

ALIPHATIC POLYUREA SPRAY ELASTOMER SYSTEM

■ Description

VFI-345 is a high performance aliphatic polyurea elasto-plastic polymer. It is characterized by high tensile and tear properties, outstanding durability, gloss and color retention. It is composed of aliphatic isocyanate quasi-prepolymers which are reacted with amine prepolymers to form a polyurea elastomer. Both components are low viscosity fluids which react very quickly to form a tough polymer when mixed and applied using hot plural component airless spray equipment. Meets the requirements for USDA incidental food contact.

■ Usage

Some applicable uses would include, but not be limited to the following:

- Lining of interior truck beds, truck bodies and undercoating to provide corrosion protection, resistance to abrasion, skid resistance and to improve appearance.
- Wood decks and concrete floors.
- Sanitary coatings for lining meat, poultry and other food processing facilities.
- Waterproofing for exterior block and concrete surfaces, with excellent color stability.

■ Color

Available colors are blue, gray, green, red, eggshell, safety yellow, brown and white

Physical Properties

■ Tensile

ASTM D-412
Strength: 2895 psi min.
Elongation: 55% min.
Permanent Set: 10% max.

■ Tear Resistance

ASTM D-6241
Die C 581p/i

■ Weatherability

ASTM G-53
No significant color change, loss of gloss, cracking, checking or loss of integrity after 2000 hours.

■ Service Temperature

-50° to 180°F.

■ Abrasion Resistance

Excellent.

■ Hardness

ASTM D-2240
Shore D 68

■ Chemical Resistance

Good resistance to inorganic bases, acids, and hydrocarbon solvents. Fair resistance to oxygenated and chlorinated solvents. Good resistance to hot water up to 180°F.

■ Cold Temperature Flexibility

ASTM D-3111
Pass 1 inch mandrel @ -40°F.

Liquid Component Properties

■ Coverage

1600 mil square feet per gallon.

■ Solids

"A" 100% by weight and volume.

"B" 100% by weight and volume.

■ Volatile Organic Compounds

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.

■ Flash Point

ASTM D-56 (TCC)

Greater than 200°F

■ Viscosity

"A" Component:

1600-2600 cps @ 77°F.

"B" Component:

500-700 cps @ 77°F.

■ Shelf Life

6 months in unopened containers at 50°F - 90°F.

■ Thinner

Not recommended.

■ Cure Time

Gel in 10-15 seconds. Cure to tack free in 4-10 minutes depending upon thickness and temperature. Develops chemical resistance and physical properties in 24 hours. Recoatable for up to 4 hours.

■ Mix Ratio

1:1 by volume.

■ Clean Up Solvent

Toluene, Xylene, M.E.K. For reduced fire hazard use glycol ethers or environmentally acceptable chlorinated solvents.

Application

■ Equipment

VFI-345 requires hot airless plural component equipment capable of producing a minimum of 2500 psi and heat to 140°. Self-purging impingement mixing spray guns are required. Contact Volatile Free, Inc. or more specific spray gun recommendations.

■ Primer

Self-priming with proper preparation on most surfaces. Please contact Volatile Free, Inc. for specific recommendations.

■ Precautions

See Material Safety Data Sheet for complete safety data. Fresh air supply breathing equipment is required for protection from Aliphatic isocyanate. Protect from exposure to moisture. Water will cause the "A" component (ISO) to generate carbon dioxide with resulting high pressure in closed containers.

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