

Datenblatt

Balls made of black glass

Glass sphere with high chemical and thermal stability. Have an electrically insulating effect, resistant to strong external loads and pressure fluctuations.

Field of application

Chemical and medical flow meters, instruments for aerospace industry.

Corrosion resistance

Stable: In contact with most acidic and basic substances.

Chemical composition in %

SiO ₂	Na ₂ O	CaO	Al ₂ O ₃	B ₂ O ₃	K ₂ O	BaO	MnO ₂
65,00 - 75,00	9,50 - 15,50	3,00 - 5,00	<= 1,00	1,00 - 3,00	2,00 - 3,00	3,00 - 4,00	5,00 - 7,00

Physical / mechanical / thermal / electrical / magnetic characteristics

Characteristic	Symbol	Unit	Type	Note	Value
Density	δ	g/cm ³	Physical	Environmental temp.	2,57
Modulus of elasticity	E	GPa	Mechanical	-	66
Refractive index	n	-	Optical	-	1,520
Softening temperature	-	°C / °F	Thermal	Umg. T. / Atm. D	650 / 1202
Linear coefficient of thermal expansion	α	10 ⁻⁶ / °C	Thermal	($\Delta T = 0 - 100^\circ C$)	7,20
Thermal conductivity	λ	W / (m*K)	Thermal	Environmental temp.	0,76
Volume resistivity	ρ	$\Omega * m$	Electrical	-	> 10 ¹⁴
Relative magnetic permeability	μ	-	Magnetic	Diamagnetic	< ~1

Technical characteristics

Characteristic	Type	Unit	Value	Unit	Value
Hardness	Mechanical	Knoop	468 - 530	Mohs	6
Breaking load compression	Mechanical	MPa	750 - 900	psi * 10 ³	109 - 138
Operating temperature	Thermal	°C	0 - 300	°F	32 - 572

Available with

Diameter min / max (mm)	Diameter min / max (in)	Surface	Precision grade
1,000 - 100,000	3/64 - 4	polished / matt	G25 / 50 / 100 / 200 / 500 / 1000 / 2000