

PLASTIC ENCAPSULANT

■ Description

VFI-2512 is a two component, 100% solids, one to one by volume, fast set polyurethane coating.

■ Usage

VFI-2512 is intended for use as a plural component spray applied coating for a variety of applications including but not limited to the following:

- Impact resistant coating for the protection of easily deformable substrates such as EPS and insulative foams.
- Structural plastic for use in part fabrication where only a moderate level of impact resistance is required.

- Plastic coating which may be textured to splash protect drywall, wood or other architectural substrates from many common liquids.
- Aromatic base coat used to provide a continuous surface for stapled wood constructs.
- Structural for foam sculptures.

■ Color

Neutral, Black, or Off-white are typical. Many other colors available upon request – Contact Volatile Free, Inc. for details.

Physical Properties

■ Weatherability

QUV results indicate that yellowing may be visibly discerned in neutral or off-white in 1 – 2 months actual exposure. Dark colors such as black may persist for almost a year before oxidative damage may manifest itself as chalking. Physical properties, however, do not typically show significant change for even long periods of time.

■ Fire Resistance

None. If fire resistance is required perhaps one of the following products may be more appropriate for your application:

VFI-2621

VFI-2622

VFI-2623

Contact Volatile Free, Inc. for details.

■ 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.

■ Tensile Properties

ASTM D-412

Tensile Strength: 4854 psi

Elongation: 26%

Yield Strength: 5306 psi

Elastic Modulus: 34,707 psi

■ Tear Resistance

ASTM D-624: 404 lb/in

■ Hardness

ASTM D-2240

Shore D: 70 - 72

■ Impact Resistance

Unnotched Izod: 11.78 ft*lbs/in @ 76°F

Liquid Component Properties

■ Solids

% Nonvolatile (wt): 100%

■ Viscosity

Poly Component: 965 cps @ 77°F

Iso Component: 470 cps @ 77°F

■ Density

Poly Component: 8.11 – 8.51 lbs./gal.

Iso Component: 9.55 – 9.95 lbs./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

One year in unopened containers at 50° - 90°F. **Do not** preheat over 100°F maximum without mixing.

Application

■ Material Preparation

Thoroughly power mix Poly and Iso component separately 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.

■ 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-7 400 come highly recommended. Contact Volatile Free, Inc. for specific instructions and spray equipment needed.

■ Reactivity

Gel Time: 12 – 16 sec @ RT

< 3 sec @ 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.

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