

Product Information

Multi-Purpose DCPD Polyester Resin for Closed Mold Processing

TYPICAL LIQUID RESIN PROPERTIES*

	Nominal
Viscosity @ 77°F/25°C, RVT Brookfield Spindle #3 @ 20 RPM, cps.	3,200
Non-Volatiles, %	70
Acid Number, mg KOH/g	20
Weight per Gallon, lbs./gal.	9.3

TYPICAL CURING PROPERTIES*

180°F/82°C SPI Gel Test (1.0% BPO)	
150°F/66°C - 190°F/88°, minutes	6.0
150°F/66°C - Peak, minutes	7.0
Peak Exotherm, °F/°C	450/232

TYPICAL CAST MECHANICAL PROPERTIES* (1) see back page

	Nominal	Test Method
Tensile Strength, psi/MPa	6,500/44.8	ASTM D 638
Tensile Modulus, psi/GPa	590,000/4.1	ASTM D 638
Tensile Elongation, %	1.25	ASTM D 638
Flexural Strength, psi/MPa	11,700/80.7	ASTM D 790
Flexural Modulus, psi/GPa	620,000/4.3	ASTM D 790

*Typical properties are not to be construed as specifications.



DESCRIPTION

AOC's S903 is an unpromoted, high reactivity dicyclopentadiene (DCPD) polyester resin designed for a variety of closed mold applications.

FEATURES

- High reactivity DCPD chemistry
- Proven performer in a multitude of closed mold processes
- Computer controlled manufacturing provides consistent end-use performance and reduced scrap rates

APPLICATIONS

- Automotive and truck parts
- Sports equipment
- Tub and shower applications

S903 Polyester Resin

PERFORMANCE GUIDELINES

A. Keep full strength catalyst levels between 1.0% - 2.0% 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.

SAFETY

See appropriate Material Safety Data Sheets.

APPLICATION GUIDELINES

Blends of 50 to 80 percent S903 are thermoplastic shrink control additives, provide excellent surfaces, low shrinkage and dimensional control.

Low profile or Class A resins have reduced short and long term waviness and provide excellent shrinkage and dimensional control in SMC parts. It is important to realize, however, that secondary bonding characteristics of the products manufactured, whether they are adhered FRP to FRP or FRP to metals, and to other materials must be checked by the molder for all applications.

The test method should reflect adhesion failure mode on actual application, peel vs. shear, etc. The following parameters may also affect bonding performance: type of adhesive and adhesion application, type and amount of texture, substrate formulation and cure, part molding conditions, in-mold coating conditions, shop environmental conditions (humidity, temperature, dirt, grease and oil), interlaminar strength of substrate and other variables.

Contact your AOC sales representative for additional formulation recommendations.

ISO 9002 CERTIFIED

The Quality Management Systems at every AOC manufacturing facility have been certified as meeting ISO 9002 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 at 77°F/25°C and 50% relative humidity. All tests performed on unreinforced cured resin castings. 1/8" castings were prepared using 1.0% BPO, post cured for 2 hours at 250°F/121°C using AOC's test method X-12Ab.



World Leader in Resin Technology

950 HIGHWAY 57 EAST
COLLIERVERVILLE, TN 38017

PHONE (901) 854-2800
FAX (901) 854-7277

www.aoc-resins.com

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