

PRODUCT NAME

Gem-Cote™ EP AR ST

Novolac Epoxy Coating System



MANUFACTURER

Gemite® Products Inc.

Toll Free: 888-4-GEMITE (888-443-6483)

E-mail: techinfo@gemite.com

Web Site: www.gemite.com

USA

160-3480 East Robinson Rd.

Amherst, NY 14228

Phone 888-443-6483

Fax 888-443-6329

CANADA

1787 Drew Road

Mississauga, Ontario L5S 1J5

Phone 905-672-2020

Fax 905-672-6780

FEATURES

- 100% solids (no solvent)
- Resists Strong Acids
- Resists Strong Alkalis
- Resists solvents
- Designed for “splash and spill” applications
- Superior Toughness
- Fast Set & Strength Development
- High Abrasion Resistance
- High Durability
- High Chemical Resistance
- Excellent Bond
- Fungus & Mold Resistant

PRODUCT DESCRIPTION

Basic Use

Gem-Cote EP AR ST is used for protection of industrial concrete floors in “splash and spill” of acids, alkalis and solvents. It is also used in secondary containment of aggressive chemicals. It is suitable to use in broadcast application to provide a non-slip floor coating for a pedestrian areas where aggressive chemicals are present.

Composition

Gem-Cote EP AR ST is a two component system consisting of novolac epoxy resin and a curative providing superior chemical resistance.

Limitations

Gem-Cote EP AR ST will cure at the minimum temperature of 10 °C (50° F). Application becomes difficult below 15° C (59° F) due to the increased viscosity. To reach the recommended spread rates, both the substrate and the materials should be at 20-30 °C (68- 86° F). *Gem-Cote EP AR ST* bonds best to clean & dry substrate, but it will bond to relatively fresh concrete, after 2-3 days drying at 20 °C (68 °F). The proper surface preparation is essential for successful application. Consult Gemite Technical Service before starting a project to ensure that the correct surface preparation and application procedures are followed.

Health and Safety

Two-component epoxy systems can produce severe injury to, or destruction of skin and eye tissues. They are classified as corrosive for shipping purposes. Precautions must be taken to prevent prolonged or repeated skin contact and it is essential to protect the eyes from splashes. Protective clothing, rubber gloves and chemical goggles should be worn. Do NOT smoke, or use open lights, flames, motors, or pilot lights in the vicinity of application. Some people become sensitized when working with epoxy resin systems. Avoid breathing vapors, particularly if these products are used in a confined area. Face mask with respirator #1224 is usually adequate. **FOR INDUSTRIAL USE ONLY.** Consult MSDS for additional information.

Colors

Gem-Cote EP AR ST is supplied as a clear and colored coating. Standard Color: Clear, Red, Charcoal Grey

Packaging

Gem-Cote EP AR ST Kit is packaged in 3.78 l (1 USG) and consists of *Gem-Cote EP AR ST Comp. A* and *Comp. B*. For volume projects other packaging is available.

Coverage

See the INSTALLATION section.

Storage and Shelf Life

In unopened containers, stored on pallets in a heated area it will have a 2 years shelf life. Do not allow product to freeze.

TECHNICAL DATA

Gem-Cote EP AR ST Grey - Physical Properties

Viscosity Component A	2,300 cps
Viscosity Component B	400 cps
Viscosity (after blending A & B)	2,000 cps
Mixing Ratio - by Volume	A to B 2 to 1
Compressive Strength ASTM D 695	62.1MPa (9,000 psi)
Flexural Strength ASTM D 790	57.9 MPa (8,400 psi)
Tensile Strength ASTM D638-08	45.2 MPa (6,550 psi)
Tensile Elongation D638-08	4.2 %
Hardness Shore D ASTM D2240	89
Abrasion Resistance 1000 rev. ASTM D1044 Taber 1 kg load, CS 17 wheels	0.018 gms
Adhesion to Concrete	Concrete failure at 2.4 MPa (350 psi)
Curing	Allow 12 hrs for foot traffic, 24 hrs for all traffic

Gemite Products Inc.
July 2008

3 & 9

03064 Concrete Sealers
09780 Floor Treatment

Thermal Shock (Broadcast System only) Cycling from -5°C to 70°C	Passes 30 cycles
Chemical Resistance	See the table below

INSTALLATION

Guide Specifications are available and must be followed.

