

## Product Information

# EcoTek Polyethylene Terephthalate Modified Polyester Laminating Resin

### TYPICAL CAST MECHANICAL PROPERTIES\* see back page (1)

Test	Units of Measure	Nominal	Test Method
Tensile Strength	psi/MPa	9,900/69	ASTM D 638
Tensile Modulus	psi/GPa	500,000/3.4	ASTM D 638
Tensile Elongation	%	2.5	ASTM D 638
Flexural Strength	psi/MPa	19,200/132	ASTM D 790
Flexural Modulus	psi/GPa	560,000/3.9	ASTM D 790
Heat Distortion Temperature	°F/°C @264 psi	232/111	ASTM D 648

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

### TYPICAL LIQUID PROPERTIES at 25°C see back page (2)

Test	Units of Measure	Nominal Value
Viscosity, Brookfield LV #3 @60 rpm	cps	500
Thix Index, 6/60	-	3.3
Styrene Content	%	32
Gel Time, 100g, 1.25% Butanox M-50	minutes	50.0
Cure Time	minutes	13.0
Peak Temperature	°C	160



### DESCRIPTION

EcoTek H460-EKAG-50 is a prepromoted thixotropic, low reactive, Polyethylene Terephthalate modified polyester resin.

### APPLICATION

AOC's H460-EKAG-50 Polyethylene Terephthalate resin is designed for use in the manufacturing of composite parts using hand lay-up/spray-up applications.

### BENEFITS

- The combined renewable bio-derived content and/or recycled content of H460-EKAG-50 is 28%.
- Superior mechanical properties  
When used with the proper glass reinforcement content, H460-EKAG-50 produces a composite with superior mechanical properties that can assist in the reduction of cracking.
- Low Styrene content
- Superior processing  
H460-EKAG-50 was designed for quick wet out/roll out properties.

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# EcoTek™ H460-EKAG-50 Polyester Resin



## 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

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 25°C (77°F). Storage stability of two months or less should be anticipated if the storage temperature exceeds 30°C (86°F).

After extended storage, some drift may occur in the product viscosity and gel time.

## SAFETY

See appropriate Material Safety Data Sheet for guidelines.

## APPLICATION GUIDELINES

Although the H460-EKAG-50 provides excellent secondary bonding, exposing the laminate to extreme conditions such as direct sunlight, high temperatures, or dusty conditions for a long time period can reduce secondary bonding. Under these conditions it may be necessary to abrade the laminate to insure the maximum secondary bonding.

To assure adequate bonding to gel coats, fabricators should pre-wet the gel coat surface with a thin pass of catalyzed resin prior to lamination.

Chemical resistance studies indicate that resins like EcoTek H460-EKAG-50 have very poor resistance to certain hydrophobic liquids, such as hydrocarbons. Fuel storage tanks should not be produced with the H460-EKAG-50 resin.

If your manufacturing needs require a more corrosion resistant resin, please contact your AOC representative for information or technical assistance on AOC's line of isophthalic or vinyl ester resins.

## ISO 9001:2000 CERTIFIED

The Quality Management Systems at every AOC manufacturing facility have been certified as meeting ISO 9001:2000 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. Thixotropic components, if applicable, are excluded from casting samples. Castings were post cured.

### (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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The information contained in this data sheet is based on laboratory data and field experience. We believe this information to be reliable, but do not guarantee its applicability to the user's process or assume any liability for occurrences arising out of its use. The user, by accepting the products described herein, agrees to be responsible for thoroughly testing each such product before committing to production.

Our recommendations should not be taken as inducements to infringe any patent or violate any law, safety code or insurance regulation.