

Quality	23MnNiMoCr 5-4	Flame and Induction	<i>Datasheet</i>
According to standards	DIN 17115: 1987	Hardening Steel	Lucefin Group
Number	1.6758		<i>rev. 2018</i>

Chemical composition

C%	Si% max	Mn%	P% max	S% max	Cr%	Mo%	Ni%	Al%	Cu% max	N% max
0,20-0,26	0,25	1,10-1,40	0,020	0,020	0,40-0,60	0,50-0,60	0,90-1,10	0,020-0,050	0,25	0,012
Others: P + S max 0,035%										

Temperature °C

Hot forming	Normalizing +N	Quenching +Q	Hardening carburizing surface	Tempering +T	Treated for cold shearability
1100-900	860-900 air	870-890 water	880-950	min 400	(HB max 255)
Soft annealing +A	Spheroidized annealed (GKZ)	End quench hardability test		Preheating welding	Stress relieving after welding
650-720 air	800-820 furnace cooling to 160 then air	880 water		150-350 welding must be made on the annealing	600 furnace cooling
(HB max 235)	(HB 150- 210)			Ac1 Ac3 Ms Mf	
				722 785 380 165	

Mechanical properties DIN 17115

Condition of delivery	Cold-drawn +C	Soft annealed or Cold-drawn + soft annealed +C+A	Cold-drawn soft annealed and Cold-drawn +C+A+C	Spheroidized +GKZ or Cold-drawn Spheroidized +C+GKZ	Cold drawn spheroidized and Cold-drawn +C+GKZ+C
Rm N/mm ²	max 860	max 790	max 930	max 710	max 850
HB 30	max 255	max 235	max 275	150 - 210	max 250
HV 10	max 268	max 247	max 289	max 221	max 263

Hot rolled mechanical properties, values at room temperature for round Ø 20 mm after quenching at 880°C in water and tempering at 400°C DIN 17115

size mm	Testing at room temperature (longitudinal)				
	R	Rp 0.2	A%	Z%	Kv
	N/mm ² min.	N/mm ² min.	min.	min.	J min.
< 30	1180	980	10	50	40

Jominy test HRC DIN 17115

distance in mm from quenched end	1.5	3	5	7	9	11	13	15	20	25	30	35	40	45	50
min	44	43	41	39	38	37	36	35	33	31	30	28	27	27	26
max	52	52	51	51	50	50	49	49	48	47	46	45	45	44	44

Mod. of elasticity long.	GPa	210
Mod. of elasticity tang.	GPa	80
Density	Kg/dm ³	7.80
Temperature	°C	20

Alloy special structural steels

Hot rolled steel bars, wire rod, or bright steel for processing welded round link chains and bolts