Surface Preparation

New concrete should air dry, after wet curing, for min. 28 days at 20°C. Concrete surface must be clean and any existing coatings, debris, oil, grease, dirt, wax, laitance, curing compounds & other contaminants, which may interfere with proper adhesion, must be removed. Sandblast or shotblast the surface to remove contaminants. Special consideration must be given to oil and any other material that may have penetrated into the concrete. Always use Pull-Off testing to verify surface preparation adequacy. Steel surfaces to be coated must be abrasive blast clean to white metal and coating must be applied immediately, before oxidation of steel occurs.

Mixing & Application

Coating: Mix *Gem-Cote EP AR ST* as directed and apply 2 coats at the min. rate of 3.5-3.7 m²/L (142 -150 ft²/ USG), per coat. Open component “A” and stir until evenly blended. Open component “B” and stir until evenly blended. Mix “A” and “B” in a separate clean container. Agitate with a low speed mixer (200-300 rpm), being sure to scrape the bottom and sides of the container while mixing. *Gem-Coat EP AR* should be applied using a stiff brush or squeegee and back rolled using a short nap roller.

Buildup System: Mix *Gem-Cote EP AR ST* (see Coating) & apply at the rate of 2 m²/L for the 1st coat Broadcast silica sand #51 or #71 into the wet material to saturation, approx. 2 kg/ m² (0.4 lb. ft²). Allow to set and sweep away excess sand. Apply 2nd coat of *Gem-Cote EP AR ST* at 4 m²/L (for profiled surface), or at 2 m²/L for smoother profile. For a very smooth surface apply a 3rd coat of *Gem-Cote EP AR ST* at 2.5 m²/L. Total film thickness 2-3 mm (80-120 mils) for the buildup (broadcast) system.

Drying & Curing *Gem-Cote EP AR ST*

Pot Life (200 gms)	20 min. @ 21°C (77 °F)
Touch dry thin film	12 hrs @ 21 °C (77 °F)
Foot Traffic	12 hrs
All Traffic	24 hrs.
Chemical Exposure	48 hrs

Clean Up

Use Xylol and MEK blend (1:1) to clean all tools and equipment immediately after use. **Xylol and MEK are flammable and smoking, open lights, flames, motors, or pilot lights must NOT be used in the vicinity of application. Smoking near the solvent must be forbidden.**

AVAILABILITY AND COST

Gem-Cote EP AR ST is available worldwide. Contact the manufacturer for the name of the nearest Representative/Distributor and current pricing information.

WARRANTY

A limited twelve (12) month Material Replacement Warranty is available where applicable. For details contact Gemite’s Head Office.

TECHNICAL SERVICE

Technical advice on suitability of *Gem-Cote EP AR ST* for particular application, Specification assistance & Application advice contact Gemite Technical Service USA (888) 443-648 / Canada (905)672-2020, or at techinfo@gemite.com

Chemical Resistance			
Acids	Bases	Solvents	
Acetic 1-50%	Ammonia 1-25%	Acetaldehyde	Jet Fuel
Battery Acid 1-98%	Black Pulp Liquor	Acetone	Kerosene
Chromic 1-30%	Green Pulp Liquor	Butyl Acetate	MEK
HCl 1-37%	Hydrogen Peroxide 1-30%	Cyclohexane	Formaldehyde
Hydrofluoric 1-40%	Calcium Hydroxide 1-25%	Ethanol	Methyl Alcohol
Nitric 9-20%	Sodium Hypochlorite 1-9%	Ethyl Acetate	Phenol
Oleic	Sodium Hydroxide 1-50%	Isopropyl Alcohol (Rubbing Alcohol)	