

TECASON P MT XRO blue - Stock Shapes (rods, plates, tubes)

Chemical Designation

PPSU (Polyphenylsulfone)

Colour

blue opaque

Density

1.35 g/cm³

Fillers

barium sulfate

Main features

- x-ray opaque
- high thermal and mechanical capacity
- hydrolysis and superheated steam resistant
- good impact strength
- high stiffness
- high strength
- good chemical resistance
- high gamma radiation resistance

Target Industries

- medical technology

| Mechanical properties | parameter | value | unit | norm | comment |
|---------------------------------------|------------------|-----------|-------------------|----------------------|--|
| Tensile strength | 50mm/min | 79 | MPa | DIN EN ISO 527-2 | (1) For tensile test: specimen type 1b |
| Modulus of elasticity (tensile test) | 1mm/min | 2400 | MPa | DIN EN ISO 527-2 | 1) (2) For flexural test: support span 64mm, norm specimen. |
| Tensile strength at yield | 50mm/min | 79 | MPa | DIN EN ISO 527-2 | (3) For Charpy test: support span 64mm, norm specimen. |
| Elongation at yield (tensile test) | 50mm/min | 7 | % | DIN EN ISO 527-2 | n.b. = not broken |
| Elongation at break (tensile test) | 50mm/min | > 50 | % | DIN EN ISO 527-2 | |
| Flexural strength | 2mm/min, 10 N | 104 | MPa | DIN EN ISO 178 | 2) |
| Modulus of elasticity (flexural test) | 2mm/min, 10 N | 2400 | MPa | DIN EN ISO 178 | |
| Impact strength (Charpy) | max. 7,5J | n.b. | kJ/m ² | DIN EN ISO 179-1eU | 3) |
| Notched impact strength (Charpy) | max. 7,5J | 12 | kJ/m ² | DIN EN ISO 179-1eA | |
| Shore hardness | D | 84 | | DIN EN ISO 868 | |
| Thermal properties | parameter | value | unit | norm | comment |
| Glass transition temperature | | 218 | °C | DIN EN ISO 11357 | 1) (1) Found in public sources. |
| Service temperature | short term | 190 | °C | | 2) (2) Found in public sources. |
| Service temperature | long term | 170 | °C | | Individual testing regarding application conditions is mandatory. |
| Other properties | parameter | value | unit | norm | comment |
| Water absorption | 24h / 96h (23°C) | 0.1 / 0.2 | % | DIN EN ISO 62 | 1) (1) Ø ca. 50mm, h=13mm |
| Resistance to hot water/ bases | | + | - | | 2) (2) + good resistance |
| Resistance to weathering | | - | - | | 3) (3) - poor resistance |
| Flammability (UL94) | corresponding to | V0 | | DIN IEC 60695-11-10; | 4) (4) Corresponding means no listing at UL (yellow card). The information might be taken from resin, stock shape or estimation. Individual testing regarding application conditions is mandatory. |

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