

Vipel® F701-SPT-30

Polyester Alloy

AOC, L.L.C.

Message:

Vipel Corrosion Resistant Isophthalic Polyester Resin

AOC's Vipel F701-S series resins are high molecular weight, two stage isophthalic, unsaturated polyester resins with the wet out, cure and handling characteristics of general purpose resins. The main feature is lower styrene content. They have an excellent shelf life and are ideal for filament winding and spray-up. A few selected resins are listed below.

Corrosion resistance

AOC's Vipel F701-S series resins provide excellent corrosion resistance when used in contact with inorganic and organic acids. Solvent resistance is field-proven for many petroleum products such as kerosene, heating oil and crude oils. 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. Vipel F701-S series resins contain less styrene than standard versions.

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 it should be washed with soap and water and then rinsed.

General Information			
Features	Acid Resistant		
	Food Contact Acceptable		
	Good Corrosion Resistance		
	High Molecular Weight		
	Isophthalic		
	Solvent Resistant		
Uses	Coating Applications		
	Filaments		
Agency Ratings	FDA 21 CFR 177.2420		
Forms	Liquid		
Processing Method	Filament Winding		
	Hand Lay-up		
	Spraying		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.07	g/cm ³	
Styrene Content	42	%	
Exotherm			
Gel to Peak	13.0	min	
Peak	193	°C	
Gel Time (25°C) ¹	30.0	min	

Thixotropic Index ²	2.10		
Hardness	Nominal Value	Unit	Test Method
Barcol Hardness	46		ASTM D2583
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	3860	MPa	ASTM D638
Tensile Strength (Yield)	88.0	MPa	ASTM D638
Tensile Elongation (Break)	3.1	%	ASTM D638
Flexural Modulus	4210	MPa	ASTM D790
Flexural Strength	159	MPa	ASTM D790
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (1.8 MPa, Unannealed)	128	°C	ASTM D648
Thermoset	Nominal Value	Unit	
Thermoset Mix Viscosity ³ (25°C)	550	cP	
Post Cure Time (82°C)	4.0	hr	
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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