBLISHED PHYSICAL PROPERTIES WHEN APPLIED IN ACCORDANCE WITH FSP'S DIRECTIONS AND TESTED IN ACCORDANCE WITH ASTM AND FSP STANDARDS. HOWEVER, SHOULD THERE BE DEFECTS OF MANUFACTURING OF ANY KIND, THE SOLE RIGHT OF THE USER WILL BE TO RETURN ALL MATERIALS ALLEGED TO BE DEFECTIVE, FREIGHT PREPAID TO FSP FOR REPLACEMENT. THERE ARE NO OTHER WARRANTIES BY FSP OF ANY NATURE WHATSOEVER, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE IN CONNECTION WITH THIS PRODUCT. FSP SHALL NOT BE LIABLE FOR DAMAGES OF ANY SORT, INCLUDING PUNITIVE, ACTUAL, REMOTE OR CONSEQUENTIAL DAMAGES, RESULTING FROM ANY CLAIMS OF BREACH OF CONTRACT, BREACH OF ANY WARRANTY, WHETHER EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR FROM ANY OTHER CAUSE WHATSOEVER. FSP SHALL ALSO NOT BE RESPONSIBLE FOR USE OF THIS PRODUCT IN A MANNER TO INFRINGE ON ANY PATENT HELD BY OTHERS."

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 Center at 203-336-7900.

Corporate Offices

Five Star Products, Inc
750 Commerce Drive
Fairfield, CT 06825
Tel: 203-336-7900
Fax: 203-336-7930
www.fivestarproducts.com



American Owned & Operated

©2006 Five Star Products, Inc.
NVLVCTG rev. 050106 DJD