PRO-SET®

Technical Data

LAMINATING EPOXY

ADHESIVES

PROCESS EQUIPMENT

# M1018/224

White Epoxy Surface Coat

The M1018/224 epoxy surface coat is formulated for use in the mold when fabricating synthetic composite parts. This combination can be applied with a brush or roller and exhibits good hiding characteristics with one 8 to 12 mil coating. A minimum of 6 to 8 mils is necessary to prevent fisheyes on the mold surface. This product is formulated to work with polymer mold release systems as well as traditional mold wax. Test the surface coat on the wax you intend to use as there will be some differences in surface energy and resistance to surface imperfections. Additional coats can be applied if desired once the first coat has cured to a stable tacky state, usually within 45 minutes at room temperature. This coating is not UV stable and requires a topcoat to provide UV resistance.

**MIXING**

Combine the M1018 Resin with PRO-SET 224 Hardener following the ratios by weight or volume shown in the table. Stir the mixture thoroughly and transfer to a roller pan or brush apply directly to the mold surface.

**APPLICATION**

The M1018/224 mixture will get progressively more tacky so any rolling or tipping should be completed within 15 minutes at room temperature. A laminate skin coat can be applied between 1.5 hours and 3 hours at room temperature (72°F) with no surface prep necessary. If this overcoat window is exceeded and the surface is hard, scrub the surface with a Scotchbright® pad and water, then wipe dry with paper towel before continuing with the laminate process.

**COVERAGE**

Coverage at 10 mils is approximately 150 sq. ft. per mixed gallon of resin and hardener.

**CURING**

The mixture will initially cure to a slightly brittle B-stage. The mixture will reach an acceptable degree of cure for some applications with a room temperature cure for 2 weeks. Lower temperatures extend cure times and higher ambient temperatures shorten cure time. Elevated temperature post cure of 100° to 180°F is recommended for the mixture to reach the higher properties available.

We recommend building sample panels using proposed materials and manufacturing processes to confirm working and curing characteristics under your shop conditions.

**HANDLING CHARACTERISTICS** *(Not for specification purposes)*

| Property | Mixed Resin/Hardener |
|---|---|
| Density | 10 lb/gal |
| Viscosity @ 72°F (ASTM D-2393-80) | 7850 cps |

| Mix Ratio (M1018 Resin:224 Hardener) | Target | Acceptable Range |
|---|---|---|
| by weight | 100:26.8 | 100:28.3 to 100:24.0 |
| by volume | 100:30.7 | 100:32.3 to 100:27.4 |

| Pot Life (ASTM D-2427-71) | 100g |
|---|---|
| @72°F | 20 min |

**Pro-Set Inc.**
P.O. Box 656
Bay City, MI 48707 USA

888-377-6738
prosetepoxy.com



*March 2010*

PRO-SET®

LAMINATING EPOXY—PHYSICAL PROPERTIES

# M1018 Resin/224 Hardener

| Physical Property | Test Method | RT x 15 hr + 125°F x 16 hr | RT x 15 hr + 180°F x 8 hr |
|---|---|---|---|
| Hardness (Shore D) | ASTM D-2240 | 87 | 88 |
| Compression Yield (psi) | ASTM D-695 | 18,253 | 18,344 |
| Tensile Strength (psi) | ASTM D-638 | 9,249 | 8,835 |
| Tensile Elongation (%) | ASTM D-638 | 1.5 | 1.5 |
| Tensile Modulus (psi) | ASTM D-638 | 8.26E+05 | 7.63E+05 |
| Flexural Strength (psi) | ASTM D-790 | 15,648 | 16,883 |
| Flexural Modulus (psi) | ASTM D-790 | 6.91E+05 | 6.36E+05 |
| Heat Deflection Temperature (HDT) (°F) | ASTM D-648 | 164 | 198 |
| Onset of Tg by DSC (°F) ** | | 164 | 195 |
| Ultimate Tg by DSC (°F) ** | | 195 | 195 |
| Izod Impact, notched (Ft-lb/in) | ASTM D-256 | 0.46 | 0.46 |

** Determined using a Differential Scanning Calorimeter (DSC).
Value reported is the onset of the glass transition
Test Specimens were neat epoxy (without fiber reinforcement)
Typical Values; not to be construed as specification

**November 2008**