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Nazwa gatunku: 1.2363/X100CrMoV5

Nazwa: COLD WORK TOOL STEEL

NORM: ISO 4957

APPLICATION

Steel susceptible to cutting punching stamping, shear blades, bending tools, blanking dies and punches, form rolls, cold mandrels, and knives for high performance wood planing machines, moulds for plastic processing and embossing dies

CHEMICAL COMPOSITION:

C	Si	Mn	P	S	Cr	Mo	W	V	Co	Ni
0,95-1,05	0,10-0,40	0,40-0,80	Max 0,030	Max 0,030	4,80 – 5,50	0,90 – 1,20	–	0,15 – 0,35	–	–

MECHANICAL PROPERTIES:

Hardness after	Tempering ºC	Symbol	Value
Soft annealing	–	HB	≤241
Quenching with 970 ºC in water	–	HRC	64
Quenching with 970 ºC in water and tempering	180	HRC	≥60
	200	HRC	62
	250	HRC	60.5
	300	HRC	59
	350	HRC	58
	400	HRC	59
	450	HRC	59.5
	500	HRC	58

PHYSICAL PROPERTIES:

Property	Unit	Value
Density, ρ	$g*cm^{-3}$	7.75
Thermal expansion, $\alpha_{20\text{-}100^{o}C)}$	K^{-1}	$10.7*10^{-6}$
Thermal conductivity, $\lambda_{20^{o}C)}$	$W*m^{-1}*K^{-1}$	21

Technological treatment processes:

Technological treatment processes			Possible application	Temperature, °C
Hot forming	Forging		+	1050-850
	Rolling		+	1050-850
Treatment	Heat treatment	Quenching	+	960-980
		Tempering	+	170-550
	Precipitation strengthening	Supersaturation	–	–
		Ageing	–	–
	Annealing	Soft annealing	+	800-840
		Stress relieving	+	600-700
Thermochemical treatment	Nitriding		–	470-550
	Other		–	–

INTERNATIONAL STEEL GRADES:

ISO		CEN		Russia	
X100CrMoV5	ISO 4957:1999	X100CrMoV5	EN ISO 4957:1999	–	–
US		Japan		China	
A2	ASTM A 681-91	SKD 12	JIS G 4404-1983	Cr5Mo1V	GB 1299-85