

SODA LIME GLASS BALLS

Light weight glass balls, they are chemically inert and they allow to get excellent surface finishing.

Applications

Special bearings and valves, plastic bearings, low-cost check valves, metering pumps, flow meters, measurement instruments, agitators, optic fiber devices, ink cartridges, closures for bottle, shot blasting, grinding. They are used even into art and decoration fields.

Chemical composition

%SiO ₂	%Na ₂ O	%CaO	%MgO	%Al ₂ O ₃	%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	6,00 max	2,00 max	2,00 max	1,50 max	0,80 max	0,80 max	0,010 max	-	-

Physical / mechanical / thermal / electric / magnetic properties

Property	Symbol	U.o.M.	Type	Notes	Values
Density	δ	g/cm ³	Physical	Room temp.	2,50
Young's modulus	E	GPa	Mechanical	-	70
Refractive index	n	-	Optic	-	1,518
Softening temperature	-	°C/°F	Thermal	Room temp./P.atm.	726 / 1340
Coefficient of linear thermal expansion	α	10 ⁻⁶ /°C	Thermal	(ΔT=0-100°C)	9,4
Thermal conductivity	λ	W/(m·K)	Thermal	Room temp.	1,00
Volume resistivity	ρ	Ω*m	Electric	-	> 10 ¹⁴
Relative magnetic permeability	μ	-	Magnetic	Diamagnetic	<-1

Technical data

Property	Type	U.o.M.	Values	U.o.M.	Values
Hardness	Mechanical	Knoop	465 - 585	-	-
Ultimate compressive strength	Mechanical	MPa	900 - 1100	psix10 ³	131 - 159
Service temperature	Thermal	°C	0 / 200	°F	32 / 392

Range

Diameters (min/max)	U.o.M.	Diameters (min/max)	U.o.M.	Precision Grade
1,000 - 100,000	mm	3/64 - 4	"	V100-V200-V500-V1000-V2000

Corrosion Resistance

Basically inert material, soda lime balls resist even to strong alkaline solutions.