

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

### Chemical Designation

PPSU (Polyphenylsulfone)

### Colour

blue opaque

### Density

1.35 g/cm<sup>3</sup>

### 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 <sup>2</sup> | DIN EN ISO 179-1eU   | (3)                                                                                                                                                                                             |
| Notched impact strength (Charpy)      | max. 7.5J        | 12        | kJ/m <sup>2</sup> | 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) Found in public sources.                                                                                                                                                                    |
| Service temperature                   | short term       | 190       | °C                |                      | (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) Ø ca. 50mm, h=13mm                                                                                                                                                                          |
| Resistance to hot water/ bases        |                  | +         |                   | -                    | (2) + good resistance                                                                                                                                                                           |
| Resistance to weathering              |                  | -         |                   | -                    | (3) - poor resistance                                                                                                                                                                           |
| Flammability (UL94)                   | corresponding to | V0        |                   | DIN IEC 60695-11-10; | (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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