### Polyethylen HMW (high molecular weight) EL

**DIN designation:** PE HMW/500 EL  
**Test condition:** dry

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#### Technical data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Test method</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Density</td>
<td>ISO 1183-1</td>
<td>0.98</td>
<td>g/cm³</td>
</tr>
</tbody>
</table>

#### Mechanical data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Test method</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yield stress</td>
<td>ISO 527</td>
<td>22</td>
<td>MPa</td>
</tr>
<tr>
<td>Elongation at break</td>
<td>ISO 527</td>
<td>&gt;50</td>
<td>%</td>
</tr>
<tr>
<td>Tensile modulus of elasticity</td>
<td>ISO 527</td>
<td>900</td>
<td>MPa</td>
</tr>
<tr>
<td>Notched impact strength</td>
<td>ISO 179</td>
<td>no break</td>
<td>kJ/m²</td>
</tr>
<tr>
<td>Shore hardness</td>
<td>ISO 868</td>
<td>65</td>
<td>Skala D</td>
</tr>
</tbody>
</table>

#### Electrical data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Test method</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume resistivity</td>
<td>IEC 60093</td>
<td>&gt;10⁴</td>
<td>Ω·cm</td>
</tr>
<tr>
<td>Surface resistivity</td>
<td>IEC 60093</td>
<td>&gt;10⁴</td>
<td>Ω</td>
</tr>
</tbody>
</table>

#### Thermal data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Test method</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Crystalline grain melting range</td>
<td>ISO 11357-3</td>
<td>135</td>
<td>°C</td>
</tr>
<tr>
<td>Thermal conductivity</td>
<td>DIN 52612-1</td>
<td>0.40</td>
<td>1,90 W/(m·K)</td>
</tr>
<tr>
<td>Thermal capacity</td>
<td>DIN 52612</td>
<td>150-230</td>
<td>kJ/(kg·K)</td>
</tr>
<tr>
<td>Coefficient of linear thermal expansion</td>
<td>DIN 53752</td>
<td>80</td>
<td>10⁶ /K</td>
</tr>
<tr>
<td>Service temperature long therm (max.)</td>
<td>Prüfwerte</td>
<td>130</td>
<td>°C</td>
</tr>
<tr>
<td>Service temperature short therm (max.)</td>
<td>Prüfwerte</td>
<td>-100</td>
<td>°C</td>
</tr>
<tr>
<td>Service temperature long therm (min.)</td>
<td>Prüfwerte</td>
<td>79</td>
<td>°C</td>
</tr>
<tr>
<td>Heat deflection temperature</td>
<td>ISO 306, V B</td>
<td></td>
<td>°C</td>
</tr>
</tbody>
</table>

#### Other data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Test method</th>
<th>Value</th>
<th>Unit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water absorption</td>
<td>ISO 62</td>
<td>&lt;0.01</td>
<td>HB</td>
</tr>
<tr>
<td>Flammability</td>
<td>UL 94</td>
<td></td>
<td>%</td>
</tr>
</tbody>
</table>

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#### Material properties

- very good electrically conductive
- low water absorption
- good gliding properties
- Suitable for use in explosion-proof areas

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#### Application areas

Electrical engineering, Conveyor technology, Transport technology, mechanical engineering

#### Application examples

pump construction, Panel in explosion protection, etc.

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Info: In this data printout indicative values are given. These values are changing by the influence of processing conditions, modifications, material additives and environmental influences. These data are recommended values and out of experience. The user has to carry out his own experiments with this material. These data are not legally binding. We can not assure that this material is suitable for your application.

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