AISI M2 M2 DIN 3343

HS6-5-2C

C 0.90 **Si** 0.35 **Mn** 0.30 **Cr** 4.20 **Mo** 5.00 **V** 1.90 **W** 6.35

Steel properties

Standard high-speed steel grade. Its well-balanced alloy composition forms the basis of itshigh toughness and good cutting edge retention, rendering it suitable for a large variety ofapplications.

Standards

AISI M2 **AFNOR** Z85WDCV06-05-04-02

Physical properties

Thermal conductivity

at °C	20	350	700
W/(m • K)	32.8	23.5	25.5

Applications

For all metal-cutting tools for roughing or finishing such as twist drills, diverse milling cutters, thread dies, broaches, reamers, countersinks, thread chasers, circular saw segments, shaping tools and woodworking tools. Also highly suitable for cold-forming tools such as cold extrusion rams and dies, as well as cutting and precision cutting tools, plastic moulds with elevated wear resistance and screws.

Heat treatment

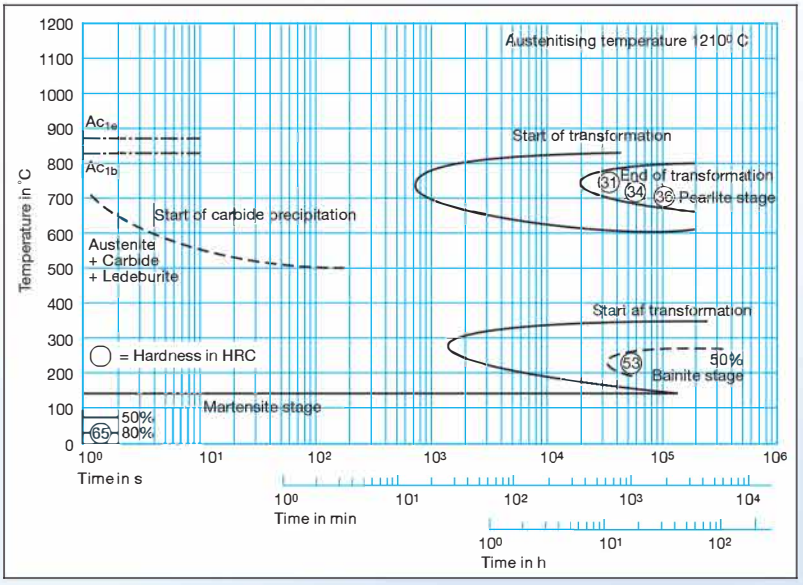
Soft annealing °C	**Cooling**	**Hardness HB**
770 – 860	Furnace	max. 269

Stress-relief annealing °C	**Cooling**
630 – 650	Furnace

1st pre-heating °C	**2nd and 3rd pre-heating °C**	**Hardening[1] °C**	**Quenching**	**Tempering °C**	**Hardness after tempering HRC**
up to approx. 400 in an air-circulating furnace	a) 850 b) 850 and 1050	1190 – 1230	a) Saltbath, 550 °C b) Oil c) Air	at least twice 530 – 560	64 – 66

For cold-forming tools with a complex geometry, a hardening temperature at the lower end of the quoted range is recommended. The stated hardening temperatures apply to saltbath hardening only. For vacuum hardening, we suggest a reduction of 10 °C to 30 °C.

Isothermal time-temperature-transformation diagram



Tempering diagram