

BLACK GLASS BALLS

High dimensional stability, these balls are resistant to corrosion and to chemical absorption.

Applications

Medical and chemical flowmeters, aircraft slips, turn indicators. Variety of functions, most common use into precision instruments.

Chemical composition

%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 max	1,00-3,00	2,00-3,00	3,00-4,00	5,00-7,00	-	-	-	-

Physical / mechanical / thermal / electric / magnetic properties

Property	Symbol	U.o.M.	Type	Notes	Values
Density	δ	g/cm ³	Physical	Room temp.	2,55
Young's modulus	E	GPa	Mechanical	-	66
Refractive index	n	-	Optic	-	1,520
Softening temperature	-	°C/°F	Thermal	Room temp./P.atm.	650 / 1202
Coefficient of linear thermal expansion	α	10 ⁻⁶ /°C	Thermal	(ΔT=0-100°C)	7,2
Thermal conductivity	λ	W/(m·K)	Thermal	Room temp.	0,76
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	468 - 530	-	-
Ultimate compressive strength	Mechanical	MPa	750 - 900	psix10 ³	109 - 130
Service temperature	Thermal	°C	0 / 300	°F	32 / 572

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

Good corrosion resistance in contact with most acid and basic compounds.