

D-635 FIRE RETARDANT PLASTIC ENCAPSULANT

■ Description

VFI-2621 is a two component, 100% solids, one to one by volume, fast set, fire retardant, polyurethane coating.

■ Usage

VFI-2621 is intended for use as a plural component spray applied coating for a variety of applications (which invariably require some degree of fire resistance) 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 / Off-white.

Physical Properties

■ Tensile Properties

ASTM D412
Strength: 4,366 psi
Elongation: 7%

■ Yield Strength

4,223 psi
Elastic Modulus: 41,485 psi

■ Hardness

Shore D: 72

■ Tear Strength

ASTM D624 264 lb/in

■ Weatherability

QUV results indicate that yellowing may be visibly discerned in VFI – 2621 within a few days. It is not, however, UV radiation that poses the major problem; but the elevated temperature does cause some of the FR agent to decompose – yellowing the film.

■ Fire Resistance

Rated ASTM D-635 HB
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.

Liquid Component Properties

■ Solids

% Nonvolatile (wt): 100%

■ Viscosity

Poly Component: (1200-1400) cps @ 77°F
Iso Component: 450-650 cps @ 77°F

■ Density

Poly Component: 9.32 lbs./gal.
Iso Component: 10.71 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

6 months in unopened containers at 50° - 80°F. **Do not** preheat over 100°F maximum without mixing.

Application

■ 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.

■ Equipment

Plural component airless spray equipment capable of maintaining temperatures of 150° to 160°F, 2500 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 come highly recommended. Contact Volatile Free, Inc. for specific instructions and spray equipment needed.

■ Reactivity

Gel Time: 16 - 20 sec @ RT
< 4 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 eight 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 3 minutes) to maximize adhesion.

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