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Silicon ball

Balls made of silicone rubber. These can be used in a wide temperature range and ensure very high elasticity. They are resistant to weathering and radiation and can be used both as electrical insulators and electrical conductors. No good mechanical properties and wear resistance.

Field of application

Applications at high and low temperatures where constant elastic properties are required. Use in food, automotive and medical sectors. Very good sealing elements.

Corrosion resistance

Good resistance to contact with water (even hot), oxygen, ozone, hydraulic fluids, animal and vegetable oils and greases, dilute acids. Unresistant to strong acids and bases, mineral oils and greases, alkalis, aromatic hydrocarbons, ketones, petroleum products, polar solvents.

Material

Technical name	Alternative name	Abbreviation
Polysiloxane / Polydimethylsiloxane	Silicon	MQ / VMQ / PMVQ / PDMS

Physical / mechanical / thermal / electrical / magnetic characteristics

Characteristic	Symbol	Unit	Type	Note	Value
Density	δ	g/cm ³	Physical	Environmental temp.	1,20
Modulus of elasticity	E	MPa	Mechanical	-	7
Elongation at break	A	%	Mechanical	Environmental temp.	≤ 400
Compression set	-	%	Mechanical	Environmental temp.	40
Coefficient of friction	μ	-	Mechanical	Environmental temp.	1,00
Linear coefficient of thermal expansion	α	10 ⁻⁶ /°C	Thermal	($\Delta T = 0 - 100^\circ C$)	230,0
Thermal conductivity	λ	W/(m*K)	Thermal	Environmental temp.	0,17
Electrical resistivity	ρ	$\Omega \cdot mm^2/m$	Electrical	-	10 ⁴ - 10 ¹⁵
Relative magnetic permeability	μ	-	Magnetic	Diamagnetic	< -1

Technical characteristics

Characteristic	Type	Unit	Type	Unit	Value
Hardness	Mechanical	Shore A	20 - 90		
Break load in traction	Mechanical	MPa	8 - 12	psi * 10 ³	1,16 - 1,74
Operating temperature	Thermal	° C	-65 - 180	° F	-85 - 356

Available with

Diameter min/max (mm)	Diameter min/max (in)	Precision grade	Hardness
1,000 - 152,400	3/64 - 6	III	25-35 / 35-45 / 45-55 / 55-65 / 65-75 / 75-85 / 80-90 Shore A