Vipel® F013-AAA-00

Vinyl Ester

AOC, L.L.C.

Message:

Vipel Corrosion Resistant Bisphenol A, Epoxy Vinyl Ester Resins
AOC's Vipel F013 series is a bisphenol A epoxy-based vinyl ester resin dissolved in styrene. The Vipel F013 series is ideally suited for use in hand lay-up, spray-up, filament winding and pultrusion processes where outstanding mechanical properties and excellent resistance to chemicals and heat are required.
Versatile
Wide formulating capabilities allow for use in many processes and for optimization of cost/performance.
Unique composition produces a tough and versatile resin with excellent crack and craze resistance in molded parts.
Vipel F013 is suitable for moldings that are subjected to particularly high static or dynamic loads, such as pipe, tanks, duct work and flooring applications.
Vinyl ester resins have excellent resistance to sustained heat.
Corrosion Resistant
Vipel F013 highly resistant to hydrogen peroxide, and alkalis, and performs well in various stages of hypochlorite and chlorine production. Refer to AOC for corrosion resistance information or for
questions regarding suitability of a resin to any particular chemical environment.
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 it should be washed with soap and water and rinsed.

General Information	
Features	Alkali Resistant
	Crazing Resistant
	Food Contact Acceptable
	Good Chemical Resistance
	Good Corrosion Resistance
	Good Crack Resistance
	Good Toughness
	High Heat Resistance
Uses	Coating Applications
	Filaments
Agency Ratings	FDA 21 CFR 177.2420
Forms	Liquid
Processing Method	Filament Winding
	Hand Lay-up
	Pultrusion
	Spraying

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.04	g/cm^3	
Styrene Content	45	%	

Exotherm			
Gel to Peak	18.0	min	
Peak	182	°C	
Gel Time (25°C) [1]	23.0	min	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Barcol Hardness	34		ASTM D2583
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	3240	MPa	ASTM D638
Tensile Strength (Yield)	88.3	MPa	ASTM D638
Tensile Elongation (Break)	6.6	%	ASTM D638
Flexural Modulus	3650	MPa	ASTM D790
Flexural Strength	150	MPa	ASTM D790
Thermal	**Nominal Value**	**Unit**	**Test Method**
Deflection Temperature Under Load (1.8 MPa, Unannealed)	111	°C	ASTM D648
Thermoset	**Nominal Value**	**Unit**	
Thermoset Mix Viscosity [2] (25°C)	350	cP	
NOTE			
1.	Gel time with 0.1% cobalt 6%, 0.1% DMA and 1.25% MEKP		
2.	Brookfield RV viscosity spindle 2 at 20 rpm		

Recommended distributors for this material

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