

## 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; |   |

Our information and statements reflect the current state of our knowledge and shall inform about our products and their applications. They do not assure or guarantee chemical resistance, quality of products and their merchantability in a legally binding way. Our products are not defined for use in medical or dental implants. Existing commercial patents have to be observed. The corresponding values and information are no minimum or maximum values, but guideline values that can be used primarily for comparison purposes for material selection. These values are within the normal tolerance range of product properties and do not represent guaranteed property values. Therefore they shall not be used for specification purposes. Unless otherwise noted, these values were determined by tests at reference dimensions (typically rods with diameter 40-60 mm according to DIN EN 15860) on extruded and machined specimen. As the properties depend on the dimensions of the semi-finished products and the orientation in the component (esp. in reinforced grades), the material may not be used without a separate testing under individual circumstances. The customer is solely responsible for the quality and suitability of products for the application and has to test usage and processing prior to use. Data sheet values are subject to periodic review, the most recent update can be found at [www.ensingerplastics.com](http://www.ensingerplastics.com). Technical changes reserved.

Manufactured by: Ensinger Group,  
a German based plastic manufacturer

Represented by:  
Ensinger Asia Holding Pte Ltd.  
(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.ensingerplastics.com/en-sg/](http://www.ensingerplastics.com/en-sg/)

Date: 2017/07/27

Version: AA