

# Solef® 31508

## polyvinylidene fluoride

Solef® 31508 PVDF copolymer is a low viscosity and very flexible grade for Wire&Cable applications.

### General

Material Status	• Commercial: Active
Availability	<ul style="list-style-type: none"> <li>• Africa &amp; Middle East</li> <li>• Asia Pacific</li> <li>• Europe</li> <li>• Latin America</li> <li>• North America</li> </ul>
Features	<ul style="list-style-type: none"> <li>• Copolymer</li> <li>• Good Flexibility</li> <li>• Low Viscosity</li> </ul>
Uses	• Wire & Cable Applications
Forms	• Granules

### Physical

	Typical Value	Unit	Test method
Density / Specific Gravity	1.75 to 1.80		ASTM D792
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	3.0 to 8.0	g/10 min	ASTM D1238
Molding Shrinkage - Flow	2.0 to 3.0	%	
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)	400 to 600	MPa	ASTM D638
Tensile Strength <sup>2</sup>			ASTM D638
Yield, 23°C, 2.00 mm	14.0 to 35.0	MPa	
Break, 23°C, 2.00 mm	14.0 to 30.0	MPa	
Tensile Elongation <sup>2</sup>			ASTM D638
Yield, 23°C, 2.00 mm	10 to 12	%	
Break, 23°C, 2.00 mm	350 to 600	%	
Coefficient of Friction			ASTM D1894
vs. Itself - Dynamic	0.20 to 0.30		
vs. Itself - Static	0.20 to 0.40		
Taber Abrasion Resistance			ASTM D4060
1000 Cycles, 1000 g, CS-10 Wheel	5.00 to 10.0	mg	

### Impact

	Typical Value	Unit	Test method
Notched Izod Impact <sup>3</sup> (23°C, 4.00 mm)	1000	J/m	ASTM D6110

### Hardness

	Typical Value	Unit	Test method
Durometer Hardness (Shore D, 2.00 mm)	53		ASTM D2240

### Thermal

	Typical Value	Unit	Test method
Glass Transition Temperature	-28.0	°C	ASTM D4065
Vicat Softening Temperature	110	°C	ASTM D1525 <sup>4</sup>
Melting Temperature	167 to 171	°C	ASTM D3418
Peak Crystallization Temperature (DSC)	125 to 131	°C	ASTM D3418

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Thermal	Typical Value	Unit	Test method
CLTE - Flow (0 to 40°C)	1.3E-4 to 1.5E-4	cm/cm/°C	ASTM D696
Specific Heat			ASTM E968
23°C	1200	J/kg/°C	
100°C	1600	J/kg/°C	
Thermal Conductivity (23°C)	0.20	W/m/K	ASTM C177
Crystallization Heat	22.0 to 28.0	J/g	ASTM D3417
Heat of Fusion	23.0 to 29.0	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
Dielectric Strength (23°C, 1.00 mm)	20 to 25	kV/mm	ASTM D149
Dielectric Constant (23°C, 1 kHz)	7.00		ASTM D150
Flammability	Typical Value	Unit	Test method
Flame Rating (0.100 mm)	V-0		UL 94
Oxygen Index (3.00 mm)	48	%	ASTM D2863

### 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

<sup>3</sup> 2 m/s, Partial Break

<sup>4</sup> Rate A (50°C/h), Loading 2 (50 N)



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