

I Buderus Hot Work Tool Steel 2365 ISO-B

	C	Si	Mn	P	S	Cr	Mo	V
Typical analysis	0.30	0.30	0.30	0.025	0.003	3.00	2.80	0.60
Chemical composition as per SEL	0.28–0.35	0.10–0.40	0.15–0.45	≤ 0.030	≤ 0.020	2.70–3.20	2.50–3.00	0.40–0.70

Figures in % by mass

Register of European Steels (SEL)	32 CrMoV 12-28
DIN EN ISO 4957	32 CrMoV 12-28
AFNOR	30 CDV 12-30
AISI	H 10
BS	BH 10

Characteristics

Tungsten-free special hot work tool steel on a CrMoV base with good toughness. Insensitive to thermal shock, and thus not susceptible to heat cracking. Particularly suitable for water cooling.

Applications

Extruder tools including pipe extruders, such as extrusion stems, liners and die holders. Particularly suitable for water-cooled pipe mandrels, hot drawing mandrels. Part stamping dies for non-ferrous heavy metals, forging die and press die inserts, forging tools for Hatebur presses. Die-casting moulds for non-ferrous heavy metal pressure die-casting.

Delivered condition

Annealed to max. 229 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
	10.7	11.5	12.3
Thermal conductivity (W/mK)	20 °C	250 °C	500 °C
	30.0	33.0	34.0
Young's modulus (GPa)	20 °C	250 °C	500 °C
	210	195	172

High-temperature yield strength

Hardened and tempered state	0.2 % yield strength in MPa at temperature			
	450 °C	500 °C	550 °C	600 °C
~ 1570 MPa	1080	960	800	640
~ 1370 MPa	930	870	710	590
~ 1230 MPa	790	730	510	340

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