AOC®
World Leader in Resin Technology

Altek® H541-A Series Polyester Resin

Product Information

Altek® Low HAP Marine Orthophthalic Resin

TYPICAL CAST MECHANICAL PROPERTIES* (2) see back page

Tensile Strength, psi/MPa	8,900/61.4	ASTM D 638
Tensile Modulus, psi/GPa	580,000/4.0	ASTM D 638
Tensile Elongation, %	2.1	ASTM D 638
Flexural Strength, psi/MPa	17,500/121	ASTM D 790
Flexural Modulus, psi/GPa	590,000/4.07	ASTM D 790
Heat Distortion Temperature @264 psi, °F/°C	138/59	ASTM D 648

*Typical properties are not to be construed as specifications.

TYPICAL LIQUID RESIN PROPERTIES*

25°C Viscosity, LV 3@60	750
Thix Index, 6/60	2.5
Styrene	=/<35

Gel times available at 20, 25, 30 minutes using 1.25% MEKP-9

DESCRIPTION

AOC's Altek® H541-A is a fast wet-out, moderate cure, general purpose, orthophthalic resin for hand lay-up and spray-up molding applications. It is a promoted, thixotropic resin with low viscosity and medium exotherm. The low styrene content aids fabricators in meeting local permits or MACT regulations.

FEATURES AND BENEFITS

- Extremely versatile product
- Excellent bonding characteristics and very good surface aesthetics.
- Available in different viscosity and gel time variations.
- MACT Compliant for Marine Application.
- For Marine applications where maximum resistance to osmotic blistering is required, AOC recommends a skin coat of Hydropel ® H034-A or H100 be applied to the part before the application of the Altek H541.

Altek® H541-A 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

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 H541-A series 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 H541-A series have very poor resistance to certain hydrophobic liquids, such as hydrocarbons. Fuel storage tanks should not be produced with the H541-A series 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.

AOC®
World Leader in Resin Technology

950 HIGHWAY 57 EAST
COLLIERVILLE, TN 38017
www.aoc-resins.com

NORTH AMERICA
Tel: 001(901) 854-2800
Fax: 001 (901) 854-7277
sales@aoc-resins.com

ASIA, MIDDLE EAST & LATIN AMERICA
Tel: 001 (863) 815-5016
Fax: 001 (863) 815-4733
international@aoc-resins.com

EUROPE
Tel: (44) 1473 288997
Fax: (44) 1473 216080
europe@aoc-resins.com

  Effective Date: September, 2007