



QUALITY	C35E - C35R	W.NR. 1.1181-1.1180
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REFERENCE NORM HOT ROLLED STEEL PRODUCTS	ISO 683-1
REFERENCE NORM BRIGHT STEEL PRODUCTS	UNI EN 10277

CHEMICAL COMPOSITION (%)

	C	Si	Mn	P (max.)	S (max)	Cr (max)	Mo (max)	Ni (max)	Cu (max)	Cr+Mo+Ni (Max)
C35E	0,32 ÷ 0,39	0,10 ÷ 0,40	0,50 ÷ 0,80	0,025	0,035	0,40	0,10	0,40	0,30	0,63
C35R					0,020 ÷ 0,040					

MECHANICAL PROPERTIES HOT ROLLED NORMALIZED STEEL (ISO 683-1)

Size (mm)	ReH (MPa) Min.	Rm (MPa)	A% Min.	Z% Min	KV Min (J)
d ≤ 16mm	300	550	18		
t ≤ 16mm					
16mm < d ≤ 100mm	270	520	19		
16mm < t ≤ 100mm					
100mm < d ≤ 250mm	245	500	19		
100mm < t ≤ 250mm					

MECHANICAL PROPERTIES HOT ROLLED QUENCHED & TEMPERED STEEL (ISO 683-1)

Size (mm)	ReH (MPa) Min.	Rm (MPa)	A% Min.	Z% Min	KV Min (J) + 20°
d ≤ 16mm	430	630 + 780	17	40	25
t ≤ 16mm					
16mm < d ≤ 100mm	380	600 + 750	19	45	25
16mm < t ≤ 100mm					
100mm < d ≤ 250mm	320	550 + 700	20	50	25
100mm < t ≤ 250mm					

MECHANICAL PROPERTIES BRIGHT STEEL PRODUCTS (UNI EN 10277)

Size (mm)	(+SH) HOT ROLLED + PEELED		(+C) COLD DRAWN			(+QT+SH) QUENCHED & TEMPERED + PEELED				(+QT+C) QUENCHED & TEMPERED + COLD DRAWN		
	Hardness (HBW) Max.	Rm (MPa)	Rp0,2 (MPa) Min.	Rm (MPa)	A5 (%) min.	Rp0,2 (MPa) Min.	Rm (MPa)	A5 (%) min.	KV Min (J) + 20°	Rp0,2 (MPa) Min.	Rm (MPa)	A5 (%) min.
5 ≤ t ≤ 10			510	650 + 1000	6					525	750 + 950	9
10 < t ≤ 16			420	600 + 950	7					490	700 + 900	9
16 < t ≤ 40	156 + 204	520 + 700	320	580 + 880	8	370	600 + 750	19	35	455	650 + 850	10
40 < t ≤ 63	156 + 204	520 + 700	300	550 + 840	9	320	500 + 700	20	35	400	570 + 770	11
63 < t ≤ 100	156 + 204	520 + 700	270	520 + 800	9	320	500 + 700	20	35	385	550 + 750	12

Jominy test values HRC (ISO 683-1)

Distance from ends mm	1	2	3	4	5	6	7	8	9	10	11
MAX	58	57	55	53	49	41	34	31	28	27	26
MIN	48	40	33	24	22	20					

Distance from ends mm	13	15	20	25	30
MAX	25	24	23	20	
MIN					

Indicative values based on current regulations.