

# CH16V/1.2379

## CHEMICAL PROPERTIES:

Brand	Mat.-No.	Short name	Reference analysis %					
			C	Si	Mn	Cr	Mo	V
CH16V	1.2379	X153CrMoV12	1.55	0.30	0.40	11.5	0.70	1.00

## TYPE OF STEEL AND CHARACTERISTICS:

**High chromium, ledeburitic cold-work tool steel with molybdenum and vanadium.**

The additions improve edge retaining and deep hardening properties; good dimensional stability; excellent wear resistance due to the ledeburitic structure. Nitriding is possible after special heat treatment

## APPLICATIONS:

High performance blanking and punching dies for sheet thickness up to 5 mm; circular and straight shear blades for sheet thickness up to 4 mm; precision stamping dies; cold drawing tools, hobbing dies, thread cutting tools, cold pilger mandrels; flanging rolls; guide rolls; forming rollers for continuous production of steel profiles and tubes; small plastic moulds and inserts for abrasive materials.

## HEAT TREATMENT :

**Annealing:** Temperature 820-850°C

**Holding Time:** 4-6h; Slow furnace cooling

**Hardness after annealing:** max 250 HB

**Stress relieving:** Temperature appr. 650°C

**Holding Time:** 1-2h; Slow cooling

**Hardening:**

Temperature: 1010-1050°C

**Quenching:** oil, air or step quenching at appr 350-450°C

**Hardness obtainable:** appr 63-64 HRC

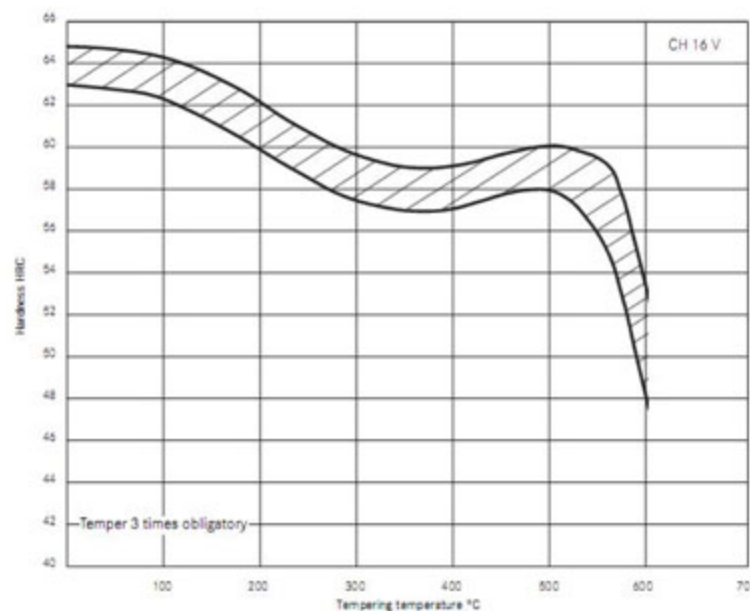
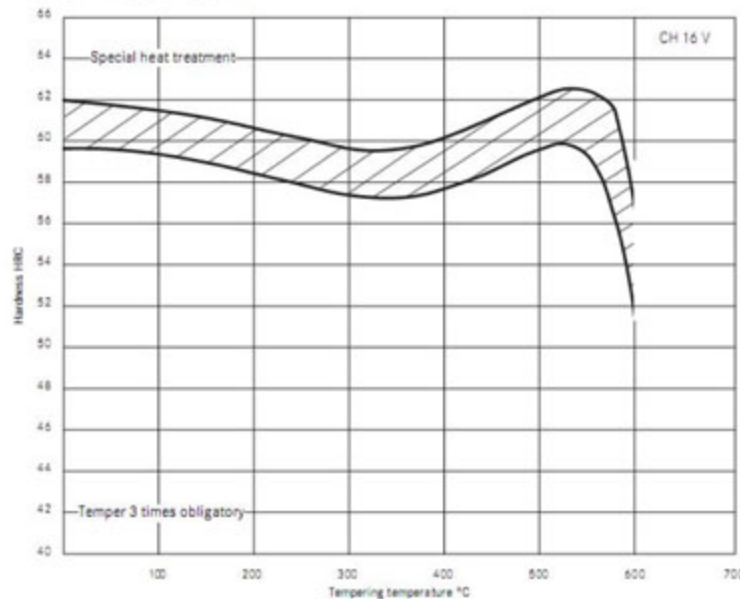
**Tempering:** refer to diagram; preferring upper level

**Special treatment:** Hardening at 1050-1080°C; when tools be nitrided oil or step quenching at 350-450°C

**Tempering:** 520-570°C; suitable to nitriding

**Nitriding temperature:** appr. 540°C

Tempering diagram



TTT-Diagram

