COLD WORK STEELS

Available Product Variants

Long Products | Plates

Product Description

High duty machine knives for the cellulose, paper and fiberboard industries. Flat and circular shear blades for plates up to 15 mm thickness.

Properties

- Toughness & Ductility: good
- Wear Resistance: high
- Compressive strength: good
- Dimensional stability: good

Applications

- Machine knife (for producers)

Technical data

Material designation	
~1.2360	SEL
~A8	AISI

Chemical composition (wt. %)

C	Si	Mn	Cr	Mo	V
0.52	0.95	0.4	8	1.4	0.35

Material characteristics

	Compressive strength	Dimensional stability during heat treatment	Toughness	Wear resistance abrasive
BÖHLER K329	★★★	★★★	★★★★	★★★★
BÖHLER K305	★★★★★	★★★	★★	★★★★★
BÖHLER K306	★★★★	★★★	★★★★	★★★
BÖHLER K313	★★★★	★★★	★★★	★★★
BÖHLER K320	★★★	★★★	★★★	★★★
BÖHLER K600	★	★★★	★★★★★	★
BÖHLER K601	★	★★★	★★★★	★★
BÖHLER K605	★	★★★	★★★★	★★

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ONE STEP AHEAD.

Delivery condition

Annealed

Hardness	max. 240 HB

Heat treatment

Annealing

Temperature (°C | °F)	800 | 1472 to 850 | 1562	Slow controlled cooling in furnace at a rate of 50 to 68°F/hr (10 to 20°C/hr) down to approx. 1112°F (600°C), further cooling in air.

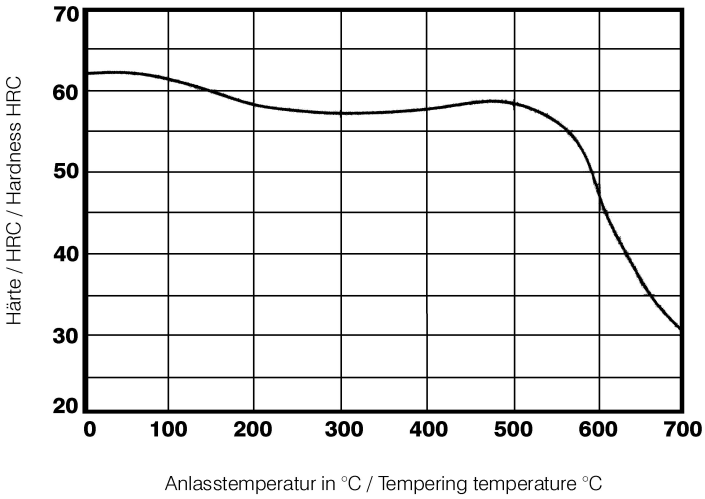
Stress relieving

Temperature (°C | °F)	650 | 1202	Slow cooling in furnace. Intended to relieve stresses set up by extensive machining, or in complex shapes. After through heating, hold in neutral atmosphere for 1 to 2 hours.

Hardening and Tempering

Temperature (°C | °F)	1000 | 1832 to 1020 | 1868	Oil, salt bath 932 to 1022°F (500 to 550°C), air 1868 to 1904°F (1020 to 1040°C) Holding time after temperature equalization: 15 to 30 minutes. After hardening, tempering to the desired working hardness, see tempering chart.

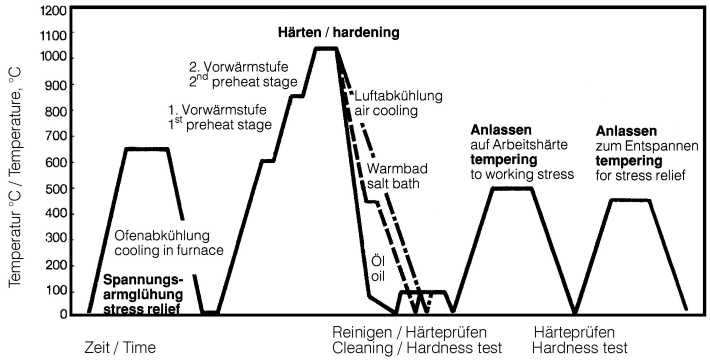
Tempering chart



Tempering:

Hardening temperature:
——— 1020°C
Specimen size: square 20 mm

Heat treatment sequence



Physical Properties

Temperature (°C | °F)	20 | 68
Density (kg/dm^3 | lb/in^3)	7.7 | 0.28
Thermal conductivity (W/(m.K) | BTU (IT) ft/hr/ft^2/F)	26 | 15.02
Specific heat (J/(kg.K) | BTU (IT) lb/F)	460 | 109.87
Spec. electrical resistance (Ohm.mm^2/m | 10^{-4} Ohm.inch^2/ft)	0.6 | 2.84
Modulus of elasticity (10^{3}N/mm^2 | 10^{3}ksi)	210 | 30.46

Thermal Expansions

Temperature (°C | °F)	100 | 212	200 | 392	300 | 572	400 | 752	500 | 932
Thermal expansion (10^{-6} m/(m.K) | 10^{-6} inch/(inch.F))	11.5 | 6.389	12 | 6.667	12.2 | 6.778	12.5 | 6.944	12.8 | 7.111

For more information see https://www.voestalpine.com/bohler-edelstahl/de/

The data contained in this brochure is merely for general information and therefore shall not be binding on the company. We may be bound only through a contract explicitly stipulating such data as binding. Measurement data are laboratory values and can deviate from practical analyses. The manufacture of our products does not involve the use of substances detrimental to health or to the ozone layer.

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