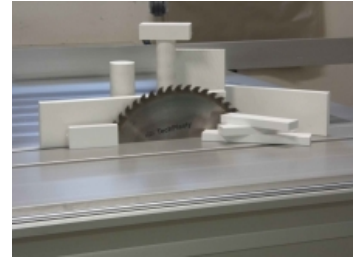


PET - polyethylene terephthalate

Other material names PET: PETP

Material group: PET

PET is an unreinforced, semi-crystalline thermoplastic polyester based on polyethylene terephthalate. It is characterized as having the best dimensional stability coupled with excellent wear resistance, a low coefficient of friction, high strength, and resistance to moderately acidic solutions. PET's properties make it especially suitable for the manufacture of precision mechanical parts which are capable of sustaining high loads and enduring wear conditions. PET's continuous service temperature is 100°C and its melting point is almost higher than acetals.



In addition, PET offers good chemical and abrasion resistance. Its low moisture absorption enables mechanical and electrical properties to remain virtually unaffected by moisture. PET can be machined to precise detail on standard metal working equipment.

PET is an excellent candidate for parts used in the food processing and equipment industries.

Color of material:

White



Typical applications:

- Manifolds machined
- Food manufacturing and processing equipment
- Carousel
- Filter Track
- Locating Disk
- Rings



The material is used in:

Beverage industry
Food industry

Features:

- Good for both wet and dry environments
- High strength and rigidity -- ideal for close tolerance parts
- Excellent stain resistance
- Good wear resistance and excellent dimensional stability
- Better resistance to acids than nylon or acetal

Material availability: Some sizes are in stock

Material properties table

Specific weight	1.38 g/cm ³
Yield strength	80 N/mm ²
Allowable mean pressure deformation 1%	26.00 N/mm ²
Allowable mean pressure deformation 2%	51.00 N/mm ²
Allowable mean pressure deformation 5%	93.00 N/mm ²
p.v dry limit	0.15 MPa.m/s
Flexural strength	125 N/mm ²
Tensibility	40 %
Flexural modulus	2 600 N/mm ²
Tensile modulus	3 000 N/mm ²
Impact toughness	bez zlomu
Notched toughness	>4 kJ/m ²
Ball hardness	140 N/mm ²
Friction coefficient	0.25
Sliding wear	0.35 um/km
Abrasive wear	610
Antistatic material	No
Permittivity	3.40
Electrical strength	60 kV/mm
Specific internal resistance	10 ¹⁵ Ω
Specific surface resistance	10 ¹⁴ Ω.cm
Melting point	255 °C
Thermal expansion	7 10 ⁻⁵ /K
Thermal conductivity	0.24 W/(K.m)
Permanent use temperature	-20 ; 100 °C
Transient temperature of use	-20 ; 160 °C
Absorbability	0,25 %
Water absorption	0,5 %
Resistance - oils	resistant
Acid resistance	conditionally resistant
Durability - alcali	conditionally 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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