

Quality	11SMnPb30	<i>Technical card</i>
According to standards	EN 10087: 2000	<i>Lucefin Group</i>
Number	1.0718	

Chemical composition

C%	Si%	Mn%	P%	S%	Pb%	
max	max		max			
0,14	0,05	0,90-1,30	0,11	0,27-0,33	0,20-0,35	Product deviations are allowed
± 0.02	+ 0.01	± 0.04	+ 0.02	± 0.03	+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

Testing at room temperature (longitudinal)

size mm	R	HB		
from to	N/mm ²	for information	R	R _{p 0.2} A% HB
			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

Values valid also for +C+SL

Testing at room temperature (longitudinal)

size mm	R ^{a)}	R _{p 0.2} ^{a)}	A%	HB	
from to	N/mm ²	N/mm ² min	min	for inform.	
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

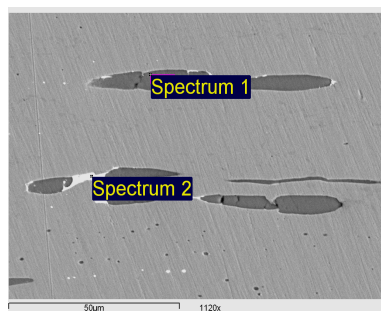
^{a)} for flats and special sections, yield point can be – 10% and tensile strength can be ± 10%

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

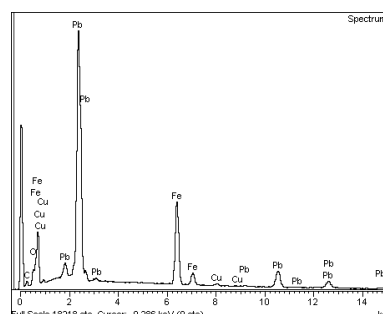
Modulus of elasticity	Specific heat capacity	Density	Melting temperature
GPa	J/(Kg•K)	Kg/dm ³	°C
200	440	7.85	1500-1540

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

Annealing is carried out to obtain 2,5 A/cm: 700 °C x 2 h cooling at 50 °C/h at up to 300 °C or 720 °C feed 15 m (Trafitec furnace)