

AISI M35 M35 DIN 3243

HS6-5-2-5

C 0.92 Cr 4.10 Mo 5.00 V 1.90 W 6.40 Co 4.80

Steel properties The cobalt content in this high-performance high-speed steel results in high red hardness and tempering resistance. As a consequence, this grade is particularly suitable for conditions involving thermal stresses and discontinuous cutting. Under the name Rapidur 3245, AISI M35 + S and material number 1.3245, this steel grade is supplied with a higher sulphur content (S = 0.10 %).

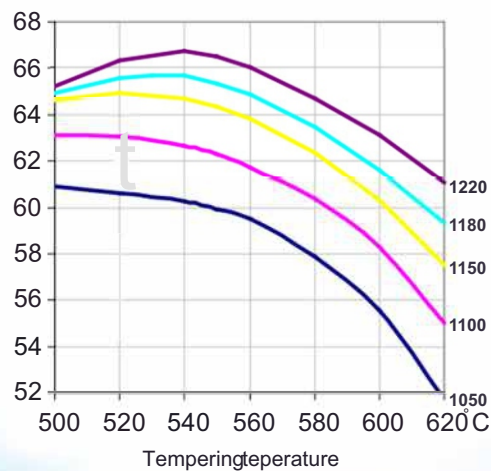
Standards AISI M35 AFNOR Z85WDKCV06-05-05-04-02

Applications Heavy-duty milling cutters of all kinds, highly stressed twist drills and taps, profile knives, machining of high-strength materials, broaches.

Heat treatment	Soft annealing °C 820-860	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	Hardening ¹ °C 1190- 1230	Quenching a) Saltbath, 550 °C b) Oil c) Air	Tempering °C at least three times 540- 570	Hardness after tempering HRC 64-67

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.

Tempering Graph



Hardness after hardening, quenching and tempering

Tool	Hardening	Tempering
Single-edge cutting tools	1220°C	560°C
Multi-edge cutting tools	1190-1220°C	550-570°C
Cold work tools	1050-1150°C	550-570°C