

TECAFLON PVDF ELS black - Stock Shapes (rods, plates, tubes)

Chemical Designation

PVDF (Polyvinylidene fluoride)

Colour

black

Density

1.78 g/cm³

Fillers

conductive carbon black

Main features

- electrically conductive
- very good chemical resistance
- inherent flame retardant
- continuous service temperature up to 150 °C
- good slide and wear properties
- very good UV and weather resistance
- very good weldable

Target Industries

- chemical technology
- electronics
- energy industry
- mechanical engineering

| <i>Mechanical properties</i> | <i>parameter</i> | <i>value</i> | <i>unit</i> | <i>norm</i> | <i>comment</i> |
|--------------------------------------|------------------|-----------------------------------|-------------------|------------------|---|
| Modulus of elasticity (tensile test) | 1mm/min | 3100 | MPa | DIN EN ISO 527-2 | 1) |
| Tensile strength at yield | 50mm/min | 55 | MPa | DIN EN ISO 527-2 | |
| Elongation at yield (tensile test) | 50mm/min | 4 | % | DIN EN ISO 527-1 | |
| Elongation at break (tensile test) | 50mm/min | 8 | % | DIN EN ISO 527-2 | |
| Impact strength (Charpy) | max. 7,5J | 67 | kJ/m ² | DIN EN ISO 179-1 | 2) |
| Ball indentation hardness | | 162 | MPa | ISO 2039-1 | 3) |
| | | | | | (1) For tensile test: specimen type 1b (2) For Charpy test: support span 64mm, norm specimen. (3) Specimen in 4mm thickness |
| <i>Thermal properties</i> | <i>parameter</i> | <i>value</i> | <i>unit</i> | <i>norm</i> | <i>comment</i> |
| Glass transition temperature | | -40 | °C | DIN EN ISO 11357 | 1) |
| Melting temperature | | 177 | °C | DIN EN ISO 11357 | |
| Service temperature | short term | 150 | °C | - | 2) |
| Service temperature | long term | 150 | °C | - | |
| | | | | | (1) Found in public sources. (2) Found in public sources. Individual testing regarding application conditions is mandatory. |
| <i>Electrical properties</i> | <i>parameter</i> | <i>value</i> | <i>unit</i> | <i>norm</i> | <i>comment</i> |
| surface resistivity | | 10 ² - 10 ⁶ | Ω | DIN EN 61340-2-3 | |
| <i>Other properties</i> | <i>parameter</i> | <i>value</i> | <i>unit</i> | <i>norm</i> | <i>comment</i> |
| Resistance to hot water/ bases | | + | | - | 1) |
| Resistance to weathering | | + | | - | 2) |
| | | | | | (1) + good resistance (2) + good resistance |

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Manufactured by: Ensinger Group,
a German based plastic manufacturer

Represented by:
Ensinger International GmbH
(Singapore Branch)
for Asia Pacific other than Japan+China

63 Hillview Avenue #02-03
Lam Soon Industrial Building
Singapore 669569
Tel +65 65524177
Fax +65 65525177
www.ensinger.com.sg

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