

**STANDARD REFERENCE:**
**EN ISO 683-4: 2018 (Hot-rolled products) | EN 10277: 2018 (Bright products)**
**RODACCIAI REFERENCES AND COMPARABLE STANDARDS**

EUROPE		ITALY	GERMANY		FRANCE	UK	USA
EN 10087: 1998 EN 10277-3: 2008		(UNI 4838-80)	(DIN 1651-88)		(NF A 35-561-92)	(BS 970 pt.3-91)	ASTM A 29
Grade	N°		Werkstoff	N°			
(11SMnPb30+Te+Bi)	(1.0718)	(CF 9 SMnPb 28+Te+Bi)	(9 SMnPb 28+Te+Bi)	(1.0718)	S 250 Pb+Te+Bi	-	(12L14+Te+Bi)

**CHEMICAL COMPOSITION (CAST ANALYSIS) (%)**

C / max	Si / max	Mn	P / max	S	Pb	Te	Bi
0,14	0,05	0,90±1,30	0,11	0,27÷0,33	0,20±0,35	0,01±0,05	0,05±0,09

**MECHANICAL PROPERTIES OF BRIGHT STEEL**

Size mm	as Rolled and/or as Rolled + Turned (+SH)		Cold Drawn (+C)		
	Hardness HB max	R <sub>m</sub> (MPa)	R <sub>p0,2</sub> (MPa) min	R <sub>m</sub> (MPa)	A5 (%) min
≥5 ≤10	-	-	440	510÷810	6
>10 ≤16	-	-	410	490÷760	7
>16 ≤40	169	380÷570	375	460÷710	8
>40 ≤63	169	370÷570	305	400÷650	9
>63 ≤100	154	360÷520	245	360÷630	9

For size &lt;5 mm the mechanical properties may be agreed at the time of enquiry and order

**WORKING TEMPERATURES RECOMMENDED**

Operation	Hot forgings deformation	Normalizing	Soft annealing
°C	950±1250	870÷910	650÷700

