

## S-2 ROCKBIT TOOL STEEL SHOCK RESISTING BALLS

Alloy steel through hardened balls, they are featured by high toughness and wear/collision resistance. They are specifically indicated for drilling applications.

### Applications

Oil-well drilling, well applications, offshore drilling devices.

### Chemical composition

%C	%Si	%Mn	%P	%S	%Mo	%V	-	-	-	-	-
0,40-0,55	0,90-1,20	0,30-0,50	0,030 max	0,030 max	0,30-0,60	0,50 max	-	-	-	-	-

### International standards

ITA	USA	GER	FRA	UK	RUS	CHN	JAP
-	T41902	-	-	-	Si-Mo	5SiMoV	-

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

Property	Symbol	U.o.M.	Type	Notes	Values
Density	$\delta$	g/cm <sup>3</sup>	Physical	Room temp.	7,72
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	( $\Delta T=0-100^{\circ}C$ )	10,8
Thermal conductivity	$\lambda$	W/(m·K)	Thermal	Room temp.	19,0
Electric resistivity	$\rho$	$\Omega \cdot m \cdot 10^{-9}$	Electric		165
Relative magnetic permeability	$\mu$	-	Magnetic	Ferromagnetic	> 500

### Technical data

Property	Type	U.o.M.	Values	U.o.M.	Values
Hardness	Mechanical	HRC	54 - 63	-	-
Ultimate tensile strength	Mechanical	MPa	2100 - 2200	psix10 <sup>3</sup>	305 - 320
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)
1,000 - 150,000	mm	3/64 - 6	"	G10-20-25-28-40-60-100-200

### Corrosion Resistance

Good corrosion resistance in alkaline solutions, fairish in contact with salts or industrial atmospheres, poor in contact with water and steam, they do not resist in contact with acid substances.