



钢铁之家

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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



中国材料与试验协会

GJB

国家军用标准



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

航空航天材料规范



国际标准

JASO

日本汽车标准组织

EN

JB

UNS

UNI

ASME

SS



## Rapidur 3247

HS2-9-1-8

C 1.08 Cr 4.10 Mo 9.50 V 1.20 W 1.50 Co 8.00

**Steel properties** High-carbon, high-speed steel based on molybdenum. Characterized by high wear resistance, red hardness and toughness. As a result of its low vanadium content, this grade exhibits good grindability.

**Standards** AISI M42 AFNOR Z110DKCW

**Applications** For tools subject to severe mechanical wear (e.g. in case of small cross-section cuts at high cutting speeds). Particularly suitable for die-sinking cutters, milling cutters and engraving machines including gravers as well as for tool bits in automatic lathes. Also suitable for non-cutting shaping (e.g. cold extrusion rams and tools employed in machining materials for the aviation industry such as titanium alloys).

<b>Heat treatment</b>	<b>Soft annealing °C</b> 820 – 860	<b>Cooling</b> Furnace	<b>Hardness HB</b> max. 277
	<b>Stress-relief annealing °C</b> 630 – 650	<b>Cooling</b> Furnace	

1st pre-heating °C	2nd and 3rd pre-heating °C	Hardening <sup>1</sup> °C	Quenching	Tempering °C	Hardness after tempering HRC
up to approx. 400 in an air-circulating furnace	a) 850 b) 850 and 1050	1160 – 1190	a) Saltbath, 550 °C b) Oil c) Air	at least three times 530 – 560	66 – 69

<sup>1</sup> 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.

