

# Solef® 5120

## polyvinylidene fluoride

Solef® 5120 PVDF is a medium viscosity grade that gives improved adhesion ideal for its usage in lithium batteries.

### General

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

Physical	Typical Value	Unit	Test method
Density	1.75 to 1.78	g/cm <sup>3</sup>	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/21.6 kg)	< 3.0	g/10 min	ISO 1133
Water Absorption <sup>1</sup> (24 hr, 23°C)	< 0.20	%	ASTM D543

Mechanical	Typical Value	Unit	Test method
Tensile Modulus <sup>2</sup> (23°C)	1000 to 1500	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)	124 to 130	°C	ASTM D3418
Heat of Fusion <sup>3</sup>	38.0 to 48.0	J/g	ASTM D3418
Thermal Stability <sup>4</sup>	> 375	°C	TGA

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

### Additional Information

Intrinsic Viscosity: 0.15 - 0.25 l/g

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### Notes

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

<sup>1</sup> 30g

<sup>2</sup> 1.0 mm/min

<sup>3</sup> 80°C to end of melting

<sup>4</sup> @ 1% weight loss

<sup>5</sup> Voltage < 1V, after 2 min - 500 V @ 23°C

<sup>6</sup> Intensity = 10 mA, after 2 min @ 23°C

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