

1.2343 / H11 Hot Work Tool Steel

Standards	DIN	AISI	JIS	ГОСТ
X38CrMoV51	1.2343	H11	SKD6	4X5MΦC

Chemical composition (typical analysis in %)

C	Si	Mn	P	S	Cr	Mo	V
0.33-0.41	0.80-1.20	0.25-0.50	≤0.030	≤0.030	4.80-5.50	1.10-1.50	0.30-0.50

Steel properties :

Chrome - molybdenum - silicon - vanadium steel for hardening in oil and in air with very good hardenability, high firmness during the heat and resistance to the tempering, very good toughness and plastic properties during normal and also higher temperatures. Further the steel has a very good resistance to tearing of thermal fatigue and low sensitivity to quick changes of temperature. The steel is suitable for the heat treatment also for firmness over 1800 N/mm² and for tools cooled by water. It is well-workable during the heat and well-workable in the soft-annealed state.

Applications :

For molds for firm and movable core parts and other parts of molds for pressure casting of aluminum alloys and large series of castings of zinc and magnesium alloys. Tools for hot mechanical working, i.e. very stressed small and middle-sized dies and inserts of dies. Dies, thorns, jaws and punches. Very stressed extruders and other auxiliary tools for extrusion of non-ferrous metals during the heat, extrusion dies for aluminum and its alloys. Tools for hot cutting, e.g. small or middle-sized shear blades, trimming dies and cutting thorns.

Size range :

Diameter (mm)	Thickness (mm)	Width (mm)
6 - 500	6 - 400	Max 810

Delivery condition : Soft annealed to max. 229 HB

Heat Treatment:

Soft annealing

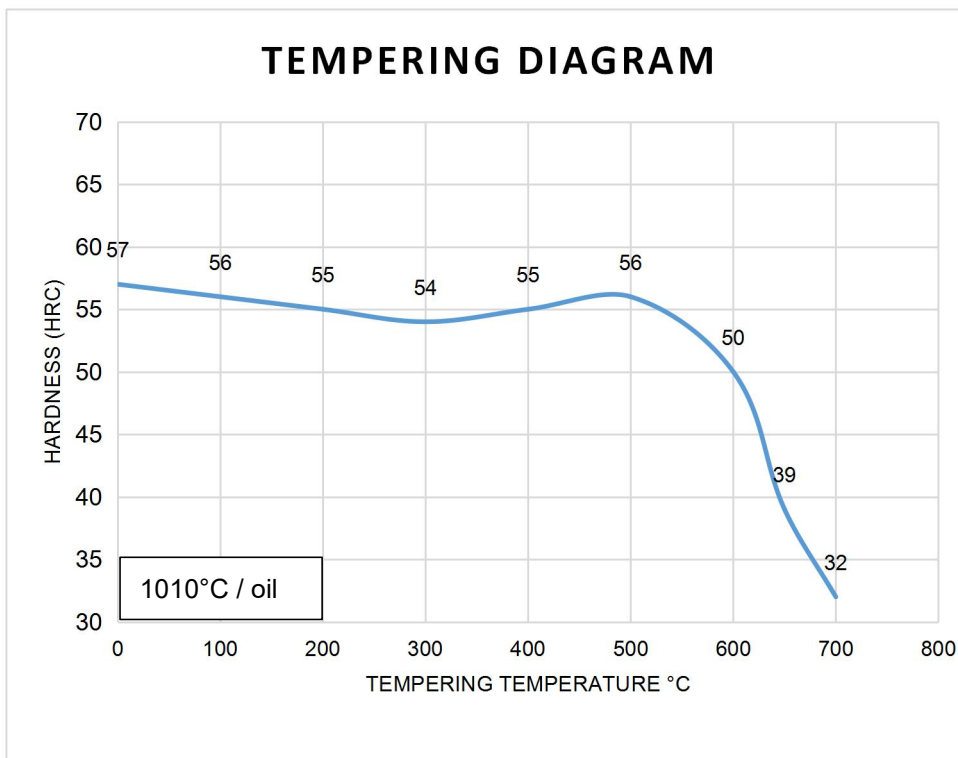
Temperature(°C)	Cooling	Hardness
760 - 780	furnace	max. 229 HB

Forging

Temperature(°C)	Cooling	
900 - 1000	furnace	

Hardening

Temperature(°C)	Cooling	Tempering
1010 - 1030	oil or air or hot bath	see tempering diagram



Remarks: All technical information is for reference only.

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