

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 ¹ (23°C, 2.00 mm) | 360 to 480 | MPa | ASTM D638 |
| Tensile Strength ² | | | 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 ² | | | 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.

¹ Type IV, 1.0 mm/min

² Type IV, 50 mm/min



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