

LOW NOISE AISI 52100 HIGH PRECISION CHROME STEEL BALLS

High precision AISI 52100 chrome steel balls feature the lowest tolerances and noise levels.

Applications

High precision & aircraft bearings, recirculating ball screws, high precision spindles & gears, bearings for electric motors.

Chemical composition

%C	%Si	%Mn	%P	%S	%Cr	-	-	-	-	-
0,95-1,10	0,35 max	0,20-0,50	0,025 max	0,025 max	1,30-1,60	-	-	-	-	-

International standards

ITA	USA	GER	FRA	UK	RUS	CHN	JAP
100Cr6	52100	1.3505	100C6	534A99	9Ch1	GCr15	SUJ2

Physical / mechanical / thermal / electric / magnetic properties

Property	Symbol	U.o.M.	Type	Notes	Values
Density	δ	g/cm ³	Physical	Room temp.	7,80
Young's modulus	E	GPa	Mechanical	-	200
Specific heat	c	J/kg-K	Thermal	Room temp.	464
Coefficient of linear thermal expansion	α	10 ⁻⁶ /°C	Thermal	($\Delta T=0-100^{\circ}C$)	12,3
Thermal conductivity	λ	W/(m·K)	Thermal	Room temp.	42,4
Electric resistivity	ρ	$\Omega \cdot m \cdot 10^{-9}$	Electric	-	215
Relative magnetic permeability	μ	-	Magnetic	Ferromagnetic	> 300

Technical data

Property	Type	U.o.M.	Values	U.o.M.	Values
Hardness	Mechanical	HRC	60 - 66	-	-
Ultimate compressive strength	Mechanical	MPa	2500 - 2600	psix10 ³	362 - 377
Service temperature	Thermal	°C	-60 / 150	°F	-76 / 302

Range

Diameters	U.o.M.	Diameters	U.o.M.	Precision Grade (ISO 3290)
0,500 - 12,700	mm	1/32 - 1/2	"	G3
3,000 - 15,000	mm	1/8 - 19/32	"	G5
1,200 - 25,000	mm	3/64 - 1	"	G10