

Vipel® K733-APT-20

Polyester Alloy

AOC, L.L.C.

Message:

Firepel® Polyester Resin for Filled Fire Retardant Applications

AOC's Firepel® K320-A series are promoted, non thixotropic resins specifically designed to be blended with alumina trihydrate (ATH) to provide fire retardant properties. ATH is needed to provide fire retardant properties.

Firepel® K320-A series resins are used for mass transit applications. Flammability of composite parts is dependent on the geometry of the part, degree of cure, reinforcement content, types of reinforcement, etc. It is the end user's responsibility to ensure that finished parts meet the required specifications. Published flammability properties should be used for comparison purposes only.

Fire Resistance

Firepel® K320-A series resins are designed for use in filled applications where fire retardancy and low smoke emissions are required.

Toxicity

Composites made with Firepel® K320- A series resins have low toxicity values due to the absence of halogens.

General Information			
Features	Flame Retardant		
	Good Chemical Resistance		
	Good Corrosion Resistance		
	Isophthalic		
Uses	Filaments		
Forms	Liquid		
Processing Method	Filament Winding		
	Hand Lay-up		
	Spraying		

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.26	g/cm ³	
Styrene Content	39	%	
Flame Spread Index	20.0		ASTM E84
Smoke Developed	600		ASTM E84
Exotherm			
Gel to Peak	7.0	min	
Peak	168	°C	
Gel Time (25°C) ¹	20.0	min	
Thixotropic Index ²	2.00		

Hardness	Nominal Value	Unit	Test Method
Barcol Hardness	40		ASTM D2583

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3860	MPa	ASTM D638
Tensile Strength (Yield)	64.8	MPa	ASTM D638
Tensile Elongation (Break)	1.9	%	ASTM D638

Flexural Modulus	4140	MPa	ASTM D790
Flexural Strength	120	MPa	ASTM D790
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	90.0	°C	ASTM D648
Thermoset	Nominal Value	Unit	
Thermoset Mix Viscosity ³ (25°C)	500	cP	
NOTE			
1.	Gel time with 1.25% MEKP		
2.	2/20 rpm Thix Index		
3.	Brookfield RV viscosity spindle 2 at 20 rpm		

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