

## Application purpose and characteristics

Machine components with high demands in terms of precision and wear resistance. Bearings, sliding elements with high loads capacity and wear resistance.

This material has a homogeneously distributed, integral solid lubricant. The specific material composition results in a unique, self-lubricating material for plain bearings. In addition to having a very high wear resistance, this material offers a lower coefficient of friction.

Material name, short description	PET-C
Material name, based on technical standards	Polyethylene terephthalate
Density	1.39 g/cm <sup>3</sup>
Color	grey
Compound code	PET-C SL.003-00
Compound	PET-C + solid lubricants

## Mechanical properties

Modulus of elasticity & tension 1	3300 N/mm <sup>2</sup> ISO 527
Tensile strength	80 N/mm <sup>2</sup> ISO 527
Yield stress	80 N/mm <sup>2</sup> ISO 527
Elongation at rupture	10 % ISO 527
Hardness test value	81 Shore D
Impact strength	60 kJ/m <sup>2</sup> ISO 179-1/1eU Charpy, 23 °C
Notch impact strength	3.60 kJ/m <sup>2</sup> ISO 179/1eA Charpy

## Thermal attributes

Max. operating temperature short term	160 °C IEC 216
Coefficient of linear thermal expansion 1	60 * 10 <sup>-6</sup> K <sup>-1</sup>

## Electrical attributes

Dielectric constant 1	3 DIN IEC 60250 1 MHz
Dielectric strength 1	20 kV/mm IEC 60243
Surface resistivity	10 <sup>13</sup> Ω IEC 60093

## Other attributes

Water absorption	0.5 % ISO 62 23 °C
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## Approvals / Compliance

Food & Beverage	FDA CFR 21 - 177.1630 "Polyethylene phthalate polymers"
	EC No. 1935/2004 incl. last amendments and EC 2023/2006 (GMP)
	Regulation EU 10/2011 incl. last amendments



EC No.1935:2004



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.