

ACEROS PARA TRABAJO EN FRÍO

Formatos disponibles

Productos largos*

Chapas

*) Presented data refer exclusively to long products. Please observe the detailed explanations at the end of the data sheet (pdf).

Descripción

BÖHLER K340 ECOSTAR es un acero convencional para herramientas de trabajo en frío con 8% de Cromo.

Es un acero con bajos cambios dimensionales, apto para el temple en aceite y al aire gracias a la distribución uniforme de carburos en su estructura, lo cual permite una distribución homogénea de las cargas combinadas.

Método de obtención

Convencional

Propiedades

- > Resistencia a la compresión : buena
- > Estabilidad dimensional : buena

Aplicaciones

- > Cuchillas de máquinas (fabricantes)
- > Acuñaado
- > Tornillos y cilindros
- > Thread rolling (ES)
- > Laminación
- > Corte fino / Troquelado / Estampado
- > Componentes de desgaste
- > Conformado en frío
- > Compactación de polvo
- > Componentes generales de ingeniería mecánica

Composición Química

C	Si	Mn	Cr	Mo	V	Others
1,10	0,70	0,40	8,20	2,10	0,50	+Al, Nb

Características

	Resistencia a la compresión	Estabilidad dimensional durante el tratamiento térmico	Tenacidad	Resistencia al desgaste abrasivo	Resistencia al desgaste adhesivo
BÖHLER K340 ISODUR®	★★★	★★★★★	★★★	★★★	★★★★★
BÖHLER K340 ECOSTAR®	★★★	★★★	★★	★★	★★
BÖHLER K100	★★	★★	★	★★★	★★
BÖHLER K105	★★	★★	★	★★	★★
BÖHLER K107	★★	★★	★	★★★	★★
BÖHLER K110	★★	★★★	★	★★★	★★
BÖHLER K190 MICROCLEAN®	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
BÖHLER K294 MICROCLEAN®	★★★★★	★★★★★	★★★	★★★★★	★★★★★
BÖHLER K360 ISODUR®	★★★	★★★★★	★★★	★★★★★	★★★★★
BÖHLER K346	★★★	★★★	★★★	★★★★★	★★
BÖHLER K353	★★	★★★	★★	★★	★★
BÖHLER K390 MICROCLEAN®	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
BÖHLER K490 MICROCLEAN®	★★★★★	★★★★★	★★★★★	★★★★★	★★★★★
BÖHLER K497 MICROCLEAN®	★★★★★	★★★★★	★★★	★★★★★	★★★★★
BÖHLER K888 MATRIX	★★★★★	★★★★★	★★★★★	★★	★★
BÖHLER K890 MICROCLEAN®	★★★★★	★★★★★	★★★★★	★★★	★★★

Estado de suministro

recocido

Dureza (HB)	máx. 235
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Tratamiento térmico

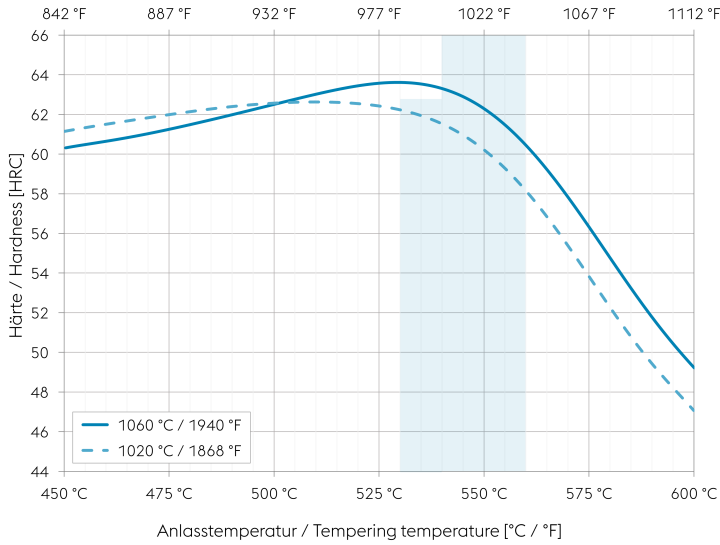
Alivio de tensiones

Temperatura	650 °C	After through-heating, hold in neutral atmosphere for 1 - 2 hours. Slow cooling in furnace; intended to relieve stresses set up by extensive machining, or in complex shapes.
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Temple y revenido

