

CORROSION RESISTANT STEELS - MARTENSITIC, SEMI- MARTENSITIC AND FERRITIC STEELS

Available Product Variants

Plates

Product Description

Corrosion resistant, martensitic 13 % Cr steel grade for example special knives , scissors, table knives, kitchen knives and machining cutting knives.

Applications

- > Custom Hand Knives
 - > Packaging
- > CPI (incl. LNG, Urea)
 - > Surgery
- > Cutting

Technical data

Material designation		Standards	
1.4034	SEL	AFNOR Z40C14	Others
1.3541			
X45Cr13	EN		
X46Cr13			
S42000	UNS		
420	AISI		
~SUS420J2	JIS		
40Ch13	GOST		

Chemical composition (wt. %)

C	Si	Mn	Cr
0.46	0.4	0.4	13

Delivery condition

Annealed	
Hardness (HB)	max. 245

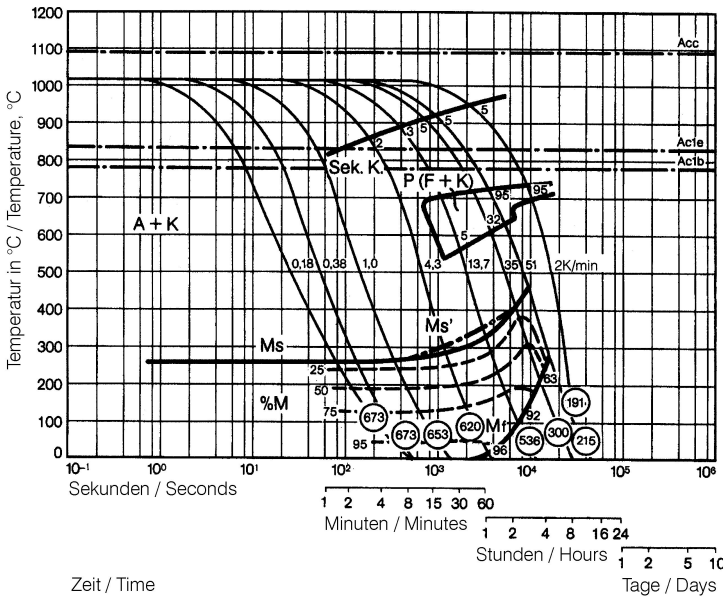
Heat treatment

Annealing

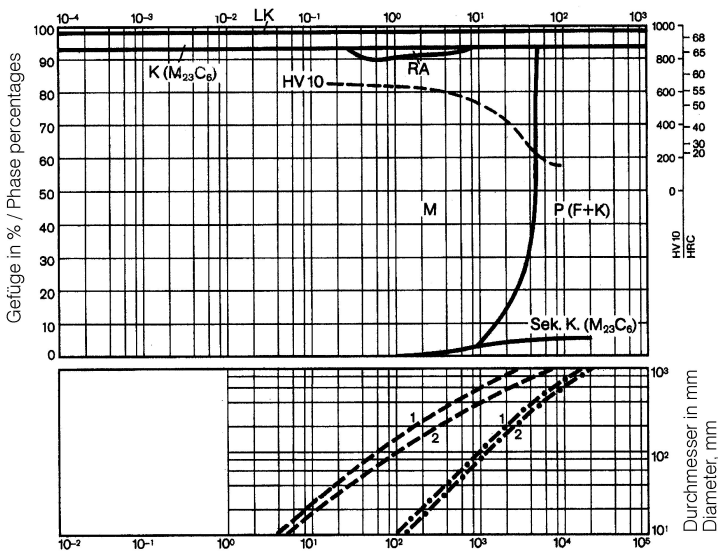
Temperature	750 to 850 °C	Furnace, Air
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Hardening and Tempering

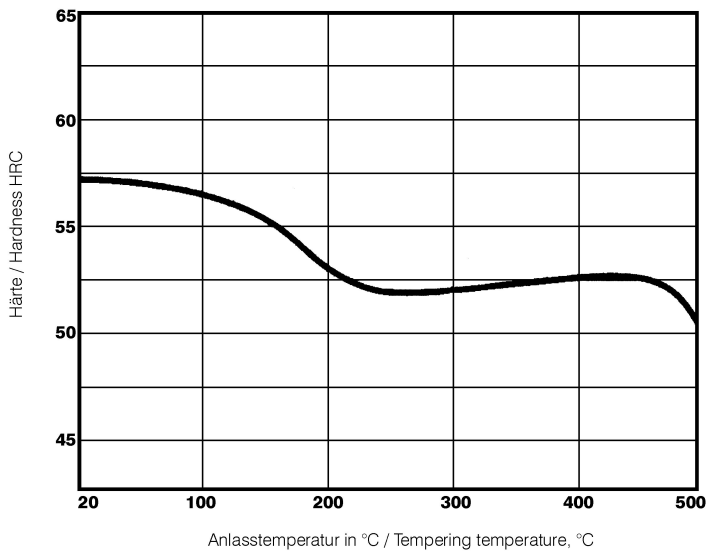
Temperature	980 to 1,030 °C	Oil, Air
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Abkühlungsparameter λ / Cooling parameter λ



Kühlzeit von 800°C auf 500°C in Sekunden / Cooling time in sec. from 800°C to 500°C



Physical Properties

Density	7.7	[kg/dm ³]
Thermal conductivity	30	[W/(m.K)]
Specific heat	460	[kJ/kg K]
Spec. electrical resistance	0.55	[Ohm.mm ² /m]
Modulus of elasticity	215	[10 ³ N/mm ²]

Thermal Expansions between 20°C | 68°F and ...

Temperature (°C)	100	200	300	400
Thermal expansion (10 ⁻⁶ m/(m.K))	10.5	11	11.5	12

If other available product variants are listed in addition to long products, please note that these may differ in terms of melting process, technical data, delivery and surface condition as well as available product dimensions. For mandatory technical specifications, other requirements and dimensions, please contact our regional voestalpine BÖHLER sales companies. 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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