

**STANDARD REFERENCE:**
**UNI EN 10025: 2004 (Hot-rolled products) | UNI EN 10027-2: 2008 (Bright products)**
**RODACCIAI REFERENCES AND COMPARABLE STANDARDS**

	EUROPE		ITALY	GERMANY		FRANCE	UK	USA
	UNI EN 10025: 2004 UNI EN 10277-2: 2008		(UNI 7070 - 72)	(DIN 17100-80)		(NF A 35-501-83)	(BS 4360 - 90)	ASTM A 29
	Grade	N°		Werkstoff	N°			
<b>RE 37</b>	S235JR S235JRC	1.0038 1.0122	Fe 360 B	RSt 37 - 2	1.0038	E 24 - 2	-	-

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

C / max	Mn / max	P / max*	S / max	N / max*
0,17	1,40	0,045	0,045	0,009

\* for each reduction of 0,005% below the specified P maximum an increase of 0,001% N above specified maximum will be permitted up to a maximum of 0,012%

**MECHANICAL PROPERTIES - AS ROLLED CONDITION**

Size mm	R <sub>m</sub> (MPa)	R <sub>p 0,2</sub> (MPa)	A <sub>5</sub> (%) min	KV (J) +20°C
≤16	360 - 510	235	26	27
>16 ≤40	360 - 510	225	26	27
>40 ≤63	360 - 510	215	25	27
>63 ≤80	360 - 510	215	24	27
>80 ≤100	360 - 510	215	24	27
>100 ≤150	350 - 500	195	22	27

**MECHANICAL PROPERTIES - BRIGHT PRODUCTS CONDITION**

Denomination		Size mm	Mechanical Properties				
Steel name	Steel number		Turned (+SH)		Cold Drawn (+C)		
			Hardness HB	R <sub>m</sub> (MPa)	R <sub>p 0,2</sub> (MPa) min	R <sub>m</sub> (MPa)	A (%) min
<b>S235JRC</b>	<b>1.0122</b>	≥5 ≤10	-	-	355	470÷840	8
		>10 ≤16	-	-	300	420÷770	9
		>16 ≤40	102÷140	360÷510	260	390÷730	10
		>40 ≤63	102÷140	360÷510	235	380÷670	11
		>63 ≤100	102÷140	360÷510	215	360÷640	11

**WORKING TEMPERATURES RECOMMENDED**

Operation	Hot forgings deformation	Soft annealing
°C	900÷1150	650÷700