

1.2510

Cold working steel



1 Main characteristics and applications

Medium alloyed cold work steel with good hardening capacity, high wear resistance, dimensionally stable during heat treatment.

Its applications are small tools for cutting and punching, shear knives, thread rolling tools, measuring tools, wood working tools.

2 Comparable standards

UNI	W.Nr	DIN	AFNOR	AISI/SAE	BS
-	1.2510	100MnWCr4	95MnWCr5	(O1)	-

3 Chemical composition (typical; in weight %)

C	Mn	Si	Cr	V	W
0.95	1.15	0.30	0.55	0.10	0.50

4 Critical points

Ac1	740 °C
Ac3	770 °C
Ms	215 °C

5 Production technology

EAF - LF - VD - Forging - Heat treatment +A

6 US specification

In according to standard EN10228-3 Class 4 and standard SEP 1921 Class E/e

7 Delivery condition

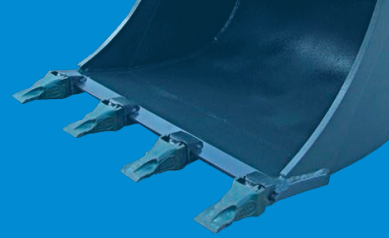
W1.2510 is delivered in annealed condition, with hardness max 230 HB (21 HRC).

8 Physical properties (reference values)

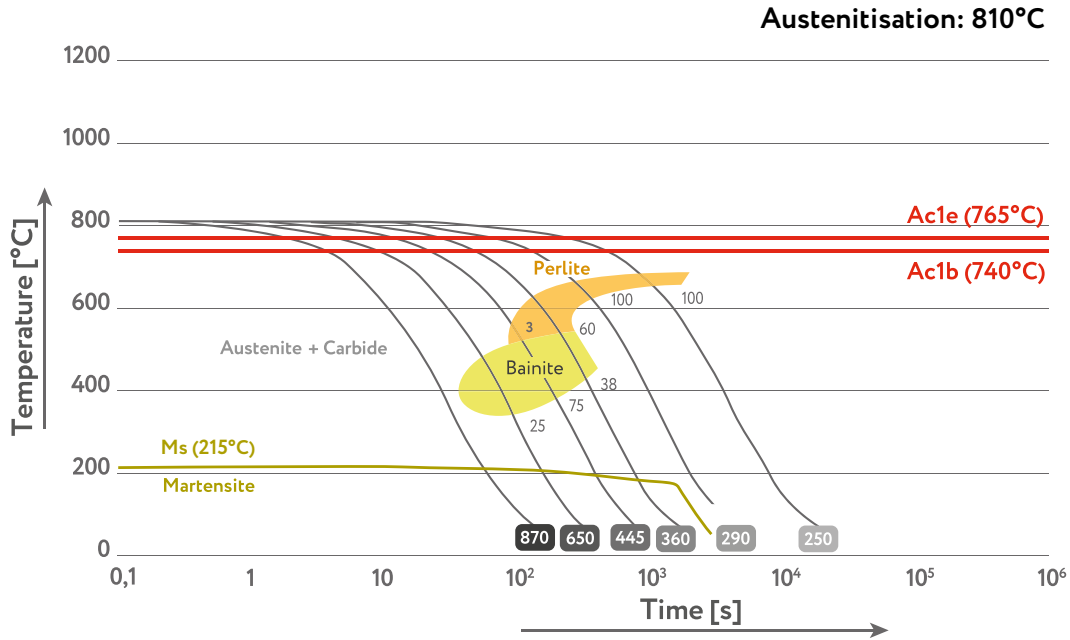
	20°C	100°C	250°C	500°C
Thermal expansion coefficient (10 ⁻⁶ /K)	11.4	11.7	12	12.7
Thermal conductivity (W/mk)	29.9	30.1	31.7	31.2
Young modulus (Kn/mm ²)	212	209	200	175

9 Heat treatment

TREATMENT	TEMPERATURE	HOLDING TIME (HT)	COOLING	COMMENTS
Annealing	Heat to 700 - 720 °C	Min. H.T. for 2 minute /mm	Furnace to 600°C than in air	-
Stress relieving	Heat to 600 - 650 °C	Min. H.T. for 2 minute /mm	Air or furnace	-
Hardening	Heat to 790-820 °C	Min. H.T. for 1 minute /mm	Oil or pressure gas (vacuum)	-



10 C.C.T. curve



11 Tempering curve

