# Vipel® K733-BPT-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	1.21	g/cm³		
Styrene Content	39	%		
Flame Spread Index <sup>1</sup>	15.0		ASTM E84	
Smoke Developed <sup>2</sup>	650		ASTM E84	
Exotherm				
Gel to Peak	6.0	min		
Peak	179	°C		
Gel Time (25°C) <sup>3</sup>	20.0	min		
Thixotropic Index <sup>4</sup>	2.00			
Hardness	Nominal Value	Unit	Test Method	
Barcol Hardness	44		ASTM D2583	
Mechanical	Nominal Value	Unit	Test Method	
Tensile Modulus	3790	MPa	ASTM D638	
Tensile Strength (Yield)	75.8	MPa	ASTM D638	
Tensile Elongation (Break)	2.4	%	ASTM D638	

Flexural Modulus	4000	MPa	ASTM D790
Flexural Strength	124	MPa	ASTM D790
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8			
MPa, Unannealed)	96.1	°C	ASTM D648
Thermoset	Nominal Value	Unit	
Thermoset Mix Viscosity <sup>5</sup> (25°C)	450	cP	
NOTE			
1.	1.5% Antimony Trioxide		
2.	1.5% Antimony Trioxide		
3.	Gel time with 1.25% MEKP		
4.	2/20 rpm Thix Index		
	Brookfield RV viscosity spindle 2 at		
5.	20 rpm		

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