

Product Information

Altek® General Purpose Orthophthalic Polyester Laminating Resin

TYPICAL CAST MECHANICAL PROPERTIES * (2) see back page

	Nominal	Test Method
Tensile Strength, psi/MPa	10,500/72	ASTM D 638
Tensile Modulus, psi/GPa	600,000/4.1	ASTM D 638
Tensile Elongation, %	2.3	ASTM D 638
Flexural Strength, psi/MPa	18,000/124	ASTM D 790
Flexural Modulus, psi/GPa	600,000/4.1	ASTM D 790
Heat Distortion Temperature, °F/°C at 264 psi	138/59	ASTM D 648

*Typical properties are not to be construed as specifications.

TYPICAL LIQUID PROPERTIES* (1) see back page

VERSIONS	Plant	MEKP	%	GT	Peak Exotherm, °C/°F	Visc	SP	rpm	cps	% Styrene
H520-BDA-15	G	M-50	1.25	15	80/176	LV	3	60	475	43
H520-BDA-20	G	M-50	1.00	20	73/163	LV	3	60	475	43
H520-BDA-22	G	M-50	1.25	22	80/176	LV	3	60	475	43
H520-BWA-20 ¹	G	M-50	1.00	20	73/163	LV	3	60	475	43
H520-BWC-15 ¹²	G	DDM-9	1.00	15	135/275	LV	3	60	450	42

1) Non air inhibited

2) Test tube Gel time and Peak Exotherm



APPLICATIONS

AOC's Altek H520-BD/BW is designed for use in the manufacturing of composite parts using hand lay-up or spray-up application methods. For those marine applications where maximum resistance to blistering is required, we recommend a skincoat of Hydropel® H034-A, be applied on the hull prior to the application of AOC's Altek H520-BD/BW.

BENEFITS

Low Exotherm

The low exotherm of Altek H520-BD/BW allows for the application of a thick laminate sections that can cure at one time without the generation of excessive heat.

Good Secondary Bonding

Altek H520-BD/BW provide good chemical bonding between laminate application if proper application procedures are followed.

Superior Mechanical Properties

When used with the proper glass reinforcement content, AOC's Altek H520-BD/BW produces a composite with superior mechanical properties that can assist in the reduction of cracking.

Altek® H520-BD/BW Series 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

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 appropriate Material Safety Data Sheet for guidelines.

APPLICATION GUIDELINES

Although Altek H520-B 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 Altek H520-B has very poor resistance to certain hydrophobic liquids, such as hydrocarbons. Fuel storage tanks should not be produced with the Altek H520-B 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)

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.

(2)

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 are post cured for 5 hours at 212°F/100°C using AOC test method X-12Ab.

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.



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