

Rapidur 3343

HS6-5-2C

C 0.90 Si 0.30 Mn 0.30 Cr 4.10 Mo 5.00 V 1.90 W 6.40

Steel properties

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

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

770 – 860

Cooling

Furnace

Hardness HB

max. 269

Stress-relief annealing °C

630 – 650

Cooling

Furnace

1st pre-heating °C

up to approx. 400
in an air-circulating
furnace

2nd and 3rd pre-heating °C

- a) 850
- b) 850 and 1050

Hardening¹ °C

1190 – 1230

Quenching

- a) Saltbath, 550 °C
- b) Oil
- c) Air

Tempering °C

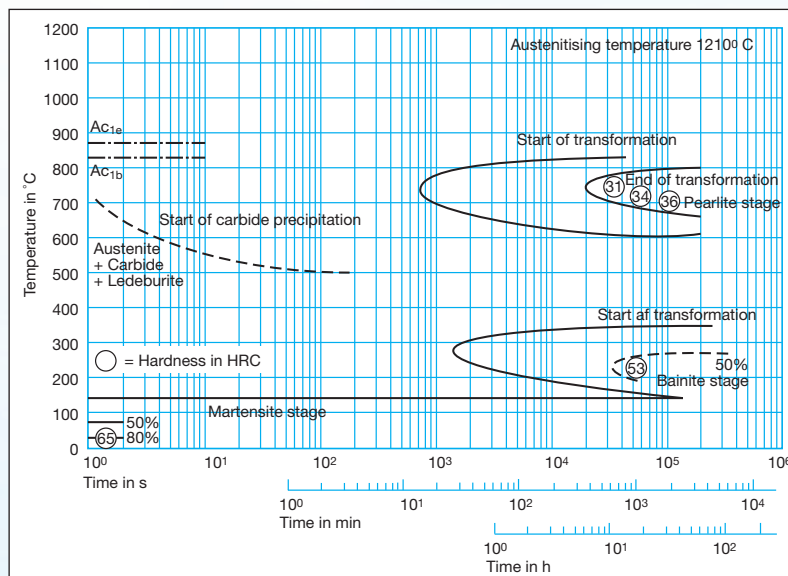
at least twice
530 – 560

Hardness after tempering HRC

64 – 66

¹ 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

