

ACEROS PARA TRABAJO EN FRÍO

Formatos disponibles

Productos largos

Descripción

BÖHLER K346 belongs to the group of conventionally produced 8% chromium steels. Its alloy composition features a high content of molybdenum, tungsten and vanadium, which makes BÖHLER K346 more wear resistant and tougher than conventional 12% chromium steels (1.2080, 1.2379). BÖHLER K346 is used in situations where materials like 1.2379 are insufficient in terms of toughness and where high requirements for abrasive wear resistance are set. This combination of high wear resistance and toughness offers advantages for industrial knives subject to high stress in the recycling industry. This grade is also used for stamping and cutting tools.

Método de obtención

Convencional

Propiedades

- > Dureza y Ductilidad : buena
- > Resistencia al desgaste : alto
- > Resistencia a la compresión : alto
- > Estabilidad dimensional : alto

Aplicaciones

- > Cuchillas de máquinas (fabricantes)
- > Componentes para la industria del reciclaje
- > Componentes para equipos bajo tierra (perforación, ejes, etc.)
- > Thread rolling (ES)

Composición Química

C	Si	Mn	Cr	Mo	V
1,13	1,20	0,35	7,80	1,60	2,40

Características

	Resistencia a la compresión	Estabilidad dimensional durante el tratamiento térmico	Tenacidad	Resistencia al desgaste abrasivo	Resistencia al desgaste adhesivo
BÖHLER K346	★★★	★★★	★★★	★★★★	★★
BÖHLER K100	★★	★★	★	★★★	★★
BÖHLER K105	★★	★★	★	★★	★★
BÖHLER K110	★★	★★★	★	★★★	★★
BÖHLER K190 MICROCLEAN®	★★★★	★★★★★	★★★★	★★★★	★★★★
BÖHLER K294 MICROCLEAN®	★★★★★	★★★★★	★★★	★★★★★	★★★★★
BÖHLER K340 ECOSTAR®	★★★	★★★	★★	★★	★★
BÖHLER K340 ISODUR®	★★★	★★★★	★★★	★★★	★★★★
BÖHLER K353	★★	★★★	★★	★★	★★
BÖHLER K360 ISODUR®	★★★	★★★★	★★★	★★★★	★★★★
BÖHLER K390 MICROCLEAN®	★★★★★	★★★★★	★★★★	★★★★★	★★★★★
BÖHLER K490 MICROCLEAN®	★★★★	★★★★★	★★★★	★★★★	★★★★
BÖHLER K497 MICROCLEAN®	★★★★★	★★★★★	★★★	★★★★★	★★★★★
BÖHLER K888 MATRIX	★★★★	★★★★★	★★★★★	★★	★★
BÖHLER K890 MICROCLEAN®	★★★★	★★★★★	★★★★★	★★★	★★★

Estado de suministro
recocido

Dureza (HB)	máx. 250
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Tratamiento térmico
Recocido

Temperatura	840 a 870 °C	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.
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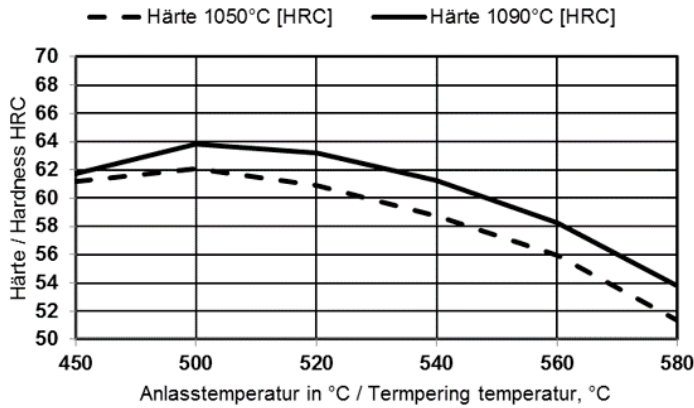
Alivio de tensiones

Temperatura	650 °C	After through-heating, soak for 1 to 2 hours in neutral atmosphere, then slow cooling in furnace. This is used to relieve stresses caused by extensive machining or for complex geometries.
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Temple y revenido

Temperatura	1.050 a 1.090 °C	After through-heating, soak for 15 to 20 minutes. Quenching in air, oil or vacuum. After hardening, tempering to the desired working hardness, see tempering chart.
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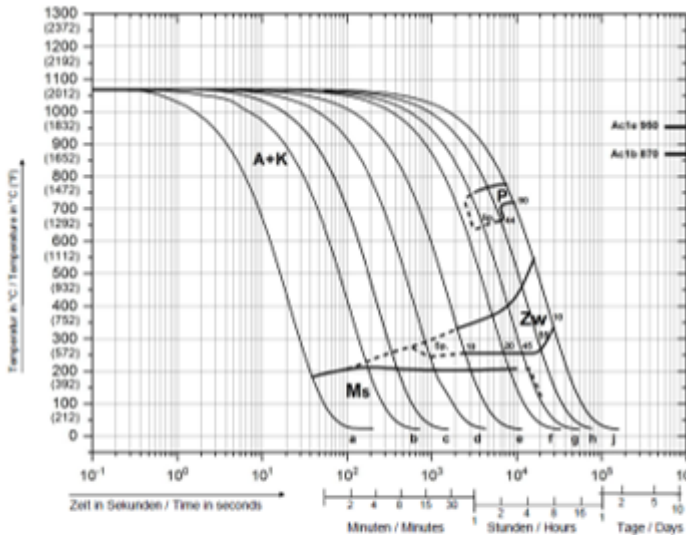
Tempering Chart



Tempering:

Hardening temperature:
 ——— 1090°C
 - - - - - 1050°C
 Sample profile: 0,28x0,39 inch (7x10 mm)
 hardened in vacuum; N₂-cooling 72,52 psi (5 bar);
 Tempering 3x2 hours

Continuous cooling CCT curves



Austenitising temperature: 1958°F (1070°C)
 Holding time: 30 minutes

10...90 phase percentages
 Cooling parameter λ: i.e. duration of cooling from 1472 to 932°F (800 to 500°C) in s x 10⁻²

Probe	(DIL805) Vers.Nr.	λ	HV _{0.05}	RA%	Probe	(DIL805) Vers.Nr.	λ	HV _{0.05}	RA%
a	2151	0,1	812	14	g	2154	38	610	7
b	2153	0,5	810	13	h	2180	65	370	1
e	2148	1,1	810	12	j	2183	110	260	<1
d	2156	3	790	16					
e	2182	8	750	14					
f	2158	23	680	13					

Propiedades físicas

Temperatura (°C)	20
Densidad (kg/dm ³)	7,64
Conductividad térmica (W/(m.K))	22
Calor específico (kJ/kg K)	0,47
Resistencia eléctrica específica (Ohm.mm ² /m)	0,6
Módulo de elasticidad (10 ³ N/mm ²)	220

Expansión térmica

Temperatura (°C)	100	200	300	400	500	600	700
Expansión térmica (10 ⁻⁶ m/(m.K))	11	11,5	12	12,4	12,7	13	13,2

For additional specifications and technical requirements, please contact our regional voestalpine BÖHLER sales companies.

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