AISI 1010/1015 LOW SOFT UNHARDENED CARBON STEEL BALLS (*Catapult Ammo*)

Applications
Caddies, wrought iron work, curtain mechanisms, steel shots, munitions, stirrers and mixers in not aggressive environments, welding appliances.

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	JAP
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	δ	[g/cm3]	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	α	[10^-6/ºC]	Thermal	(ΔT=0-100°C)	11.8
Thermal conductivity	λ	[W/(m·K)]	Thermal	Room temp.	57.9
Electric resistivity	ρ	[Ω*m*10^-9]	Electric	-	155
Relative magnetic permeability	μ	-	Magnetic	Ferromagnetic	> 500

Technical data

Property	Type	U.o.M.	Values	U.o.M.	Values
Hardness	Mechanical	[HRB]	60 - 90	-	-
Ultimate tensile strength	Mechanical	[MPa]	200 - 300	[psix10^3]	29 - 43
Service temperature	Thermal	[ºC]	-40 / 500	[ºF]	-40 / 932

Range

0.300 - 300.000	[mm]	1/64 - 12	["]	G100-200-500-1000-2000