

## Product Information

# EcoTek Corrosion Resistant Isophthalic Polyester Resin

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

Test	Unit of Measure	Nominal	Test Method
Tensile Strength	psi/MPa	12,100/83.4	ASTM D 638
Tensile Modulus	psi/GPa	550,000/3.8	ASTM D 638
Tensile Elongation	%	2.8	ASTM D 638
Flexural Strength	psi/MPa	18,400/127	ASTM D 790
Flexural Modulus	psi/GPa	610,000/4.2	ASTM D 790
Heat Distortion Temperature °F/°C @ 264 psi		224/107	ASTM D 648
Barcol Hardness		43	ASTM D 2583

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

### DESCRIPTION

AOC's EcoTek F701-FBBG resin is a high molecular weight, two stage isophthalic, unsaturated polyester resin with the wet out, cure and handling characteristics of general purpose resins.

### TYPICAL LIQUID RESIN PROPERTIES\* (2) see back page

VERSION	VISCOSITY, cps	THIX INDEX	GEL TIME, minutes	GEL TO PEAK, minutes	PEAK EXOTHERM, °F/°C	Specific Gravity	Styrene Content %
F701-FBBG-15	550 <sup>1</sup>	2.5 <sup>2</sup>	15 <sup>3</sup>	12	390/199	1.08	47

1) 77°F/25°C Brookfield LV viscosity spindle 3 at 60 rpm

2) 6/60 rpm Thix Index

3) 77°F/25°C Gel time with 1.25% MEKP

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



### BENEFITS

■ The combined renewable bio-derived content and/or recycled content of EcoTek F701-FBBG is 20%.

### Corrosion resistance

AOC's EcoTek F701-FBBG resin provides excellent corrosion resistance when used in contact with inorganic and organic acids. Solvent resistance is field-proven for many petroleum products such as kerosene, heating oil and crude oils. Refer to AOC's "Corrosion Resistant Resin Guide" for corrosion resistance information or for questions regarding suitability of a resin to any particular chemical environment contact AOC.

### Versatile

Suitable for various fabricating methods such as hand lay-up, spray-up, filament winding, etc.

### Food and Drug

This resin is manufactured from raw materials that are listed in FDA regulation Title 21 CFR 177.2420. It is the fabricator's responsibility to also be sure that the final composite is well cured. All composites used for FDA applications should be post cured at 180°F/82°C for at least 4 hours. After post curing it should be washed with soap and water and rinsed.



# EcoTek® F701-FBBG Polyester Resin



## PERFORMANCE GUIDELINES

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

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

**C.** Sanding and/or grinding is recommended if a secondary bond is applied to a laminate that was made with a resin containing wax.

## 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.

## 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 test of the base resin with 40% styrene 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, 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.



955 Highway 57 East  
Collierville, TN 38017  
Toll Free: (866) 319-8827  
[www.aoc-resins.com](http://www.aoc-resins.com)

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