

I Buderus Hot Work Tool Steel 2360 ISO-B

	C	Si	Mn	P	S	Cr	Mo	V
Typical analysis	0.48	0.80	0.40	0.020	0.003	7.70	1.40	1.40
Chemical composition as per SEL	0.45–0.50	0.70–0.90	0.35–0.45	≤ 0.020	≤ 0.005	7.30–7.80	1.30–1.50	1.30–1.50

Figures in % by mass

Register of European Steels (SEL)	X 48 CrMoV 8-1-1
AFNOR	Z 48 CDV 8

Characteristics

High-alloy CrMoV hot work tool steel with high tempering properties and good hardness at high temperatures, very good compressive strength and especially high wear resistance.

Applications

Press dies, die inserts, part stamping dies and extrusion press dies.

Delivered condition

Annealed to max. 230 HB

Hardened and tempered to customer specification on request

Physical properties (reference values)

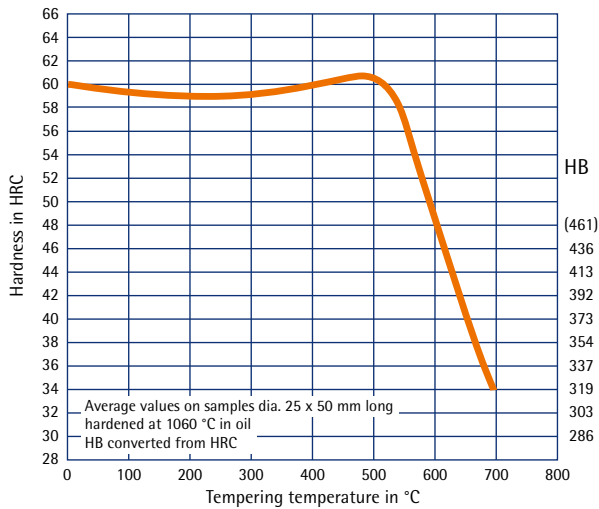
Thermal expansion coefficient ($10^{-6}/K$)	20–100 °C	20–250 °C	20–500 °C
	10.0	10.8	11.5
Thermal conductivity (W/mK)	20 °C	250 °C	500 °C
	20.0	22.0	25.0
Young's modulus (GPa)	20 °C	250 °C	500 °C
	210	195	172

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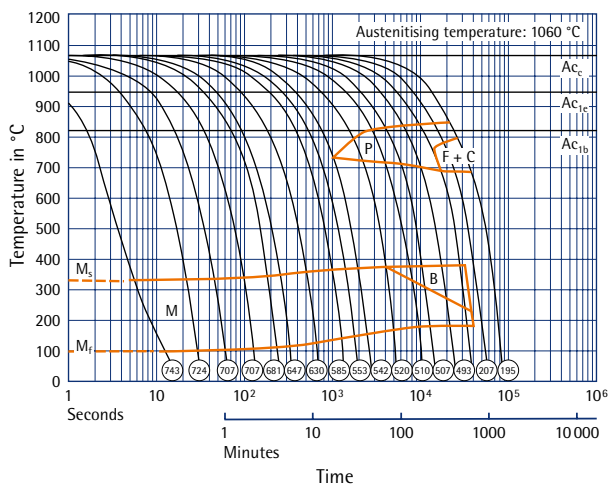
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Heat treatment	
Stress relieving	Temperature: Approx. 650 °C in the annealed state Approx. 550 °C in the hardened and tempered state Duration: 1 hour per 50 mm wall thickness Cooling: Furnace
Soft annealing	Temperature: 840 °C Duration: 1 hour per 25 mm wall thickness Cooling: Furnace
Hardening	Temperature: 1060 °C Duration: 30 seconds per mm wall thickness
Quenching hardness	Max. 60 HRC in oil, hot bath or vacuum
Tempering (at least twice)	Temperature: See tempering curve Duration: 1 hour per 25 mm wall thickness Cooling: Air
Working hardness	40–50 HRC

Tempering curve



TTT curve (continuous)



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