

Datenblatt | Data sheet

Plastic ball PK

Semi-crystalline engineering thermoplastic material balls, they feature good mechanical properties, excellent wear and abrasion resistance, good corrosion resistance and resistance to high temperatures, high elasticity and good dimensional stability. This material is not stable to UV radiation.

Field of application

Special bearings and pumps, they are used in the automotive and aerospace fields, and in chemical, electronic and petroleum industry.

Corrosion resistance

Good corrosion resistance in contact with aliphatic hydrocarbons, lubricants, oils, greases, petroleum products, saline solutions. Polyketone balls are attacked by strong acids and bases.

Material

Technical name	Alternative Name	Abbreviation
Polyketone	Polyketone	PK

Physical / mechanical / thermal / electrical / magnetic characteristics

Characteristic	Symbol	Unit	Type	Note	Value
Density	δ	g/cm ³	Physical	Ambient temperature	1,24
Modulus of Elasticity	E	GPa	Mechanical		1500
Friction coefficient	μ	-	Mechanical	Ambient temperature	0,27
Specific heat	C	J/kg*K	Thermal	Ambient temperature	0,50
Coefficient of linear thermal expansion	α	10 ⁻⁶ /°C	Thermal	($\Delta T = 0 - 100$ °C)	110
Thermal conductivity	λ	W/(m*K)	Thermal	Ambient temperature	0,30
Volume resistivity	ρ	Ω *m	Electrical	-	> 10 ¹³
Relative magnetic permeability	μ	-	Magnetical	Diamagnetic	<~1

Technical characteristics

Characteristic	Type	Unit	Value	Unit	Value
Hardness	Mechanical	Shore D	75 - 85	-	-
Yield point load in compression	Mechanical	MPa	80 - 110	psi*10 ³	11 - 16
Operating temperature	Thermal	°C	-40 - 120	°F	-40 - 248

Available with

Diameter min/max (mm)	Diameter min/max (in)	Precision grade
1,500 - 100,000	1/16 - 4	0 / I / II / III / IV