**KYNAR SUPERFLEX® 2500-20**

Kynar Superflex® resin is a thermoplastic fluorinated polymer. The properties are the same as standard grades: chemical resistance, resistance to UV, low permeation, high purity, excellent mechanical behavior.

Moreover, this grade is very flexible and is suitable in electrical isolation cable, tubing and co-extrusion.

This grade is available as pellet form for injection, extrusion, compression.

### MAIN CHARACTERISTICS

<table>
<thead>
<tr>
<th>PROPERTIES</th>
<th>VALUE</th>
<th>UNIT</th>
<th>TEST STANDARD</th>
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<tbody>
<tr>
<td><strong>RHEOLOGICAL PROPERTIES</strong></td>
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<td></td>
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<tr>
<td>Melt Volume-Flow Rate</td>
<td>5.8</td>
<td>cm³/10min</td>
<td>ISO 1133</td>
</tr>
<tr>
<td>Temperature</td>
<td>450</td>
<td>°F</td>
<td>-</td>
</tr>
<tr>
<td>Load</td>
<td>8.38</td>
<td>lb</td>
<td>-</td>
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<tr>
<td>Melt Flow Rate</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Temperature</td>
<td>1 - 15</td>
<td>g/10min</td>
<td>ASTM D1238</td>
</tr>
<tr>
<td>Load</td>
<td>230</td>
<td>°C</td>
<td>-</td>
</tr>
<tr>
<td>Melt Viscosity, 230°C, 100 s⁻¹</td>
<td>3.8</td>
<td>kg</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>9 - 16</td>
<td>kPoise</td>
<td>ASTM D3835</td>
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<tr>
<td><strong>MECHANICAL PROPERTIES</strong></td>
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<td></td>
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<tr>
<td>Tensile Modulus</td>
<td>50800</td>
<td>psi</td>
<td>ISO 527-1/-2</td>
</tr>
<tr>
<td>Tensile Modulus, 73 °F</td>
<td>35000 - 55000</td>
<td>psi</td>
<td>ASTM D638</td>
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<tr>
<td>Yield stress</td>
<td>2180</td>
<td>psi</td>
<td>ISO 527-1/-2</td>
</tr>
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<td>Tensile Strength at Yield, 73 °F</td>
<td>1700 - 2800</td>
<td>psi</td>
<td>ASTM D638</td>
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<td>Yield strain</td>
<td>18</td>
<td>%</td>
<td>ISO 527-1/-2</td>
</tr>
<tr>
<td>Elongation at Yield, 73 °F</td>
<td>17 - 25</td>
<td>%</td>
<td>ASTM D638</td>
</tr>
<tr>
<td>Nominal Strain at Break</td>
<td>&gt; 50</td>
<td>%</td>
<td>ISO 527-1/-2</td>
</tr>
<tr>
<td>Tensile Strength at Break, 73 °F</td>
<td>2000 - 4500</td>
<td>psi</td>
<td>ASTM D638</td>
</tr>
<tr>
<td>Elongation at Break, 73 °F</td>
<td>500 - 800</td>
<td>%</td>
<td>ASTM D638</td>
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<tr>
<td>Taber Abrasion, CS 17 1000g/pad</td>
<td>28 - 33</td>
<td>mg/1000 cycles</td>
<td>ASTM-G195-13A</td>
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<tr>
<td>Hardness, Shore D, 73 °F</td>
<td>50 - 57</td>
<td>-</td>
<td>ASTM D2240</td>
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<tr>
<td>Flexural Modulus, 73 °F</td>
<td>28000 - 40000</td>
<td>psi</td>
<td>ASTM D790</td>
</tr>
<tr>
<td>Flexural Strength @ 5% Strain, 73 °F</td>
<td>1500 - 2500</td>
<td>psi</td>
<td>ASTM D790</td>
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<tr>
<td>Compressive Strength, 73 °F</td>
<td>2000 - 3000</td>
<td>psi</td>
<td>ASTM D695</td>
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<tr>
<td>Charpy Notched Impact Strength, +23°C</td>
<td>N</td>
<td>ft/lb/in²</td>
<td>ISO 179/1eA</td>
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<tr>
<td>Unnotched Impact Strength, 73 °F</td>
<td>N</td>
<td>ft/lb/in</td>
<td>ASTM D256</td>
</tr>
<tr>
<td>Notched Impact Strength, 73 °F</td>
<td>N</td>
<td>ft/lb/in</td>
<td>ASTM D256</td>
</tr>
<tr>
<td>Coefficient of Friction, Static vs. Steel, 73 °F</td>
<td>0.49</td>
<td>-</td>
<td>ASTM D1894</td>
</tr>
<tr>
<td>Coefficient of Friction, Dynamic vs. Steel, 73 °F</td>
<td>0.54</td>
<td>-</td>
<td>ASTM D1894</td>
</tr>
<tr>
<td><strong>THERMAL PROPERTIES</strong></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Melting Temperature, 10°C/min</td>
<td>252</td>
<td>°F</td>
<td>ISO 11357-1/-3</td>
</tr>
<tr>
<td>Melting Point, 73 °F</td>
<td>243 - 257</td>
<td>°F</td>
<td>ASTM D3418</td>
</tr>
</tbody>
</table>

