

Rapidur 3202

(HS12-1-4-5)

C 1.35 Cr 4.10 Mo 0.80 V 3.80 W 12.00 Co 4.80

Steel properties High-performance high-speed steel featuring an extremely good cutting edge retention and wear resistance due to its high vanadium content. A high cobalt content contributes to a high red hardness and tempering resistance.

Standards AISI ~T15

Applications Machining of hard materials which wear cutting edges such as highly quenched and tempered chromium-nickel grades and non-ferrous metals, mother-of-pearl, paper, hard rubber, synthetic resins, marble, slate and the like. Ideally suited for turning and finishing tools, forming tools of all kinds, heavy-duty milling cutters and automatic lathes.

Heat treatment	Soft annealing °C 820 – 860	Cooling Furnace	Hardness HB max. 280			
	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 – 1240	Quenching a) Saltbath, 550 °C b) Oil c) Air	Tempering °C at least three times 540 – 580	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.