

Ureshell Foam Hard Coating

BRUSHABLE PLASTIC ENCAPSULANT

Description

UreShell is a two component, 100% solids, one part Iso to three parts Poly by volume, slow cure polyurethane coating.

Usage

UESHELL is a batch mixed coating applied most commonly by brush, roller or trowel that has been found to have the following applications (among others):

- Impact resistant coating for the protection of easily deformable substrates such as EPS and other 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.
- Gap or crack filler.
- Waterproof encapsulating material.

Color

Neutral is typical. Many other colors may be available upon request – Contact Demand Products, Inc. for details.

Physical Properties

Weatherability

QUV results indicate that yellowing may be visibly discerned in neutral or off-white in 2 – 3 months continuous 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.

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: 3834 psi

Elongation: 6.9%

Yield Strength: 3423 psi

Elastic Modulus: 24,476 psi

Tear Resistance

ASTM D-2240

Shore D: 71 – 80

Depending upon post cure Conditions.

Hardness

ASTM D-2240

Shore D: 70

Impact Resistance

Un-notched Izod: 2.5ft*lbs/in @ 73°F

Liquid Component Properties

Solids

% Nonvolatile (wt): 100%

Viscosity

Poly Component:

7000 cps @ 77°F

Iso Component:

200 cps @ 77°F

Density

Poly Component:

11.8 lbs./gal.

Iso Component:

10.3 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.

Application

Material Preparation

Thoroughly power mix Poly component before mixing with Iso component side. Usually this takes a minimum of 5 minutes per pail with proper mixing equipment. For specific mixers, blade and shaft length, contact Demand Products, Inc. A hand mixer is not adequate. Only mix what you can apply before pot life expires. Mix only 8 liquid ounces of Iso into 24 liquid ounces of premixed Poly and power mix well.

Equipment

Ordinary paintbrush, notched trowel (preferred), squeegee, or medium nap roller.

Reactivity

Potlife (brush): 15 min @ 76°F

Potlife (trowel): 23 min @ 76°F

Cure Time

Applied coating will set in about two hours at 70°F, depending on film thickness, liquid material temperature and the substrate temperature. Generally complete cure takes from two to three days at room temperature. Product can be placed into service after one complete day of cure at 70°F minimum. After 24 hours cure the hardness is around 71 Shore D. Prime the plastic part the next day.

Mixing

Volume

1 unit ISO: 3 units POLY by volume.

Weight

1 unit ISO: 3.44 units POLY by weight.

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