

Material No.: Code:

DE - Brand:

1.2714 55NiCrMoV7

A50

Chemical composition:
(Typical analysis in %)

C	Cr	Mo	Ni	V			
0,55	1,10	0,50	1,70	0,10			

Steel properties:

Ni alloyed die steel with excellent toughness and good through hardening properties. Similar to AISI L6.

Applications:

Standard material for forging dies, hot shear knives, punches, backing plates, die holders, hot punching tools.

Condition of delivery:

- a) Soft annealed to max. 248 HB
- b) Quenched and tempered, 1100 - 1350 N/mm²

Physical properties:

Thermal expansion coefficient

$10^{-6} \cdot m$	20-100°C	20-300°C	20-500°C	20-600°C
m · K	12,3	13,4	14,1	14,4

W	20°C	350°C	700°C
m · K	35,9	38,2	34,8

Thermal conductivity

Heat treatment:

Soft annealing

Temperature	Cooling	Hardness
650 - 700°C	furnace	max. 248 HB

Stress relief annealing

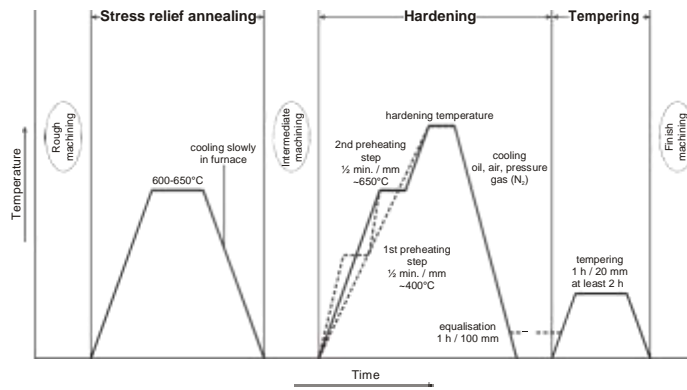
The recommendation 600 - 650°C is valid for the soft annealed condition.

Temperature	Cooling	
600 - 650°C	furnace	

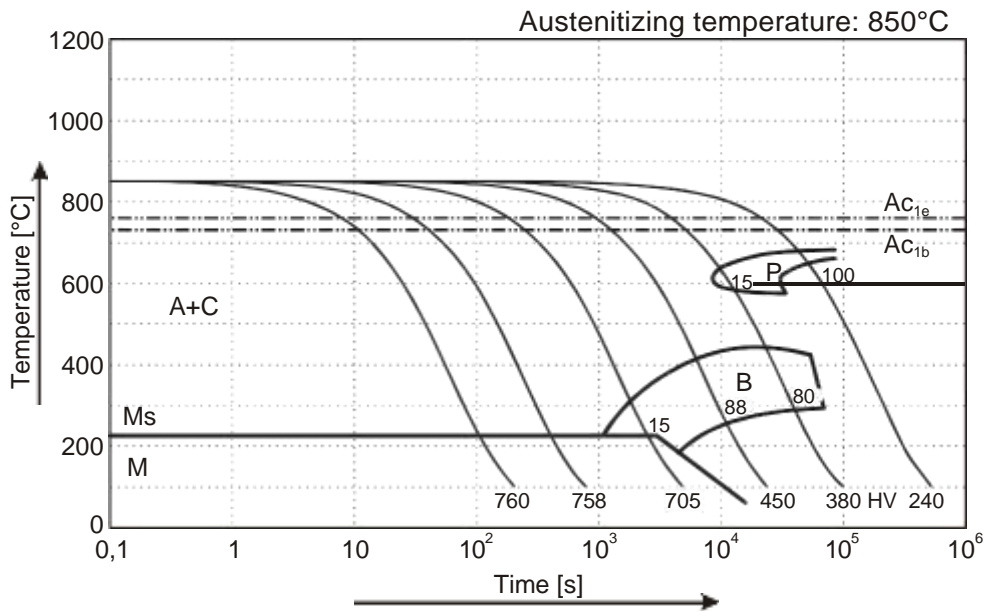
Hardening

Temperature	Cooling	Tempering
840 - 890°C	oil, pressure gas (N ₂), air	see tempering diagram

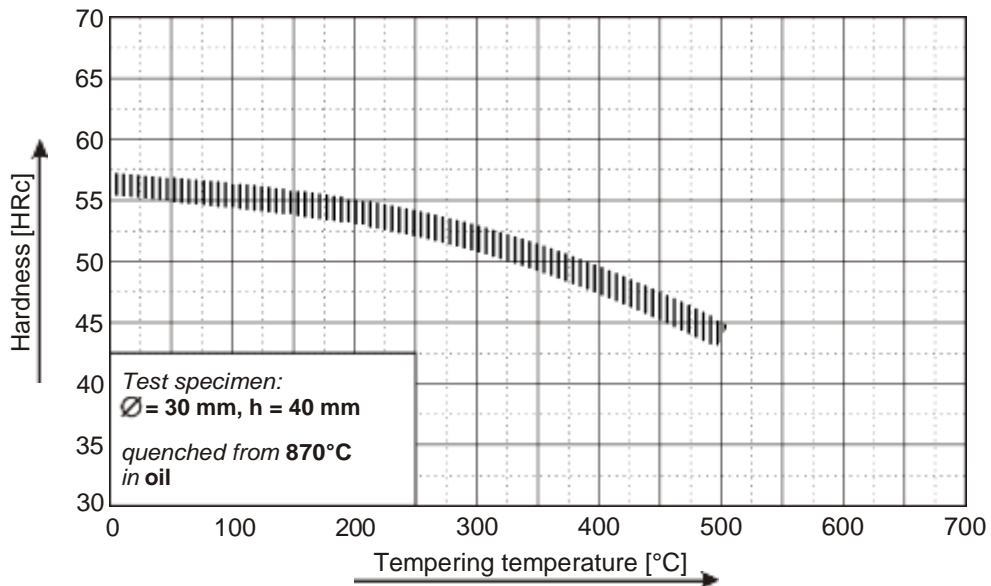
(1.2714) Thermal Cycle Diagram



Continuous Cooling Transformation Diagram (CCT)



Tempering Diagram



Remarks: All technical information is for reference only.