



AISI D2 HCHCR-D2 DIN 2379

X153CrMoV12

C 1.54 Si 0.32 Mn 0.34 Cr 12.00 Mo 0.76 V 0.91

Steel properties

HCHCR - D2 steel is Cold Work Steel with High Carbon High Chromium contents. The Quality with high wear resistant and toughness properties due to Vanadium addition of 0.90% . Normally it supply condition is an Annealed and will offer hardness to reach 57-59 HRC. It can be machinable in the annealed condition. D2 is the superior steels than D3 due to high alloys properties.

Standards

AISI D2 AFNOR Z160CDV12

Physical properties

Coefficient of thermal expansion at °C 10 ⁻⁶ m/(m · K)	20 – 100 10.6	20 – 200 11.5	20 – 300 11.8	20 – 400 12.3
Thermal conductivity at °C W/(m · K)	20 16.6	350 20.6	700 24.3	

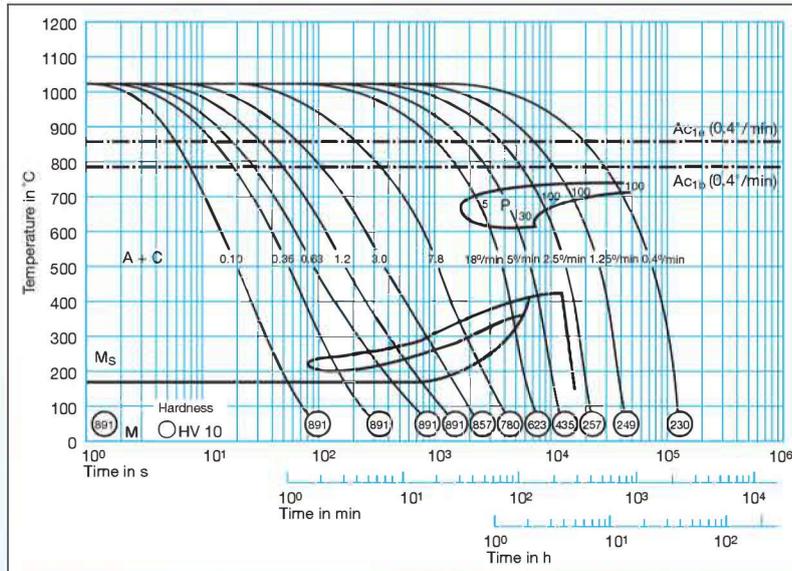
Applications

HCHCR D2 tool steel applicable for cold stamping or forming dies, cold forming rolls, Chipper knives, Punches, slitters, shear blades, tools, tyre shredders, trimming, cutting Threading Dies , stamping tools Etc.

Heat treatment

Soft annealing °C 840 – 870	Cooling Furnace	Hardness HB max. 250
Stress-relief annealing °C 660 – 710	Cooling Furnace	
Hardening °C 1000 – 1060	Quenching Air, oil or saltbath, 500 – 550 °C	Hardness after quenching HRC 64
Tempering °C (three times) HRC	100 200 300 400 500 525 550 600	64 61.5 58.5 58.5 59 60 57 50

Time-temperature-transformation diagram
Hardening temperature: 1030 °C



Tempering diagram

