

Data sheet

Soda lime glass

Sphere made of lightweight glass, chemically inert. Surfaces are optimally machinable.

Field of application

Special bearings and valves, mixers, low-cost control valves, metering pumps, flow meters, measuring instruments, plastic bearings, optical fiber applications, ink cartridges, bottle caps, centrifugal blasting, milling processes.
For art and decoration purposes

Corrosion resistance

Resistant: To strong alkali solutions; Nearly inert.

Chemical composition in %

SiO ₂	Na ₂ O	CaO	Al ₂ O ₃	MgO	Li ₂ O	K ₂ O	TiO ₂	Fe ₂ O ₃	PbO
63,00 - 81,00	9,00 - 15,00	7,00 - 14,00	≤ 2,00	≤ 6,00	≤ 2,00	≤ 1,50	≤ 0,80	≤ 0,80	≤ 0,010

Physical / mechanical / thermal / electrical / magnetic characteristics

Characteristic	Symbol	Unit	Type	Note	Value
Density	δ	g/cm ³	Physical	Environmental temp.	2,50
Modulus of elasticity	E	GPa	Mechanical	-	70
Refractive index	n	-	Optical	-	1,518
Softening temperature	-	°C / °F	Thermal	Umg. T. / Atm. D	726 / 1340
Linear coefficient of thermal expansion	α	10 ⁻⁶ / °C	Thermal	(ΔT = 0 - 100°C)	9,4
Thermal conductivity	λ	W / (m*K)	Thermal	Environmental temp.	1,00
Volume resistivity	ρ	Ω*m	Electrical	-	> 10 ¹⁴
Relative magnetic permeability	μ	-	Magnetic	Diamagnetic	< ~1

Technical characteristics

Characteristic	Type	Unit	Value	Unit	Value
Hardness	Mechanical	Knoop	465 - 585	Mohs	6
Breaking load compression	Mechanical	MPa	900 - 1100	psi * 10 ³	131 - 159
Operating temperature	Thermal	°C	0 - 200	°F	32 - 392

Available with

Diameter min / max (mm)	Diameter min / max (in)	Surface	Precision grade
1,000 - 100,000	3/64 - 4	polished / matt	G50 / 100 / 200 / 500 / 1000 / 2000