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全球钢号百科！

Global Steel Grade Encyclopedia

涵盖的行业或国家与地区类别

ASTM 国材料与试验协会
GJB 国家军用标准
SAE 动力机械工程师协会
EU 前欧洲标准化
AISI 美国钢铁学会
DIN 德国工业标准
AMS 国空航天材料规范
ISO 国际标准
JASO 日本汽车标准组织
EN 欧洲标准
JB 国机械行业标准
UNS 统一编号系统
UNI 意大利标准
ASME 美国机械工程师协会
SS 瑞典标准
GB 国家标准
JIS 日本工业标准

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

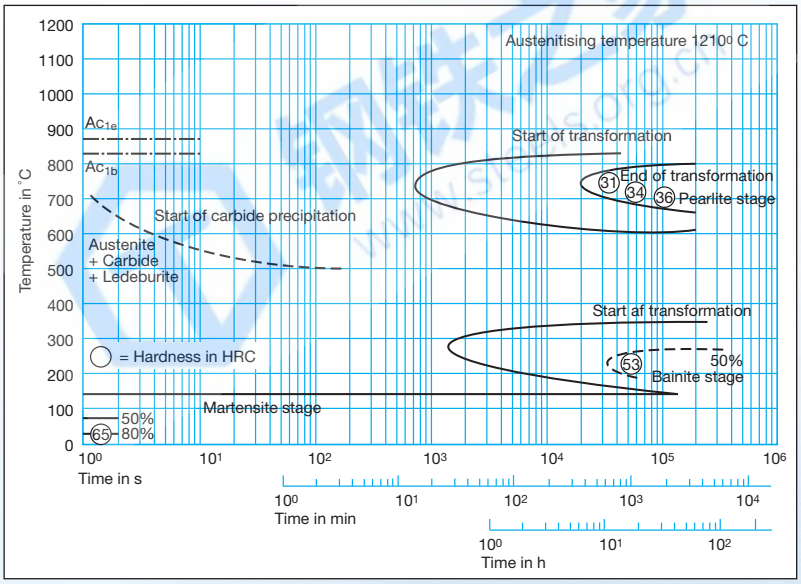
Soft annealing °C	**Cooling**	**Hardness HB**
770 – 860	Furnace	max. 269

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

[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