### Glass Transition Temperature, 10°C/min
- -40 °C  °F ISO 11357-1/-2

### Glass Transition Temperature (Tg)
-46 - -40 °C  °F ASTM D7028

### Temp. of Deflection Under Load, 1.80 MPa
88 °C  °F ISO 75-1/-2

### Heat Deflection Temperature, 264 Psi, 248 °F/hr
80 - 100 °C  °F ASTM D648

### Coefficient of Thermal Expansion, 73 °F
8.5 - 10.8 10E-5/°F ASTM D696

### Burning Behav. at 1.5 mm Nominal Thickness
- Thickness Tested
  - V-0 in
  - 0.0591 in

- Yellow Cord available
  - yes

### Burning Behav. at Thickness h
- Thickness Tested
  - V-0 class
  - 0.0394 in

### Oxygen Index
- 44 %
  - ISO 4589-1/-2

### Limiting Oxygen Index, 73 °F
- 42 %
  - ASTM D2863

### Thermal Conductivity
- 1 - 1.25 BTU in / (hr ft2 F)
  - ASTM D433

### Specific Heat
- 0.28 - 0.36 BTU/(lb·°F)
  - DSC

### Thermal Decomposition TGA, in air
- 707 °F
  - 1% wt. loss

### Thermal Decomposition TGA, in nitrogen
- 770 °F
  - 1% wt. loss

### Electrical Properties
- **Dielectric Constant, 1 kHz**
  - 4.5 - 13.5
  - ASTM D150

- **Dissipation Factor, 100 kHz**
  - 0.05 - 0.29
  - ASTM D150

- **Volume Resistivity, DC 68 °F, 65% R.H.**
  - 2E14 Ohm·cm
  - ASTM D257

- **Surface Resistivity, 73 °F**
  - 8.5E11 - 9.2E11 Ohm/sq
  - ASTM D257

- **Electric Strength**
  - 305 kV/in
  - IEC 60243-1

- **Dielectric Strength, 73 °F**
  - 0.0203 - 0.0279 kV/mil
  - ASTM D149

### Other Properties
- **Water Absorption**
  - 0.03 %
  - Sim. to ISO 62

- **Water Absorption**
  - ≤ 0.07 %
  - ASTM D570

- **Density**
  - 1.79 g/cm³
  - ISO 1183

- **Specific Gravity, 73 °F**
  - 1.6 - 1.62
  - ASTM D792

### Optical Properties
- **Refractive Index @ sodium D line**
  - 1.4
  - ASTM D542

### Processing
- Injection Molding, Sheet Extrusion, Coating, Transfer Molding

### Delivery form
- Pellets

### Special Characteristics
- Heat Stabilized, Light stabilized or stable to light, UV Stable

### Regional Availability
- North America, Europe, Asia Pacific, South and Central America, Near East/Africa

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