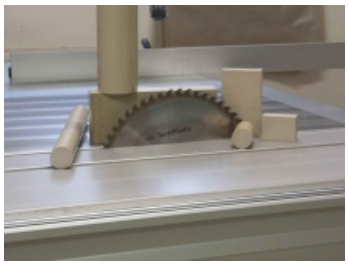
PEEK - polyetheretherketone

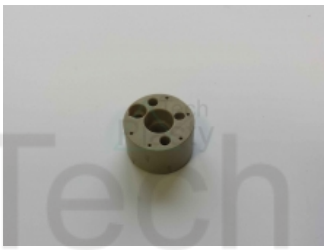
Other material names PEEK : Ketron PEEK, Murpec
Material group: PEEK



PEEK grades offer chemical and hydrolysis resistance similar to PPS, but can operate at higher temperatures. PEEK offers steam and wear resistance, while carbon-reinforced PEEK provides excellent wear capabilities. PEEK can be used continuously to 250°C and in hot water or steam without permanent loss in physical properties. For hostile environments, PEEK is a high strength alternative to fluoropolymers. PEEK carries a V-O flammability rating and exhibits very low smoke and toxic gas emission when exposed to flame.

Typical applications:

- vacuum wand handles during semiconductor manufacturing
- oil field drilling, components machined from PEEK
- ideal for instrument components where aesthetics are important
- seal components where ductility and inertness are important



The material is used in:

Food industry
Electrotechnical industry
Automobile industry
Chemical industry
Engineering industry
Steel industry
Paper industry
Glass industry
Production of single-purpose machines

Features:

- Excellent chemical resistance
- Very low moisture absorption
- Inherently good wear and abrasion resistance
- Unaffected by continuous exposure to hot water or steam

Material availability: Some sizes are in stock

Material properties table

Specific weight	1.31 g/cm³
Yield strength	110 N/mm²
Tensile strength	20 N/mm²
Allowable mean pressure deformation 1%	29.00 N/mm²
Allowable mean pressure deformation 2%	57.00 N/mm²

p.v dry limit	0.34 MPa.m/s
Flexural strength	160 N/mm²
Tensibility	20 %
Tensile modulus	4 400 N/mm²
Impact toughness	bez zlomu
Notched toughness	>3 kJ/m²
Ball hardness	230 N/mm²
Friction coefficient	0.30
Antistatic material	No
Permittivity	3.20
Electrical strength	24 kV/mm
Specific internal resistance	10^(14) Ω
Specific surface resistance	10^(13) Ω.cm
Melting point	340 °C
Thermal expansion	5 10^(-5)/K
Thermal conductivity	0.25 W/(K.m)
Permanent use temperature	-40 ; 250 °C
Transient temperature of use	-50 ; 310 °C
Absorbability	0,2 %
Water absorption	0,45 %
Resistance - oils	resistant
Acid resistance	resistant
Durability - alcali	resistant
Food contact	Yes

Engineering plastics are supplied in the form of bars, plates, strips, tubes and sheets. From the semi-finished products the company TechPlasty has regularly in stock, we also supply blanks.

All standard and special materials are designed to meet your specific requirements. Their mechanical, thermal, and electrical properties and chemical resistance satisfy the most demanding requirements and this allows them to work even in the most difficult conditions. If you need advice when choosing the appropriate material for your application, please contact us. We'll gladly advise you. You can utilize the long-term experience of our technical advisors free-of- charge, who can visit you right in your operation and solve your requirements for engineering plastics directly at the site of their usage.

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