

TECAPEEK IM natural - Stock Shapes (rods, plates, tubes)

Chemical Designation

PEEK (Polyetheretherketone)

Colour

beige opaque

Density

1.3 g/cm³

Main features

- very good chemical resistance
- inherent flame retardant
- good heat deflection temperature
- hydrolysis and superheated steam resistant
- good machinability
- good slide and wear properties

Target Industries

- oil and gas industry
- chemical technology
- energy industry
- mechanical engineering

| <i>Mechanical properties</i> | <i>parameter</i> | <i>value</i> | <i>unit</i> | <i>norm</i> | <i>comment</i> |
|---------------------------------------|------------------|--------------|-------------|------------------|--|
| Tensile strength | 50mm/min | 95 | MPa | ASTM D 638 | 1) (1) For tensile test: specimen type 1b |
| Elongation at break (tensile test) | 50 mm/min | 45 | % | ASTM D 638 | |
| Flexural strength | 2mm/min, 10 N | 124 | MPa | ASTM D 790 | |
| Modulus of elasticity (flexural test) | 2mm/min, 10 N | 3700 | MPa | ASTM D 790 | |
| Ball indentation hardness | | 84.5 | | ASTM D 2240 | |
| <i>Thermal properties</i> | <i>parameter</i> | <i>value</i> | <i>unit</i> | <i>norm</i> | <i>comment</i> |
| Glass transition temperature | | 150 | °C | DIN EN ISO 11357 | 1) (1) Found in public sources. |
| Melting temperature | | 341 | °C | DIN EN ISO 11357 | (2) Found in public sources. |
| Service temperature | short term | 300 | °C | - | 2) Individual testing regarding application conditions is mandatory. |
| Service temperature | long term | 300 | °C | - | |

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. 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. Technical changes reserved.