



钢铁之家

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全球钢号百科!

Global Steel Grade Encyclopedia



涵盖的行业或国家与地区类别



材料与试验协会

GJB

国家军用标准



动力机械工程师协会

EU

前欧洲标准化

AISI

美国钢铁学会



德国工业标准

AMS

航空航天材料规范



国际标准

JASO

日本汽车标准组织

EN

欧洲标准

JB

中国机械行业标准

UNS

统一编号系统

UNI

意大利标准



美国机械工程师协会

SS

瑞典标准



国家标准



日本工业标准

Cryodur 2080

X210Cr12

C 2.00 Si 0.30 Mn 0.30 Cr 12.00

Steel properties 12 % ledeburitic chromium tool steel with extreme wear resistance.

Standards AISI D3 AFNOR Z200C12

Physical properties

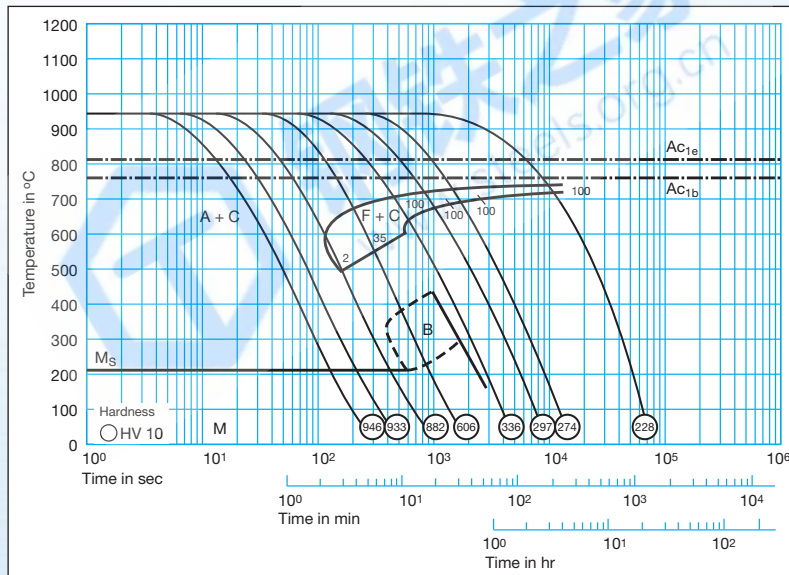
Coefficient of thermal expansion							
at °C	20 – 100	20 – 200	20 – 300	20 – 400	20 – 500	20 – 600	20 – 700
$10^{-6} \text{ m/(m} \cdot \text{K)}$	10.8	11.7	12.2	12.6	12.8	13.1	13.3

Thermal conductivity			
at °C	20	350	700
$\text{W/(m} \cdot \text{K)}$	16.7	20.5	24.2

Applications Cutting tools for sheets up to 4 mm thickness, trimming dies, blanking dies for paper and plastics, shear blades and rotary shear blades for sheet thicknesses up to 2 mm, drawing and deep-drawing tools. Woodworking tools, stone pressing tools, pressure pads and highly wear-resistant plastic moulds, profile rolls.

Heat treatment	Soft annealing °C	Cooling	Hardness HB				
	800 – 840	Furnace	max. 250				
	Stress-relief annealing °C	Cooling					
	approx. 650 – 700	Furnace					
	Hardening °C	Quenching	Hardness after quenching HRC				
	930 – 960	Oil	64				
	950 – 980	Air (up to 30 mm thickness)	64				
	Tempering °C						
	100	200	300	400	500	600	
	HRC	63	62	59	57	54	46

Time-temperature-transformation diagram



Tempering diagram

