

1.1730

Material no.: 1.1730

Abbreviated DIN name: C 45 U

Chemical analysis (%):

C	Si	Mn			
0,45	0,3	0,7			

HASCO colour code: white

Hardness when supplied: annealed to max. 190 HB (~ 650 N/mm²)

Characteristics

Material properties:

Unalloyed mould steel, readily machinable, surface hardenable.

Uses:

In mould and apparatus construction where unhardened parts are used, e.g. mould frames and add-on parts.

This material is normally used in its supplied condition.

Physical properties

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

100	200	300	400	500	600	700	°C
11,0	12,0	13,0	13,5	14,0	14,2		

Thermal conductivity W/(m·K)

20	350	700	°C
50			

For parts subjected to higher stresses, we recommend our case-hardening and heat-treatable steel types as well as our fully hardened steel.

Remarks

Polishing: Not usual.

Graining: Not usual.

Nitriding: Not usual.

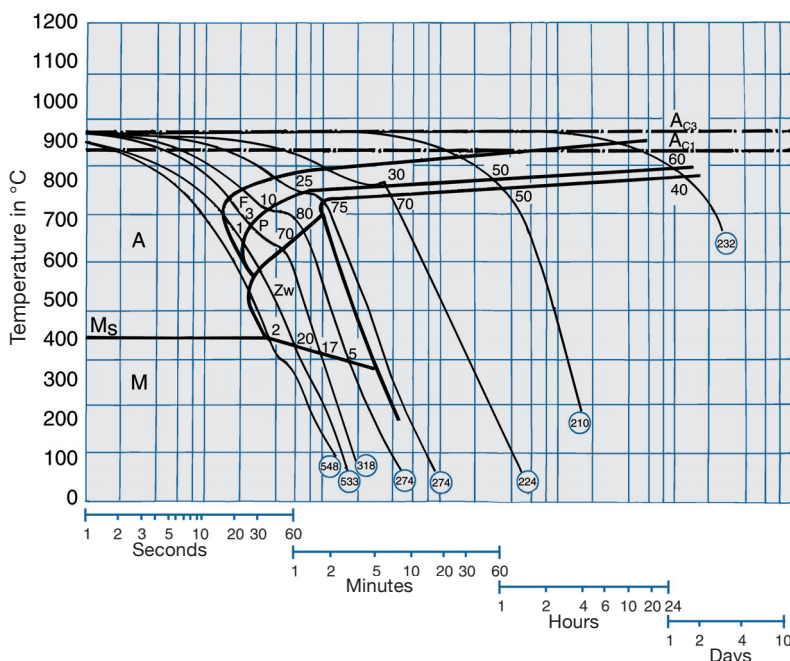
Hardening: Hardening is fundamentally not usual because the risk of stress cracking and hardness distortion is very large. Should a hardening treatment be necessary in exceptional cases, the figures from the time-temperature conversion and tempering charts should be consulted. The most suitable heat treatment for the relevant work piece should be fixed by the hardening shop.

The specified hardness should be prescribed by the hardening shop and checked on delivery.

Soft annealing: 680°C – 710°C, approx. 3 h

Stress-relief annealing: To eliminate residual stress after coarse machining at approx. 620°C, approx. 4 h with slow furnace cooling.

Time-temperature conversion chart



Tempering chart

