AOC
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Vipel® F707-PVA Series Polyester Resin

Product Information

Vipel Corrosion Resistant Flexibilized, Isophthalic, NPG, Polyester Resin

TYPICAL CAST MECHANICAL PROPERTIES * (1) see back page

Test	Unit of Measure	Nominal	Test Method
Tensile Strength	psi/MPa	12,500/86	ASTM D 638
Tensile Modulus	psi/GPa	560,000/3.9	ASTM D 638
Tensile Elongation	%	3.7	ASTM D 638
Flexural Strength	psi/MPa	20,000/137	ASTM D 790
Flexural Modulus	psi/GPa	590,000/4.1	ASTM D 790
Heat Distortion Temperature °F/°C at 264 psi		173/78	ASTM D 648
Barcol Hardness		40	ASTM D 2583

TYPICAL LIQUID RESIN PROPERTIES of Vipel F707-PVA* (2) see back page

Versions	Viscosity, cps	Thix Index	Gel Time, min	Gel to Peak, min	Peak Exotherm, °F/C°	Specific Gravity	Styrene Content %
F707-PVA-15	500 [1]	2 [2]	15 [3]	15	375/191	1.06	48
F707-PVA-25	500 [1]	2 [2]	25 [3]	20	365/185	1.06	48

1) 77°F/25°C Brookfield LV viscosity spindle 3 at 60 rpm
2) 6/60/6 Thix Index
3) 77°F/25° Gel Time with 1.0% MEKP

*Typical properties are not to be construed as specifications.

DESCRIPTION

The Vipel F707-PVA is an isophthalic, NPG, two stage, unsaturated polyester resin. The wet out, cure and handling characteristics are typical of general purpose resins.

BENEFITS

PVC Bonding

Laminates made with Vipel F707-PVA resin bond to PVC.

Versatile

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

Food and Drug

All resins in this datasheet are 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 , laminate should be washed with soap and water and rinsed.

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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 77°F/25°C.

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

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

SAFETY

See appropriate Material Safety Data Sheet for guidelines.

ISO 9001:2000 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)

These tests are based on Vipel F707 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 postcured.

(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.

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