

H11 1.2343

Name:

X 37 CrMoV 5-1

Material No.:

1.2343

Typical analysis in %:

C	Si	Cr	Mo	V
0.4	1.1	5.0	1.3	0.4

As-supplied condition:

Soft-annealed to max. 235 HB
(791 N/mm²)

Characteristics:

Hot work steel with good high temperature strength and very good toughness, high resistance to thermal shock and wear, nitridable, good polishability

General fields of application:

Tools for forging machines, dies, die inserts, extrusion tools, hot shearing knives and tools for plastics processing

Special note:

If nitrided, the nitriding depth should not be too deep otherwise increased thermal cracking may occur.

Preheating to 200 - 300 °C before starting work is recommended.

Also available in EST and ESR grades.

We recommend our H11 1.2343 in ESR steel for highly polished mirrored finishes and for the highest toughness requirements.

Heat treatment data:

	Temperature	Duration	Cooling
Soft annealing	800 - 860 °C	2 - 5 h	furnace
Stress-relief annealing	600 - 650 °C	min. 4 h	furnace
Hardening	1020 - 1060 °C	Group II	oil, air, WB 500 °C
Tempering	530 - 700 °C 3 x, see tempering curve	min. 2 h depending on cross section	still air

Physical characteristics:

Coefficient of thermal expansion: between 20 °C and:

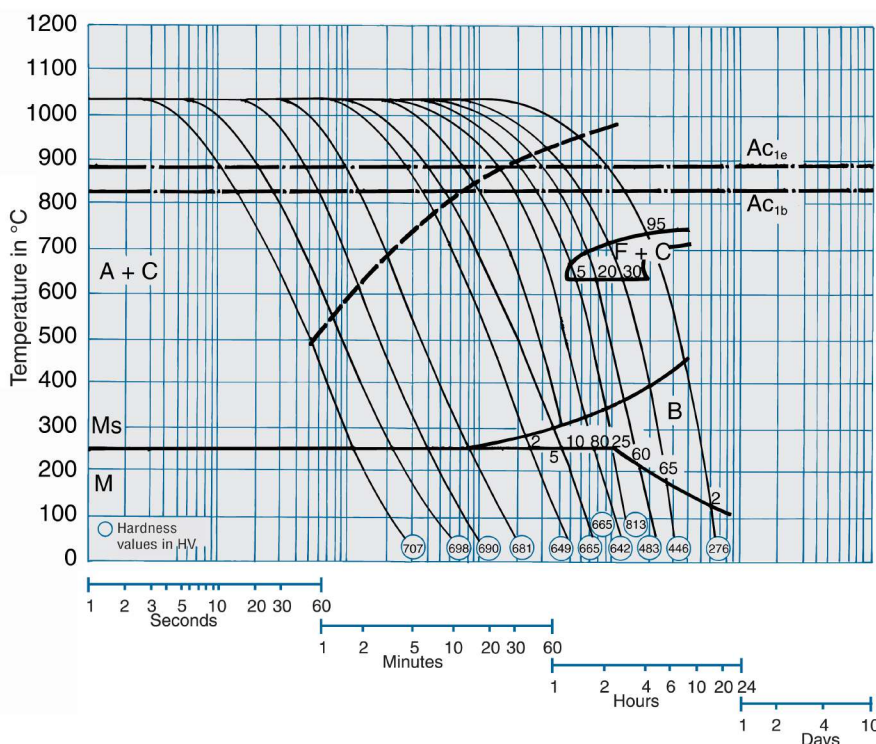
10 ⁻⁶ x m	100	200	300	400	500	600
m x K	10.8	11.4	11.8	12.0	12.9	13.0

Thermal conductivity:

W	20	350	700 °C
m x K	25.3	27.2	30.5

Normal working hardness: 30 - 53 HRC (1000 - 1850 N/mm²)

Continuous time-temperature-transformation diagram



Tempering curve

