1.3343

High Speed Steel

TECHNICAL SHEET

1 Comparision Standards

W.Nr	DIN	JIS equivalent	AISI/SAE	AFNOR	BS	UNI
1.3343	S 6-5-2	SKH51	M-2	Z85WDCV06-05-04-02	-	-

2 Chemical Composition

C	Si	Mn	P (max)	S (max)	Cr	Mo	V	W
0.86-0.94	≤ 0.45	≤ 0.40	0.03	0.03	3.80-4.50	4.70-5.20	1.70-2.10	5.90-6.70

Supply Condition	Supply Hardness (HB)
Annealed	240

3 Main Characteristics and Applications

1.3343 High-speed steel (HSS) is a premium tool steel renowned for its exceptional performance in high-speed cutting operations. Its unique alloy composition provides an excellent balance of hardness, toughness, and wear resistance, making it a popular choice for a wide range of applications.

Applications:

- Drills
- Taps
- Milling Cutters and Saws
- Knives

4 Production Route

EAF - LF - VD - Forging / Rolling + Annealing
- Machining if Required

5 Physical Properties (Reference Values)

	20°C	350°C	700°C
Thermal Conductivity (W/mk)	32.8	23.5	25.5

6 Heat Treatment

TREATMENT	TEMPERATURE	Cooling	Hardness
Annealing	Heat to 770 – 860 °C	Furnace	max. 269
Stress relieving	Heat to 630 – 650 °C	Furnace	-

1st pre-heating °C	2nd and 3rd pre-heating °C	Hardening1 °C	Quenching	Tempering °C	Quenching
up to approx. 400 in an air-circulating furnace	a) 850	1190 – 1230	a) Saltbath, 550 °C	at least twice 530 – 560	64 – 66
-	b) 850	-	b) Oil	-	-
-	-	-	C) Air	-	-

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SandeepEnterprises STEEL SOLUTIONS

1.3343

High Speed Steel

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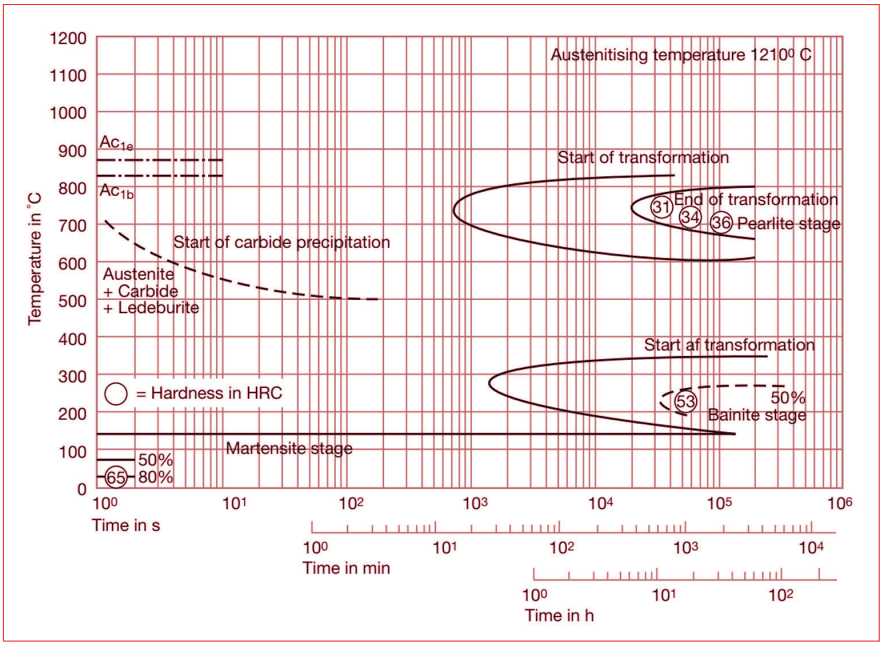
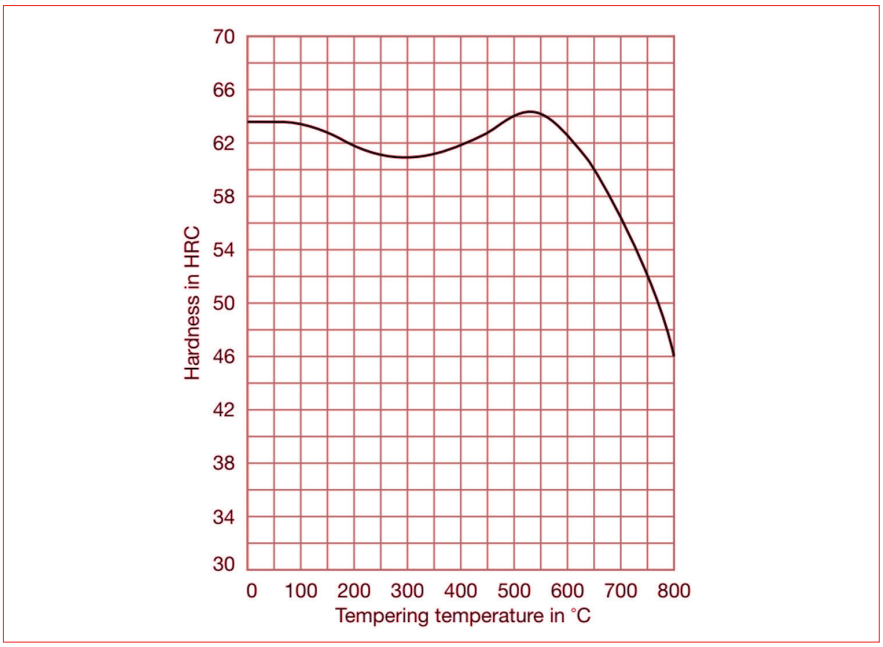
8 Tempering Curve





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