

1.4125 / AISI440C / X105CrMo17

Martensitic hardened stainless steel balls, they feature remarkable hardness, corrosion resistance, wear and abrasion resistance. Balls are provided in the passivated condition.

EINSATZBEREICHE

Precision bearings, automotive components (brakes, steering, line shaft), bicycle, agitators, appliances, sliders, quick couplings, machine tool, lock mechanisms, conveyor belts, skates, pens, pumps, castors, measurement instruments, valves.

CHEMICAL COMPOSITION

	C	Si	Mn	P	S*	Cr	Mo	-	-	-	-
min	0,95	-	-			16,00	-	-	-	-	-
max	1,20	1,00	1,00	0,040	0,030	18,00	0,75	-	-	-	-

*It DIN EN 10088-3

PHYSICAL / MECHANICAL / THERMAL / ELECTRICAL PROPERTIES

Eigenschaften	Symbol	Einheit	Typ	Anm.	Werte
Density	δ	[g/cm ³]	Physical	Room temp.	7,75
Youngs modulus	E	[GPa]	Mechanical	-	210
Specific Heat	c	[J/kg-K]	Thermal	Room temp.	450
Coefficient lin. thermal expansion	α	[10 ⁻⁶ /°C]	Thermal	($\Delta T=0-100^{\circ}C$)	10,2
Thermal conductivity	λ	[W/(m·K)]	Thermal	Room temp.	19,6
Electric resistivity	ρ	[$\Omega \cdot m \cdot 10^{-9}$]	Electrical	-	680
Rel. magnetic permeability	μ	-	Magnetical	Ferromagnetic	> 700

TECHNICAL DATAS

Eigenschaften	Typ	Einheit	Werte	ME	Werte
Hardness	Mechanical	[HRC]	> 55	HV10	min 580
Ult. tensile strength	Mechanical	[MPa]	1700 - 1900	[$\rho_{six} 10^3$]	275 - 290
Service Temperatur	Thermal	[°C]	-60 - 150	[°F]	32 - 752

QUALITY UND DIAMETER

DRM mm	Einheit	DRM “	Einheit	Qualität DIN5401 / ISO 3290
0,300 - 127,000	[mm]	1/64 - 5	[“]	G5 - 1000

CORROSIVE RESISTANCE

The material resists to corrosion in contact with freshwater, steam, oil, petrol, alcohol. They are subjected to pitting corrosion in sea water environments. Poor corrosion resistance in acid environments.