



## VFI-2505 SPRAYABLE STRUCTURAL PLASTIC

### Overview

- **Description**  
 VFI-2505 is a two component, 100% solids, one to one by volume, fast set polyurethane structural coating.
- **Usage**  
 VFI-2505 is intended for use as a plural component spray applied coating for a variety of applications including but not limited to the following:
  - Chiefly used as the structural plastic in open molding operations.
  - Structural plastic for use in any part fabrications where superior impact resistance is required while maintaining high hardness and modulus.
  - May be used in encapsulant type applications in which higher heat distortion and impact are required.
  - Aromatic base coat used to provide a continuous surface for porous wood constructs.
- **Color**  
 Neutral, Black, or Off-white are typical. Contact Volatile Free, Inc. for information on custom colors.

### Physical Properties

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| ■ <b>Hardness</b><br>ASTM D-2240<br>Shore D: 65-70 | ■ <b>Tensile</b><br>ASTM D-412<br>Tensile Strength: 4352 psi<br>Elongation: 15%<br>Yield Strength: 4250 psi<br>Elastic Modulus: 29,800 psi |
| ■ <b>Tear Resistance</b><br>ASTM D-624: 350 lb/in  |  |

### Weather & Environmental Performance

- **Weatherability**  
 QUV results indicate that yellowing may be visibly discerned in neutral or off-white within one week actual exposure. While physical properties do not vary much with exposure to UV over time, chalking may occur relatively rapidly. If your application involves significant UV exposure when placed into service, you should consider protecting the VFI-2505. with an aliphatic topcoat.
- **Chemical Resistance**  
 Hydrolytic Stability: Recovers after 10 days 150°F immersion. Generally resistant to most dilute aqueous agents when cleaned off within 10 hours of contact. Very difficult to stain by virtue of its high hardness and low porosity. Constant or frequent immersion service not recommended.

### Liquid Component Properties

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|-------------------------|--|
| ■ <b>Solids</b><br>100% | ■ <b>Viscosity</b><br>"A" side: 350-600 cps @ 77°F<br>"B" side: 600-800 cps @ 77°F |
|-------------------------|--|

- **Liquid Density & Specific Gravity**  
“A” side: 9.80 lb/gal  
“B” side: 8.55 lb/gal
- **Flash Point**  
ASTM D-56 (TCC)  
Greater than 200°F

- **Toxicity**  
ISO component contains polymeric isocyanate requiring fresh air supply respirator, gloves, and protective clothing during application.
- **Storage Stability or Shelf Life**  
One year in unopened containers at 50° - 90°F. Do not preheat over 100°F maximum without mixing.

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## Application

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- **Equipment**  
Plural component airless spray equipment capable of maintaining temperatures of 140°-160°F, 1800 psi minimum pressure and a 1:1 volume mix ratio. Compatible with a wide range of plural component spray guns, however, for detailed work the Gusmer GX-8 and especially the Gusmer DI modification for the GX-7 comes highly recommended. Contact Volatile Free, Inc. for specific instructions and spray equipment needed.
- **Material Preparation**  
Thoroughly power mix Poly and ISO component before beginning to apply. Usually this takes a minimum of 15 minutes per drum with proper mixing equipment. For specific mixers, blade and shaft length, contact Volatile Free, Inc. A hand mixer is not adequate.
- **Reactivity**
  - **Gel time:** 18-22 seconds @ room temperature  
>5 seconds @ 150°F
- **Cure Time**  
Applied coating will set in 2 – 4 minutes at 70°F, depending on film thickness, liquid material temperature and the substrate temperature. Product can be placed into service after four hours of cure time at 70°F minimum. It is encouraged to begin priming or painting the plastic at the first sign of cure (typically 2 minutes) to maximize adhesion.

For more information, contact us today at **800-307-9218**

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