

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

### Chemical Designation

PPSU (Polyphenylsulfone)

### Colour

orange opaque

### Density

1.3 g/cm<sup>3</sup>

### Main features

- high thermal and mechanical capacity
- good heat deflection temperature
- hydrolysis and superheated steam resistant
- good impact strength
- high stiffness
- high strength
- good chemical resistance
- high gamma radiation resistance

### Target Industries

- medical technology
- mechanical engineering
- vacuum technology
- automotive industry

| <i>Mechanical properties</i>          | <i>parameter</i>         | <i>value</i> | <i>unit</i>       | <i>norm</i>          | <i>comment</i>                                                    |
|---------------------------------------|--------------------------|--------------|-------------------|----------------------|-------------------------------------------------------------------|
| Tensile strength                      | 50mm/min                 | 84           | 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                 | 84           | MPa               | DIN EN ISO 527-2     | (3) For Charpy test: support span 64mm, norm specimen.            |
| Elongation at yield (tensile test)    | 50mm/min                 | 7.6          | %                 | DIN EN ISO 527-2     | n.b. = not broken                                                 |
| Elongation at break (tensile test)    | 50mm/min                 | > 50         | %                 | DIN EN ISO 527-2     | (4) Specimen in 4mm thickness                                     |
| Flexural strength                     | 2mm/min, 10 N            | 105          | MPa               | DIN EN ISO 178       | 2)                                                                |
| Modulus of elasticity (flexural test) | 2mm/min, 10 N            | 2200         | 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   |                                                                   |
| Ball indentation hardness             |                          | 137          | MPa               | ISO 2039-1           | 4)                                                                |
| <i>Thermal properties</i>             | <i>parameter</i>         | <i>value</i> | <i>unit</i>       | <i>norm</i>          | <i>comment</i>                                                    |
| Glass transition temperature          |                          | 218          | °C                | DIN EN ISO 11357     | 1) (1) Found in public sources.                                   |
| Melting temperature                   |                          | n.a.         | °C                | DIN EN ISO 11357     | 2) (2) n.a. = not applicable                                      |
| Service temperature                   | short term               | 190          | °C                |                      | 3) (3) Found in public sources.                                   |
| Service temperature                   | long term                | 170          | °C                |                      | Individual testing regarding application conditions is mandatory. |
| <i>Other properties</i>               | <i>parameter</i>         | <i>value</i> | <i>unit</i>       | <i>norm</i>          | <i>comment</i>                                                    |
| 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                                          |
| Flammability (UL94)                   | listed (value at 0.79mm) | V0           |                   | DIN IEC 60695-11-10; |                                                                   |

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