

## HIGH ABRASION NOVOLAC EPOXY

### Description

VFI-3214 is a two component, 100% solids, Novolac Epoxy 1:1 system for high abrasion resistance. It provides high heat and temperature resistance. VFI-3214 works well on both vertical and horizontal surfaces. It has high anti sagging properties and maintains a uniform thickness. Apply at temperatures above 50°F with a relative humidity less than 85%.

### Usage

Anti-corrosive coating for pipelines with high chemical resistance and abrasion resistance for steel tanks. Also use as a chemical tank lining for inorganic acids, petroleum products and solvents in containment applications.

### Color

Standard color is light gray. Contact Volatile Free, Inc. for more information on custom colors.

## Physical Properties

### Hardness

84 Shore D

### Tensile Properties

ASTM D-412

Strength: >1500 psi  
Elongation: < 5 %

### Solid Material Density

90.21lb/ft<sup>3</sup>

### Impact Resistance

Unnotched Izod  
ASTM D-2794 25-35 in/lbs

### Adhesion

ASTM D-4541  
>1000 psi (shot blasted steel with white profile)

## Weather & Environmental Performance

### Chemical Resistance

Water, high concentration inorganic acid, bases, solvents, oil, gasoline and methanol up to 100°C.

Resists mid-concentration acids (pH 0.50 or above) and solvents at temperatures up to 200°F.

## Liquid Component Properties

### Ratio

#### By volume

1:1

#### By weight

"A" side 100  
"B" side 83.20

### Recommended Coverage and Yield

40-16 ft<sup>2</sup>/gal (40 mil 100 mil) or 1600 mil ft/gal

### Solids

100%

### Viscosity (@ 75°F)

"A" side: 45000 cps  
"B" side: 25000 cps  
Mixed: 40000 cps

### Liquid Material Density & Specific Gravity

"A" side 13.16 lbs/gal (SG 1.58 g/ml)  
"B" side 10.95 lbs/gal (SG 1.31 g/m)  
Mixed 12.06 lbs/gal (SG 1.45 g/m)

### VOC

0%

### Toxicity

Non toxic

### Shelf Life

12 months in unopened container. Keep Poly "B" side covered at all times when not in use.

## Application

### Equipment

Electric or pneumatic mixer, a mixing vessel, a flat or notched squeegee and napless 3/8" nap roller for

batch mix is required. Use the proper equipment and accessories for spray application.

### ■ Surface Preparation

For direct-to-steel application, remove all visible contaminants by solvent or chemical washing (SSPC SP1 accordance). Abrasive blast steel to near white (SSPC-SP 10) or better with a 2-4 mil blast profile. All weld splatter must be removed from the surface and rough welds must be ground smooth prior to coating. For pipe coating, all surfaces must be dry and all contaminants must be removed. Remove the surface gloss by light abrasive blasting or power tool.

### ■ Material Preparation

Pre mix each component separately for 2-3 minutes in drums prior to mixing or spraying. For a bulldog spray, mix 1 part Resin (A) to 1 part Hardener (B) by volume adding the B to the A in a separate mixing vessel. Mix with an electric or pneumatic mixer or low speed drill with mixing paddle. Adjust the bulldog settings to 2000-3000 psi. Spray substrate up to 30 mils per pass. **Do not thin.**

**CAUTION! There will only be about a 6-8 minute window to get the material out of the batch container and the lines must be cleaned after spraying is complete.**

### ■ Spraying

To plural spray using a manifold use ¼" to 3/8" X 8" to 18" static mix tubes with .019 to .021 tip and 1000 psi while heating both individual system components to 100-110°F prior to spraying. To spray with airless spray, use .019-.023 tip at 2000-2500 psi with in line heater only. (Caution: short pot life). It is not recommended that you use a conventional spray. Apply two coats at 30 mils thick each for dry application to a total of 60 mils. For more information on spray equipment contact your equipment supplier for information on both plural spray and airless spray systems. Maintain a substrate temperature between 45-150°F. The difference in temperature between the substrate and the coating should never exceed 25°F. For best chemical and temperature

resistance force cure for 12 hours at 150°F, 6 hours at 250°F.

### ■ Mixing

One gallon kit can be hand mixed. Larger quantities must be power mixed. Contact your VFI representative for specific mixer requirements.

### ■ Primers

VFI-3200, VFI-3204, VFI-3206 or VFI-3211 for concrete. No primer needed for steel substrates.

### ■ Clean Up Solvent

Xylene or MEK

### ■ Reactivity

- **Gel time:** 8-10 minutes (150g mass); 6-8 minute pot life @ 75°F
- **Tack free:** 2-3 hours @ 77°F
- **Place into service time:** 6 hours foot traffic @ 75°F
- **Recoat time:** 1-4 hours @ 75°F
- **Cure time:** 5 days for full cure

### ■ Limitations

**Short pot life.** Please verify your application with your VFI representative.

### ■ Precautions

B side is CORROSIVE! Refer to the MSDS for specific component hazards. Make sure that the proper surface preparation steps are taken to avoid delaminating and other negative deformities.

### ■ Thinning

Thinning is not recommended.

### ■ Packaging

- 1 Gallon Can
- 5 Gallon Pail
- 15 Gallon Drum

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