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MOLDTRU® LPT-68000 TOOLING RESIN



Product Information

MODIFIED VINYL ESTER LOW PROFILE TOOLING RESIN

Typical Cast Mechanical Properties			
Test	Unit of Measure	Nominal	Test Method
Tensile Strength	psi/Mpa	8,720/60	D-638
Tensile Modulus	Mpsi/Gpa	430/3.0	D-638
Elongation	(%)	3	D-638
Flexural Strength	psi/Mpa	15,460/107	D-790
Flexural Modulus	psi/GPa	480/3.3	D-790
Heat Distortion	° F/°C	241/116	D-648
Barcol Hardness	934-1	42	D-2583
Izod Impact	(Ft.lbs/in)	3.49	D-4812

Typical Liquid Properties		
Test	Unit of Measure	Nominal
Viscosity Brookfield, LV		
LV#3 60 rpm 25 °C	cps	400-600
Thix Index (static)		2.0-3.5
Styrene Volatiles	%	36-38
Density, Wt/Gal cup @ 25 °C	lb./gal	8.7-8.9

Typical Gel Time Properties		
Test	Unit of Measure	Nominal
Gel Time, 1.25% MEKP-9	minutes	30.0-34.0
Gel to Peak	minutes	12.0-16.0
Peak Exotherm	° F/°C	330/165

*Typical properties are not to be construed as specifications.

DESCRIPTION

MoldTru LPT-68000 is a pre-promoted thixotropic vinyl ester low profile tooling resin. The high performance mechanical properties of the vinyl ester resin provides a laminate of quality and integrity with superior surface quality.

APPLICATION

The MoldTru LPT-68000 was developed primarily to build molds using the conventional open mold process (spray up or hand lay up) at a room temperature. In some cases a vacuum molding process can be used to obtain high glass content using technical fabrics. The low viscosity of this product provides good wet out of the laminate and air removal.

BENEFITS

MoldTru LPT-68000 has several advantages when considering the performance of the polymer and the reaction of the low profile during the mold construction. Some of the advantages are:

- **Dramatic build time reduction**
Up to five layers can be laminated at once.
- **Lower labor cost**
Reduce the timing between layers
- **No surface distortion**
The low shrinkage of the product increases the dimensional stability of the laminate.
- **Master molds replication**
The low exotherm together with a high HDT provide a correct cure and stability of the laminate. The low shrinkage improves the surface quality.
- **Viscosity**
The low viscosity helps the infusion flow faster and wets the high glass content laminate complete.
- **No print through**
Low shrinkage and unique low profile system helps to prevent glass print.

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PERFORMANCE GUIDELINES

A. Keep full strength catalyst levels between 1.0% - 2.0% of the total resin weight.

B. Maintaining shop temperatures between 65°F/18°C and 90°F/32°C and humidity between 40% and 90% will help the fabricator make a high quality part. Consistent shop conditions contribute to consistent gel times.

SAFETY

See the appropriate Safety Data Sheet for guidelines.

STORAGE STABILITY

This product is stable for three months from the date of manufacture when stored in the original containers, away from direct sunlight or other UV light sources and at or below 20°C (70°F). After extended storage, some drift may occur in the product viscosity and gel time.

During the hot summer months, no more than two months stability at 86°F/30°C should be anticipated.

Storage in plastic totes made out of materials such as polyethylene (PE) or polypropylene (PP), will accelerate gel formation and result in a significantly reduced storage stability.

Storage of this resin outdoors in translucent plastic totes may reduce the storage stability to only a few weeks. AOC cannot assume responsibility for gel formation under these storage conditions.

ISO 9001:2008 CERTIFIED

The Quality Management Systems at every AOC manufacturing facility have been certified as meeting ISO 9001:2008 standards. This certification recognizes that each AOC facility has an internationally accepted model in place for managing and assuring quality. We follow the practices set forth in this model to add value to the resins we make for our customers.

FOOTNOTES

(1.) Based on tests at 23°C and 50% relative humidity. All tests performed on unreinforced cured resin castings. 1/4" castings were prepared using 2.8% MEKP-9, post cured for 5 hours at 212°F/100°C using AOC test method X-12Ab.

(2.) The gel times shown are typical but may be affected by catalyst, promoter and inhibitor concentrations and resin, mold and shop temperature. Variations in gelling characteristics can be expected between different lots of catalysts and at extremely high humidities. Pigment and fillers can retard or accelerate gelation. It is recommended that the fabricator check the gelling characteristics of a small quantity of resin under actual operating conditions prior to use.



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