PC1000 - machine grade polycarbonate

Other material names PC1000:
Material group: Polycarbonate

PC 1000 machine grade polycarbonate (PC) is a transparent amorphous thermoplastic which offers very high impact strength and high modulus of elasticity. The material has a 145°C heat deflection temperature at 264 psi, absorbs very little moisture and resists acidic solutions. These properties, in addition to good electrical characteristics, make PC 1000 machine grade polycarbonate stock shapes an excellent choice for electrical/electronic applications. Its strength, impact resistance and transparency also make it an ideal material for certain transparent structural applications such as sight glasses and windows.

PC 1000 machine grade polycarbonate is stress relieved making it ideal for close tolerance machined parts. Our stock shapes are produced from polycarbonate resins which meet the requirements of ASTM D 3935.

A food grade polycarbonate that is compliant with FDA and Canada AG regulations is available upon request. A glass fiber reinforced polycarbonate grade is available upon request.

Typical applications:

- Manifolds
- Parts used on processing lines offer chemical resistance and minimal expansion rates
- Medical Equipment Components

The material is used in:

Beverage industry
Automobile industry

Features:

- Excellent impact resistance, toughness and elongation properties elasticity
- Transparent
- Good dielectric properties
- Economical thermal performance

Material availability: Material in stock at the manufacturer

Material properties table

Specific weight	1.20 g/cm³
Yield strength	70 N/mm²
Allowable mean pressure deformation 1%	18.00 N/mm²
Allowable mean pressure deformation 2%	35.00 N/mm²
Allowable mean pressure deformation 5%	72.00 N/mm²
Tensibility	50 %
Tensile modulus	2 400 N/mm²
Impact toughness	bez zlomu
Notched toughness	>60 kJ/m²
Ball hardness	120 N/mm²
Friction coefficient	0.50
Sliding wear	22.00 um/km
Antistatic material	No
Permittivity	3.00
Electrical strength	28 kV/mm
Specific internal resistance	10^(15) Ω
Specific surface resistance	10^(15) Ω.cm

Thermal expansion	7 10^(-5)/K
Thermal conductivity	0.21 W/(K.m)
Permanent use temperature	-50 ; 115 °C
Transient temperature of use	-60 ; 125 °C
Absorbability	0,15 %
Water absorption	0,35 %
Resistance - oils	podmienečne odolný
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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