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Technical Bulletin

HIGH Tg PULTRUSION EPOXY – A-30400/B-29000

Description:

High Tg Pultrusion Epoxy is a two-component epoxy system. This high-quality thermoset is designed for pultrusion, filament winding and RTM applications. It has low viscosity and fast property development at elevated temperatures. A long pot life allows for preheating to get lower viscosity and better fiber impregnation. High Tg Pultrusion Epoxy has proprietary release properties integrated for improved performance during Pultrusion.

Handling Properties:

RESIN VISCOSITY, cP	7,500	ASTM D 2196
RESIN DENSITY, lb./gal	9.70	ASTM D 792
HARDENER VISCOSITY, cP	150	ASTM D 2196
HARDENER DENSITY, lb./gal	9.80	ASTM D 792
COLOR	Green	
DENSITY, lb./gal	9.75	ASTM D 792
MIX RATIO, pbv (pbw)	1/1 (1/1)	
MIXED VISCOSITY, cP	860	ASTM D 2196
GEL TIME (30g @320°F), min	7	ASTM D 2471
WORKING TIME*, hours	24+	

*The working time varies according to the temperature of the air, the epoxy and the surface to which it is applied.

Note: Above viscosities/densities measured @ 77°F.

Physical Properties:

TENSILE STRENGTH, psi	5,700	ASTM D 638
TENSILE MODULUS, psi	119,000	ASTM D 638
ELONGATION @ BREAK, %	1.00	ASTM D 638
COMPRESSIVE STRENGTH, psi	14,300	ASTM D 695
COMPRESSIVE MODULUS, psi	245,000	ASTM D 695
FLEXURAL STRENGTH, psi	14,400	ASTM D 790
HARDNESS, Shore D	90	ASTM D 2240

Cure Cycle: 2 hours @ 185°F + 3 hours @300°F. Test specimens for above were neat epoxy (without fiber reinforcement).

Thermal Properties:

Heat Deflection Temperature, °F (°C)	258 (125.8)	ASTM D 648
Tg DSC Ultimate, °F (°C)	272 (133.2)	ASTM D 3418

Cure Cycle: 2 hours @ 185°F + 3 hours @ 300°F.

Mixing:

The storage temperature of High Tg Pultrusion Epoxy will greatly affect the ease of mixing, application and curing time. For best results, High Tg Pultrusion Epoxy should be stored at 60-80 °F (16-27 °C) for at least 24 hours before use. The resin and hardener need to be thoroughly blended to ensure complete dispersion. High Tg Pultrusion Epoxy can be measured by volume or weight using the mix ratios listed under the "Handling Properties" section. REMEMBER - you will have less working time at higher temperatures

SAFETY PRECAUTIONS

Avoid breathing of vapors. Forced local exhaust is recommended to effectively minimize exposure. NIOSH approved, organic vapor respirators and forced exhaust are recommended in confined areas, or when conditions (such as heated polymers, sanding) may cause high vapor concentrations. **DO NOT WELD ON, BURN OR TORCH ON OR NEAR, ANY EPOXY MATERIAL. HAZARDOUS VAPOR IS RELEASED WHEN AN EPOXY IS BURNED.**

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