Temperatura	1.020 a 1.060 °C	Oil, salt bath, compressed air, air, vacuum After through-heating, hold for 15 to 30 minutes. After hardening, tempering to the desired working hardness, see tempering chart.
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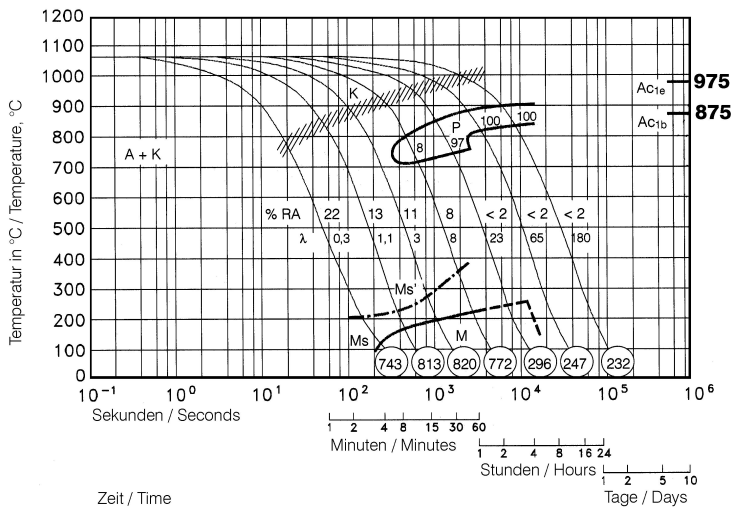
Tempering chart



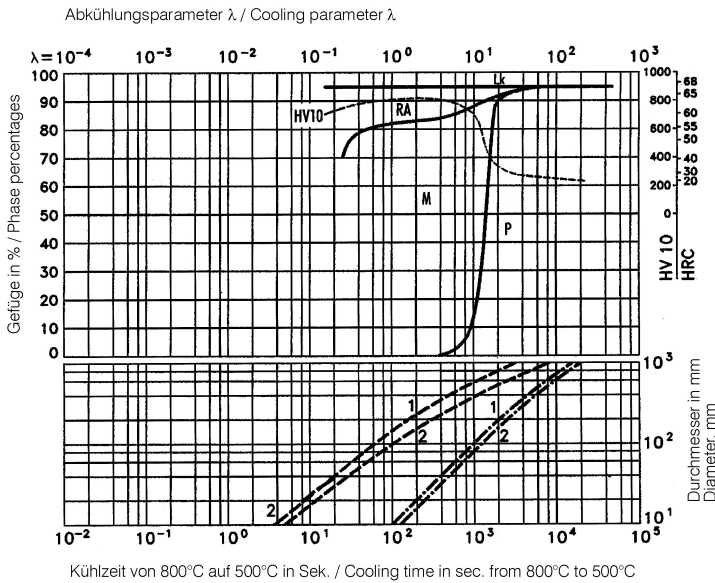
Tempering:

Hardening temperature:
 — 1020°C/1868°F
 - - - 1060°C/1940°F
 Specimen size: square 20 mm

Continuous cooling CCT curves



Quantitative phase diagram



LK... Ledeburitic carbides
RA... Retained austenite
M... Martensite
P... Perlite

Propiedades físicas

Temperatura (°C)	20
Densidad (kg/dm ³)	7,68
Conductividad térmica (W/(m.K))	17,8
Calor específico (kJ/kg K)	0,49
Resistencia eléctrica específica (Ohm.mm ² /m)	0,64
Módulo de elasticidad (10 ³ N/mm ²)	206

Expansión térmica

Temperatura (°C)	100	200	300	400	500	600	700
Expansión térmica (10 ⁻⁶ m/(m.K))	11,2	11,8	12,3	12,7	12,9	13,1	13,1

Long Products: For additional specifications, technical requirements, and other dimensions, please contact our regional voestalpine BÖHLER sales companies.

Sheet & Plates: Product Variant may differ in terms of melting process, technical data, delivery, and surface condition as well as available product dimensions. Please contact voestalpine BÖHLER Bleche GmbH & Co KG.

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.

voestalpine BÖHLER Edelstahl GmbH & Co KG
 Mariazeller Straße 25
 8605 Kapfenberg, AT
 T. +43/50304/20-0
 E. info@bohler-edelstahl.at
<https://www.voestalpine.com/bohler-edelstahl/de/>

voestalpine
ONE STEP AHEAD.