Techtron® HPV PPS

Other material names HPV PPS: POLYPHENYLENE SULPHIDE
Material group: Special plastics

PPS (polyphenylene sulfide) products offer the broadest resistance to chemicals of any advanced engineering plastic. They have no known solvents below 200°C and offer inertness to steam, strong bases, fuels and acids. Minimal moisture absorption and a very low coefficient of linear thermal expansion make these PPS products ideally suited for precise tolerance machined components. In addition, PPS products exhibit excellent electrical characteristics and are inherently flame retardant.

Color Dark blue

Typical applications:

- Components used in high pressure liquid chromatography
- Socket assemblies extensively machined from PPS plate are used during high power / high speed testing of semiconductor packages
- Retaining rings used to retain wafers in chemical-mechanical polishing equipment

The material is used in:

Electrotechnical industry
Automobile industry
Chemical industry
Engineering industry

Features:

- Excellent chemical resistance
- Essentially zero moisture absorption
- Machines to tight tolerances
- Excellent alternative to PEEK at lower temperatures

Material availability: Material in stock at the manufacturer

Material properties table

Specific weight	1.42 g/cm³
Tensile strength	78 N/mm²
Allowable mean pressure deformation 1%	33.00 N/mm²
Allowable mean pressure deformation 2%	65.00 N/mm²
Allowable mean pressure deformation 5%	105.00 N/mm²
Tensile modulus	4 000 N/mm²
Impact toughness	25
Notched toughness	>4 kJ/m²
Ball hardness	160 N/mm²
Friction coefficient	0.12
Antistatic material	No
Permittivity	3.30
Electrical strength	24 kV/mm
Specific internal resistance	10^(14) Ω
Specific surface resistance	10^(13) Ω.cm
Melting point	280 °C
Thermal expansion	6 10^(-5)/K
Thermal conductivity	0.30 W/(K.m)

Permanent use temperature	-20 ; 220 °C
Transient temperature of use	-30 ; 260 °C
Absorbability	0,2 %
Water absorption	0,05 %
Resistance - oils	resistant
Acid resistance	resistant
Durability - alcali	resistant
Food contact	No

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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