

Datenblatt | Data sheet

Plastic ball PUR

Thermoplastic elastomer balls with characteristics similar to rubber, they provide much better wear and abrasion resistance. **Properties are strongly influenced by the starting polymeric formulation.**

Field of application

Special bearings, safety valves, they are frequently used in foodstuff industry. Screen cleaning (balls with a metal core and polyurethane coating).

Corrosion resistance

Polyurethane provides good corrosion resistance in diluted acids and alkali, mineral oils and greases, petroleum products. Balls are not resisting into strong acids and basis. Poor resistance in contact with hot water, hot and wet air, steam, aromatic hydrocarbons, organic polar solvents.

Material

Technical name	Alternative Name	Abbreviation
Polyurethane	Polyurethane	PUR / PU

Physical / mechanical / thermal / electrical / magnetic characteristics

Characteristic	Symbol	Unit	Type	Note	Value
Density	δ	g/cm ³	Physical	Ambient temperature	1,14
Modulus of Elasticity	E	MPa	Mechanical		360
Friction coefficient	μ	-	Mechanical	Ambient temperature	0,24
Specific heat	C	J/kg*K	Thermal	Ambient temperature	0,30
Coefficient of linear thermal expansion	α	10 ⁻⁶ /°C	Thermal	($\Delta T = 0 - 100$ °C)	150
Thermal conductivity	λ	W/(m*K)	Thermal	Ambient temperature	0,03
Volume resistivity	ρ	Ω *m	Electrical	-	> 10 ¹⁴
Relative magnetic permeability	μ	-	Magnetical	Diamagnetic	<~1

Technical characteristics

Characteristic	Type	Unit	Value	Unit	Value
Hardness	Mechanical	Shore A	80 - 100	-	-
Yield point load in compression	Mechanical	MPa	70 - 140	psi*10 ³	10,1 - 20,3
Operating temperature	Thermal	°C	-40 - 80	°F	-40 - 176

Available with

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