

### Steel grade

Material No.	PREMIUM A8 mod. / Chipper
AISI	A8 mod. / Chipper

### Chemical composition AISI Chipper\* (reference value %)

C	Si	Mn	Cr	Mo	V
0.52	0.95	0.40	8.00	1.40	0.45

\*This specification will be delivered as Chipper-Knife-Steel (reduced content of vanadium - approx. 0.5 % V - in order to increase the toughness of your application).

### Physical properties

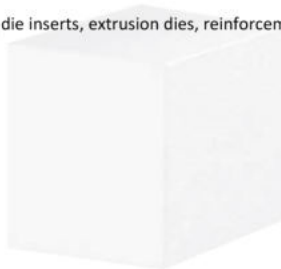
Hardness (delivery condition)	max. 250 HB, annealed
Tensile strength $R_m$ (as received condition)	approx. 123.2 KSI
Working hardness	max. 60 HRC
Thermal expansion coefficient $10^{-6}m/(m \cdot K)$	20-200°C
	11.6
Thermal conductivity $W/(m \cdot K)$	20 C
	26.1

### Technical properties

Very robust cold work steel which can be used for a wide range of applications. Has good through-hardening and high toughness (reduced occurrence of hard carbides with 8% chromium compared to 12% chromium in AISI D2). High cutting power, high wear resistance as well as excellent tempering resistance.

### Applications

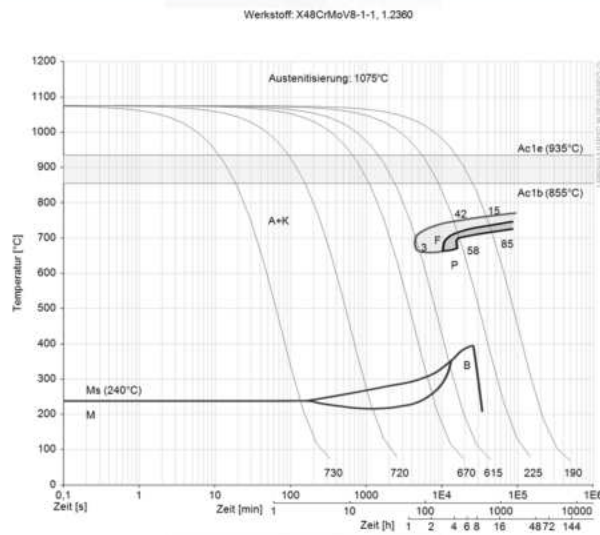
Blanking tools, stamping tools, embossing tools, forming dies, press dies, die inserts, extrusion dies, reinforcements, cold extrusion tools, tube tools, cutting tools, industrial knives, wood chipping knives, veneer knives.



### Heat treatment

Soft annealing	Temperature		Cooling		Hardness		
	1526 - 1580°F		Furnace		max. 250 HB		
Stress relief annealing	Temperature		Cooling				
	approx. 1202°F		Furnace				
Hardening	Temperature		Quenching in		Hardness after quenching		
	1886 - 1958°F		Air, oil, hot basin (1022°F)		60 - 61 HRC		
Tempering °C	100	200	300	400	500	550	600
	61	60	58	58	60	57	53

### Continuous ZTU-diagram



### Tempering diagram

