

1.2379 / D2 Cold Work Tool Steel

Standards	DIN	AISI	JIS	ГОСТ
X155CrVMo12-1	1.2379	D2	SKD11	X12MΦ

Chemical composition (typical analysis in %)

C	Si	Mn	P	S	Cr	Mo	V
1.45-1.60	0.10-0.40	0.15-0.45	≤0.030	≤0.030	11.0-13.0	0.70-1.00	0.70-1.10

Steel properties :

Chrome-molybdenum-vanadium steel with big hardenability for hardening in oil and in air, especially high resistance to the wear (higher than by 1.2080), good cutting power, very good firmness in the pressure, lower toughness (but higher than by 1.2080). This steel shows good dimensional stability at the heat treatment, suitable for hardening to the secondary hardness (the possibility of nitriding). Further the steel is very difficult to sharpen, it works at the heat with difficulties and has a rather difficult workability in the annealed state.

Applications :

Cutting, punching, stamping tools, shear blades, thread rolling dies, drawing and bending tools, flanging and straightening rolls, deep drawing tools, plastic mould for abrasive polymers, cold extrusion dies, drawing dies etc.

Size range :

Diameter (mm)	Thickness (mm)	Width (mm)
8 - 450	8 - 350	Max 810

Delivery condition : Soft annealed to max. 250 HB

Heat Treatment:

Soft annealing

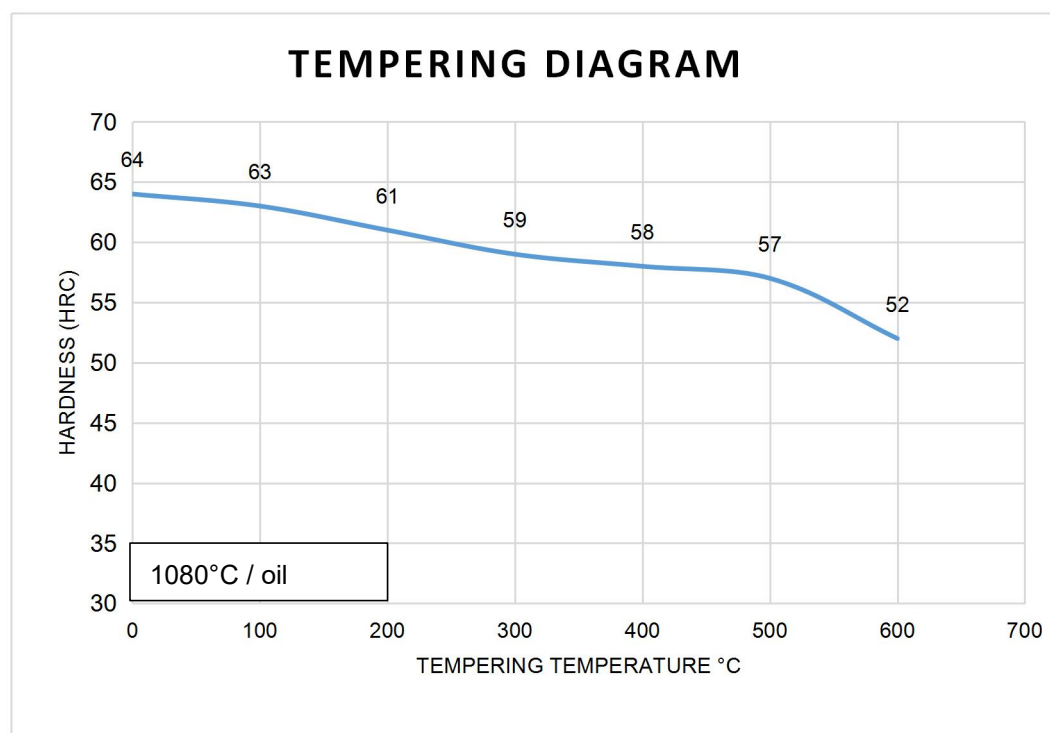
Temperature(°C)	Cooling	Hardness
800 - 850	furnace	max. 250 HB

Forging

Temperature(°C)	Cooling	
850 - 1050	furnace	

Hardening

Temperature(°C)	Cooling	Tempering
1000 - 1090	oil or air or hot bath	see tempering diagram usually 150 - 540°C



Remarks: All technical information is for reference only.

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