Vipel® K023-AAA-00

Vinyl Ester

AOC, L.L.C.

Message:

Vipel® Fire Retardant High Cross-Linked, Bisphenol A, Epoxy Vinyl Ester Resin
AOC's Vipel® K023 series is a fire retardant, high cross-linked bisphenol A epoxy vinyl ester resin dissolved in styrene. AOC's Vipel K023 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. AOC's Vipel® K023-AAA series resins are un-promoted and non-thixotropic resins.
Heat Resistance
Vipel® K023 has a high heat distortion temperature.
Fire Retardant
The Vipel® K023-AAA-00 requires no antimony trioxide spread to meet ASTM E 84 Class I flame spread requirements.
Mechanical Properties
Vipel® K023 is suitable for moldings that are subjected to particularly high static or dynamic loads. Vinyl ester resins have excellent resistance to sustained heat.
Versatile
Wide formulating capabilities allow for use in many processes and for optimization of cost/performance.
Corrosion Resistance
Vipel® K023 is highly resistant to a number of chemical environments. 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.

General Information	
Features	Crosslinkable
	Flame Retardant
	Good Chemical Resistance
	Good Corrosion Resistance
	High Heat Resistance
Uses	Coating Applications
	Filaments
Forms	Liquid
Processing Method	Filament Winding
	Hand Lay-up
	Pultrusion
	Spraying

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.29	g/cm^3	
Styrene Content	28	%	
Flame Spread Index	15.0		ASTM E84
Smoke Developed	550		ASTM E84
Exotherm			
Gel to Peak	7.0	min	
Peak	195	°C	

Gel Time (25°C) [1]	24.0	min	
Hardness	Nominal Value	Unit	Test Method
Barcol Hardness	46		ASTM D2583
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3720	MPa	ASTM D638
Tensile Strength (Yield)	91.0	MPa	ASTM D638
Tensile Elongation (Break)	4.3	%	ASTM D638
Flexural Modulus	4140	MPa	ASTM D790
Flexural Strength	121	MPa	ASTM D790
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	129	°C	ASTM D648
Thermoset	Nominal Value	Unit	
Thermoset Mix Viscosity [2] (25°C)	250	cP	
NOTE			
1.	Gel time with 0.2% Cobalt 6%, 0.05% DMA and 1.25% MEKP		
2.	Brookfield RV viscosity spindle 2 at 20 rpm		

Recommended distributors for this material

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