Solef® 5140

polyvinylidene fluoride

Solef® 5140 PVDF is an ultra high viscosity grade that gives superior adhesion and ultra high viscosity at reduced binder content, ideal for its use as binder in Lithium Ion Batteries.

General

Material Status	• Commercial: Active	
Availability	• Africa & Middle East • Asia Pacific • Europe	• Latin America • North America
Uses	• Batteries	• Binder

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Physical	Typical Value	Unit	Test method
Density	1.75 to 1.78	g/cm³	ISO 1183
Water Absorption [1] (24 hr, 23°C)	< 0.20	%	ASTM D543

Mechanical	Typical Value	Unit	Test method
Tensile Modulus [2] (23°C)	1000 to 1700	MPa	ASTM D638

Thermal	Typical Value	Unit	Test method
Glass Transition Temperature	-40.0	°C	DSC
Melting Temperature	160 to 168	°C	ASTM D3418
Peak Crystallization Temperature (DSC)	135 to 145	°C	ASTM D3418
Heat of Fusion [3]	40.0 to 50.0	J/g	ASTM D3418
Thermal Stability [4]	> 375	°C	TGA

Electrical	Typical Value	Unit	Test method
Surface Resistivity [5]	> 1.0E+14	ohms	ASTM D257
Volume Resistivity [6]	> 1.0E+14	ohms·cm	ASTM D257

Additional Information
Intrinsic Viscosity: 0.33 - 0.43 l/g

Notes

Typical properties: these are not to be construed as specifications.

[1] 30g

[2] 1.0 mm/min

[3] 80°C to end of melting

[4] @ 1% weight loss

[5] Voltage < 1V, after 2 min - 500 V @ 23°C

[6] Intensity = 10 mA, after 2 min @ 23°C