

Quality	11SMnPb30
According to standards	EN 10087: 2000
Number	1.0718

Chemical composition						
C%	Si%	Mn%	P%	S%	Pb%	Deviations allowed for analysis product
max	max		max			
0,14 ± 0.02	0,05 + 0.01	0,90-1,30 ± 0.04	0,11 + 0.02	0,27-0,33 ± 0.03	0,20-0,35 +0.03 -0.02	

Temperature °C					
Hot-forming	Natural state	Soft annealing	Carburizing	Hardening on carburized surface	Stress-relieving
1250-950	(HB 180 max)	680 cooling 20 °C/h to 300 after air (HB 135 max)	(880-950)	(770-810)	(180-200)
Normalizing	Direct hardening	Direct hardening	Stress-relieving	Pre-heating welding	Stress-relieving after welding
900 air	880 water	890 oil or polymer	150-200 furnace cooling	not recommended	

Mechanical properties							
Hot-rolled natural forming condition EN 10087: 2000				Hot-rolled quenched and tempered			
Testing at room temperature (longitudinal)							
size mm		R	HB	R	Rp 0.2	A%	HB
from	to	N/mm ²	for information	N/mm ²	N/mm ² min	min	
5	10	380-570	112-169	Not suitable for heat treatment			
10	16	380-570	112-169				
16	40	380-570	112-169				
40	63	370-570	109-169				
63	100	360-520	107-154				

Cold-drawn +C EN 10277-3: 2008					Hot-rolled Peeled-Reeled +SH				
Values valid also for +C+SL					Values valid also for +SH+SL				
size mm		Testing at room temperature (longitudinal)			Testing at room temperature (longitudinal)				
from	to	R ^{a)}	Rp 0.2 ^{a)}	A%	HB	R	Rp 0.2	A%	HB
		N/mm ²	N/mm ² min	min	for inform.	N/mm ²	N/mm ² min	min	
5 ^{b)}	10	510-810	440	6	154-243				
10	16	490-760	410	7	149-226				
16	40	460-710	375	8	139-218	380-570			112-169
40	63	400-650	305	9	119-200	370-570			112-169
63	100	360-630	245	9	104-192	360-520			107-154

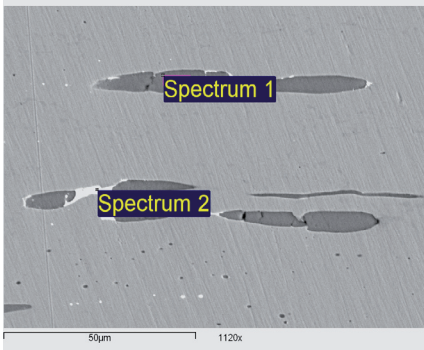
^{a)} for flats and special sections, yield point can be - 10% and tensile strength can be ± 10%

^{b)} for thickness < 5 mm, mechanical properties should be agreed before order placement

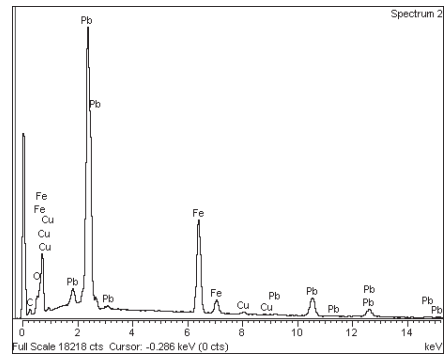
Modulus of elasticity	Specific heat capacity	Density	Melting temperature
GPa	J/(Kg•K)	Kg/dm ³	°C
200	440	7.85	1500-1540

EUROPE EN	ITALY UNI	CHINA GB	GERMANY DIN	FRANCE AFNOR	U.K. B.S.	RUSSIA GOST	USA AISI/SAE
11SMnPb30	CF 9SMnPb28	Y15Pb	9SMnPb28	S250Pb		(AS14)	12L14

Lead steel



Sulphide inclusions
x1120



Spectrum 2
qualitative
microanalysis