

# Solef® 21510

## polyvinylidene fluoride

Solef® 21510 PVDF copolymer has medium viscosity and is suitable for extrusion and for solution processing in lithium batteries applications.

### General

Material Status	• Commercial: Active	
Availability	• Africa & Middle East • Asia Pacific • Europe	• Latin America • North America
Features	• Copolymer • Good Flexibility	• Medium Viscosity
Processing Method	• Extrusion	• Solution Processing

### Physical

	Typical Value	Unit	Test method
Density / Specific Gravity	1.75 to 1.80		ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/5.0 kg)	3.0 to 9.0	g/10 min	ASTM D1238
Water Absorption (24 hr, 23°C)	< 0.040	%	ASTM D570

### Mechanical

	Typical Value	Unit	Test method
Tensile Modulus <sup>1</sup> (23°C, 2.00 mm)	360 to 480	MPa	ASTM D638
Tensile Strength <sup>2</sup>			ASTM D638
Yield, 23°C, 2.00 mm	15.0 to 18.0	MPa	
Break, 23°C, 2.00 mm	20.0 to 40.0	MPa	
Tensile Elongation <sup>2</sup>			ASTM D638
Yield, 23°C, 2.00 mm	12 to 15	%	
Break, 23°C, 2.00 mm	600 to 750	%	

### Thermal

	Typical Value	Unit	Test method
Glass Transition Temperature	-40.0	°C	ASTM D4065
Melting Temperature	130 to 136	°C	ASTM D3418
Peak Crystallization Temperature (DSC)	89.0 to 93.0	°C	ASTM D3418
Crystallization Heat	20.0 to 24.0	J/g	ASTM D3417
Heat of Fusion	20.0 to 24.0	J/g	ASTM D3417

### Electrical

	Typical Value	Unit	Test method
Surface Resistivity	> 1.0E+14	ohms	ASTM D257
Volume Resistivity	> 1.0E+14	ohms-cm	ASTM D257

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## Notes

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

<sup>1</sup> Type IV, 1.0 mm/min

<sup>2</sup> Type IV, 50 mm/min



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