

Application purpose and characteristics

The specific properties of PET-C make this material particularly suited for mechanical precision and wearing parts. High mechanical strength, rigidity, and hardness. Very good creep resistance. Low, constant coefficient of friction. Very high wear resistance (comparable to or even higher than polyamides).

Very high dimensional stability (better than that of polyacetal). Better resistance to acids than polyamide and polyacetal. Good electrical insulation properties. Physiologically safe (suitable for contact with foods). High resistance to high-energy radia

Material name, short description	PET-C
Material name, based on technical standards	Polyethylene terephthalate
Density	1.39 g/cm ³
Color	natural (white)
Compound code	PET-C 00.009-00

Mechanical properties

Modulus of elasticity & tension 1	3600 N/mm ² ISO 527-2
Yield stress	90 N/mm ² ISO 527-2
Elongation at break	15 % ISO 527-2
Hardness test value	95 Rockwell M ISO 2039-2
Ball indentation hardness	170 N/mm ² EN ISO 2039-1
Impact strength	≥ #ErrorkJ/m ² ISO 179-1eA Charpy
Notch impact strength	3.00 kJ/m ² ISO 179-1/1eU Charpy

Other attributes

Moisture absorption	0.3 % ISO 62 normal climate 23 °C / 50 % r.h.
Water absorption	0.5 % ISO 62 in water at 23 °C

Thermal attributes

Min. operating temperature	-20 °C
Max. operating temperature long term	115 °C
Max. operating temperature short term	160 °C
Coefficient of linear thermal expansion 1	0.6 * 10 ⁻⁶ /K ISO 11359 at length, 23 - 60 °C
Crystalline melting point	255 °C ISO 3146 DSC, 10 °C/min
Heat deflection temperature 1	75 °C ISO 75-2 HDT A Process
Thermal conductivity	0.27 W/(m·K) DIN 52612 + 23 °C

Electrical attributes

Comparative tracking index	600 IEC 60112
Dielectric dissipation factor 1	0.014 IEC 60250 1 MHz
Dielectric dissipation factor 2	0.001 IEC 60250 100 Hz
Dielectric constant 1	3.2 IEC 60250 1 MHz
Dielectric constant 2	3.4 100 Hz
Dielectric strength 1	22 kV/mm IEC 60243-1 in transformer oil
Surface resistivity	≥10 ¹⁴ Ω IEC 60093
Volume resistivity	≥10 ¹³ Ω*cm IEC 60093

In compliance with **RoHS** and **REACH** directives.

This information is based on our available data. These values are measured on standard test specimens and are within the normal tolerance range of material properties and do not represent guaranteed property values. Therefore they shall not be used for specification purposes. The customer is solely responsible for quality and suitability of material for his application. He has to test usage and processing prior to use. Angst+Pfister makes no guarantees for the suitability of the material for any given application and assumes no obligation or liability in connection with the information provided above.

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