

## ALIPHATIC QWIK-SPRAY LINING SYSTEM

### Description

VFI-345QS Aliphatic Polyurea is a 100% solids, two component, elasto-plastic; UV stable fast set coating or lining system. It is characterized by high tensile and tear properties, outstanding durability, and gloss and color retention. Its hard surface makes it easy to clean and sanitize. **This product is USDA compliant.**

### Usage

VFI-345QS can be used for coating concrete and steel walls, columns, beams, material handling equipment and water proofing structures, protecting these substrates from environmental degradation.

### Color

Available in white, dark gray, red, brown, green, and blue, safety yellow, eggshell and black.

## Physical Properties

### Hardness

ASTM D-2240 68 D

### Tensile Properties

ASTM D-412  
Strength: 2897 psi min.  
Elongation: 26%  
Elastic Modulus: 27269 psi  
Yield Strength: 2568 psi  
Permanent Set: 5% max..

### Tear Strength

ASTM D-624: 453 pli

### Solid Material Density

(white) 74.25 PCF

### Cold Temperature Flexibility

1.1875 inch mandrel @ 2°F Pass

### Adhesion

ASTM D-4541 Prepared steel  
w/primer cohesive failure 675 lbs/in<sup>2</sup>

## Weather & Environmental Performance

### Service Temperature

-0° to 180°F

### Weatherability QUV Test Data

ASTM G-53 QUV Weatherometer exposure equivalent to 15 years with no visible deterioration or change in physical properties.

### Chemical Resistance

Good hydrolytic stability to 180°F. Good resistance to inorganic bases, acids, and

hydrocarbon solvents. Fair resistance to oxygenated and chlorinated solvents.

### Fire Resistance

Not Rated

### Hydrolytic Properties

#### Water absorption

ASTM D-471  
24 hours @ room temperature: 1.37%

#### Water Vapor Permeability

ASTM E-96 T.B.D.

## Liquid Component Properties

### Ratio

Volume: 1 to 1

### Coverage or Yield

One case of six kits (750 x 750 ml) will cover 100 sq. ft. @ 38 mil thickness.

### Solids

Weight: 100%  
Volume: 100%

### Viscosity

Poly Component: (white) 1650 cps @ 77°F  
Colors will vary  
Iso Component: 600 cps @ 77°F

### Liquid Material Density & Specific Gravity

Poly Component: 10.60 lbs/gal (SG 1.273 g/ml)  
(white)  
Iso Component: 9.20 lbs/gal. (SG 1.104 g/ml)

- **VOC**  
Conforms to all air pollution regulations.  
Contains no Volatile Organic Compounds.
- **Toxicity**  
Iso component contains aliphatic polymeric isocyanate requiring fresh air supply respirator, gloves and protective clothing during application.
- **Storage Stability or Shelf Life**  
6 months in unopened cartridges @ 50°F - 90°F
- **Reactivity**
  - **Gel Time:** 18 to 20 seconds
  - **Tack Free:** 5 - 10 minutes
  - **Place Into Service:** Product can be placed into light duty service after four hours of cure time at 70°F minimum, full duty after 24 hours.
  - **Cure Time:** Full cure in 2-7 days

## Application

**PLEASE VIEW THE QWIK-SPRAY TRAINING VIDEO BEFORE SPRAYING THIS PRODUCT. Call your VFI representative with questions.**

- **Equipment**  
Apply VFI-345QS using a Qwik-Spray pneumatic spray dual cartridge applicator. Ensure that the compressed air source is dry, and can provide a constant 10 cfm at 90 psi. Use the ¼"X24 static mixer with the air atomizer tip supplied with your cartridges.
- **Material Preparation**  
Cartridges should be approximately 77°F to 83°F before using. The temperature of the product is very important prior to application. Shake cartridges for 30 seconds. Install static mixer on to cartridge and insert cartridge into the applicator making sure the cartridges stay straight upright until you are ready to apply the coating.
- **Applicator Preparation**  
With 110 psi inlet pressure, set fluid flow to maximum and the airflow to the atomizer at 25-50 psi. Different material temperatures require different settings.
- **Mixing**  
A paint shaker can be utilized for the mixing of stored material. Please contact your VFI representative for specific mixer recommendations.
- **Substrate Preparation**  
All surfaces must be free of contaminants and be able to provide mechanical adhesion for the coating.
- **Primers**  
Sealing porous surfaces with VFI-1007 is recommended. VFI-#11 Epoxy Primer is also recommended for cementitious and masonry surfaces where enhanced adhesion is needed. VFI-1003 Primer is recommended for maximum adhesion to white blasted steel surfaces. Please
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- **Spray Techniques**
  - Begin spraying on a piece of cardboard or other disposable material until an acceptable spray pattern is achieved.
  - This should take approximately 2 to 3 seconds.
  - Fan the spray over the object to be coated with even passes, building coats to the desired thickness.
  - The flow of the material must be continuous. If flow stops the static mixer must be changed.
  - Visually monitor material levels and cease coating just prior to emptying the cartridge to ensure that an even ratio of the material is applied to the surface.
  - An application of VFI-345QS can be textured by allowing the base coat to gel for approximately 18 to 20 seconds before applying a texturing coating.
- **Clean-up Solvent**  
Xylene, MEK. For reduced fire hazard use glycol ethers or environmentally acceptable chlorinated solvents.
- **Limitations**  
Contact your VFI representative for appropriateness of this product for your specific application.
- **Precautions**  
See Material Safety Data Sheet for complete safety data. Protect from exposure to moisture. Water will cause the "A" component (ISO) to generate carbon dioxide with resulting high pressure in closed containers.
- **Packaging**  
750 x 750 ml dual cartridges, six sets to a case. 36 cases per pallet. Single colored cases only.

contact your VFI representative for more specific preparation recommendations.

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