

1.2767

Material no.: 1.2767

Abbreviated DIN name: 45 NiCrMo 16

Chemical analysis (%):

C	Cr	Mo	Ni		
0,45	1,4	0,3	4,0		

HASCO colour code: green / white

Flat steel: violet

Hardness when supplied: annealed to max. 285 HB (~ 965 N/mm²)

Characteristics

Material properties: Due to the high nickel and corresponding carbon content, this material is a very evenly hardening, dimensionally stable steel with high toughness and resistance to impact and compressive stress.

Uses: Mould plates and inserts for the processing of thermoplastics and thermosets, especially for high gloss polishes, e.g. for transparent melts and components with high surface requirements, mould components with high compressive and flexural stresses, embossing tools and other uses for which the above requirements are needed.

Physical properties

Thermal expansion coefficient
(10⁻⁶·m)/(m·K)

100	200	300	400	500	600	700	°C
11,8	12,5	12,8	13,1	13,4	13,8	13,6	

Thermal conductivity
W/(m·K)

20	350	700	°C
30,0	30,5	32,0	

Remarks

Polishing: Definitely possible due to the metallurgical properties. For high-gloss polishes, use the ESR quality.

Graining: Possible.

Nitriding: Not usual.

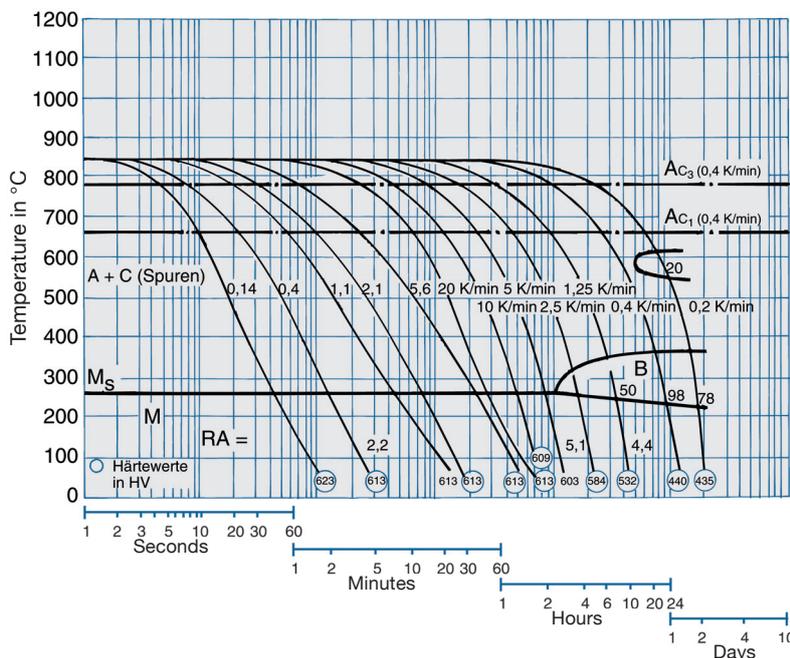
Hardening: At 840°C – 870°C. Details can be found in the time-temperature conversion and tempering charts. The most suitable heat treatment for the relevant workpiece should be fixed by the hardening shop. The hardness should be specified by the hardening shop and checked on delivery.

Soft annealing: 620°C – 650°C, approx. 4 h

Stress-relief annealing: To eliminate residual stresses after coarse machining at approx. 600°C – 650°C, approx. 4 h with slow heating and furnace cooling.

Normal working hardness: 50 - 56 HRC

Time-temperature conversion chart



Tempering chart

