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RESINS | GEL COATS | COLORANTS

ALTEK® R920 SERIES POLYESTER RESIN



Product Information

UNSATURATED POLYESTER RESIN FOR VACUUM MOLDING PROCESSES

Typical Cast Mechanical Properties ¹			
Test	Unit of Measure	Nominal	Test Method
Tensile Strength	psi/MPa	12,000/82.5	ASTM D 638 /ISO 527-1
Tensile Modulus	psi/GPa	522,000/3.6	ASTM D 638 /ISO 527-1
Tensile Elongation	%	3.8	ASTM D 638 /ISO 527-1
Flexural Strength	psi/MPa	20,500/141	ASTM D 790 /ISO 178
Flexural Modulus	psi/GPa	566,000/3.9	ASTM D 790 /ISO 178
Heat Distortion Temp.	°F/°C @264 psi	203/95	ASTM D 638/ ISO 75-A

Typical Liquid Properties ²		
Test	Unit of Measure	Nominal
Viscosity, Brookfield, LV		
Spindle #1 @ 30 rpm	cps	80
Styrene Content	%	43
Gel Time, 100g, @ 2.0% Norox MEKP-925	minutes	43
Gel to Peak	minutes	15.0
Peak Exotherm	°F/°C	302/150

**Typical properties are not to be construed as specifications.*

DESCRIPTION

Altek R920 Series is a pre-promoted, non thixed, low shrinkage higher reactivity polyester resin designed specifically for use in Vacuum Molding Processes such as Infusion, SCRIMP, LRTM and CCBM.

APPLICATION

R920 Series is designed for fabrication of nacelles, rotors, nose cones and ventilation boxes and other composite parts.

BENEFITS

- Low viscosity for fast fill time
- Designed for rapid and thorough wet out of glass fibers
- Low shrinkage which produces high quality surface cosmetics
- Moderate exotherm
- Excellent mechanical properties featuring high flexural strength combined with high elongation and heat distortion temperature resulting in a toughened composite part

Note: As all Vacuum Molding Processes are under Closed Mold Classifications, these are "environmentally friendly".



PERFORMANCE GUIDELINES

A. Keep full strength catalyst levels between 1.0% - 2.0% (1.25% minimum with mechanical application) 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.

STORAGE STABILITY

Resins are stable for three months from date of production when stored in the original containers away from sunlight at no more than 70 °F/21 °C.

During the hot summer months, no more than two months stability at 86 °F/30 °C should be anticipated. After extended storage, some drift may occur in gel time.

SAFETY

See the appropriate Material Safety Data Sheet for guidelines.

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 run at 77 °F/25 °C and 50% relative humidity. All tests performed on unreinforced cured resin castings using Norox MEKP-925 Catalyst @ 1.25%. Thixotropic components, if applicable, are excluded from casting samples. Castings are post cured 5 hours at 100 °C.

(2.) The gel times shown are typical but may be affected by catalyst, promoter, inhibitor concentration, resin, mold, and shop temperature. Variations in gelling characteristics can be expected between different lots of catalysts and at extremely high humidities. Pigment and/or filler 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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