

Material information sheet

Material number: 1.2328

Material: 45 Cr Mo V 7

Steel group: Alloyed tool steels Cr-Mo, Cr- Mo-V und Mo-V-steels

Usage: Tool steels for cold work:

All kind of chisel for air hardening without any occasion annealing, centre punch, drift punch, high hardness with high toughness

Chemical Composition:

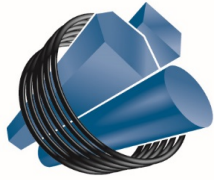
	C	Si	Mn	P	S	Cr	Mo	V
Minimum	0,42	0,20	0,85	0,00	0,00	1,70	0,25	0,03
Maximum	0,47	0,30	1,00	0,030	0,03	1,90	0,30	0,09

Heat-treatment

Hot forming	Soft-annealing (+A)	Hardening in oil	Tempering
850 - 1000 °C	690 - 730 °C	840 - 860 °C	180 - 300 °C

Mechanical-characteristic:

Hardness after glowing	$R_m \leq 800 \text{ MPa}$
Hardness after quenching	~ 55 HRC
Quenching and tempering values:	
Tempered at ~ 100 °C	~ 55 HRC $\approx R_m = 1970 \text{ MPa}$
Tempered at ~ 200 °C	~ 55 HRC $\approx R_m = 1970 \text{ MPa}$
Tempered at ~ 300 °C	~ 52 HRC $\approx R_m = 1805 \text{ MPa}$
Tempered at ~ 400 °C	~ 49 HRC $\approx R_m = 1650 \text{ MPa}$
Tempered at ~ 500 °C	~ 45 HRC $\approx R_m = 1455 \text{ MPa}$



Stock:

Bars:

- Bar length 3 to 4 m
- Tolerance data: EN 10278
- Technical terms EN 10277, surface quality class 2

Format

	8-kt	flat-oval
Tolerance	h11	
+AC+C	8 – 20	
+A+CR+A+CR		X ¹⁾

¹⁾: following dimension:

- 14 x 9 mm
- 26 x 7 mm

on request:

- 17 x 11 mm
- 20 x 12 mm
- 23 x 13 mm
- 26 x 13 mm
- 28 x 7 mm