

# ANSI 1010/1015 LOW CARBON STEEL CEMENTED BALLS

Low cost carbon steel balls, case-hardened only. The thickness of the case hardened layer is about 0,8 mm.

## Applications

Furniture rails and rollers, drawers and rolling bearings, locks, oilers and greasers, skates, caddies, toys, belt and roller conveyors, tumble finishing.

## Chemical composition

Type	%C	%Si	%Mn	%P	%S						
1010	0,08-0,13	0,10-0,35	0,30-0,60	0,040 max	0,050 max	-	-	-	-	-	-
1015	0,12-0,18	0,10-0,35	0,30-0,60	0,040 max	0,050 max	-	-	-	-	-	-

## International standards

ITA	USA	GER	FRA	UK	RUS	CHN	JPN
C10	1010	1.1121	CC10	040A10	10	10	S10C
C15	1015	1.1141	XC12	080M15	15	15	S15C

## Physical / mechanical / thermal / electric / magnetic properties

Property	Symbol	U.o.M.	Type	Notes	Values
Density	$\delta$	g/cm <sup>3</sup>	Physical	Room temp.	7,82
Young's modulus	E	GPa	Mechanical	-	200
Specific heat	c	J/kg·K	Thermal	Room temp.	468
Coefficient of linear thermal expansion	$\alpha$	10 <sup>-6</sup> /°C	Thermal	( $\Delta T=0-100^{\circ}C$ )	11,8
Thermal conductivity	$\lambda$	W/(m·K)	Thermal	Room temp.	57,9
Electric resistivity	$\rho$	$\Omega \cdot m \cdot 10^{-9}$	Electric	-	155
Relative magnetic permeability	$\mu$	-	Magnetic	Ferromagnetic	> 500

## Technical data

Property	Type	U.o.M.	Values	U.o.M.	Values
Hardness	Mechanical	HRC	55 - 65	-	-
Ultimate tensile strength	Mechanical	MPa	300 - 400	psix10 <sup>3</sup>	43 - 58
Service temperature	Thermal	°C	-40 / 500	°F	-40 / 932

## Range

Diameters (min/max)	U.o.M.	Diameters (min/max)	U.o.M.	Precision Grade (ISO 3290)
0,300 - 300,000	mm	1/64 - 12	"	G10-16-20-25-28-40-60-100-200-500-1000-2000