

ACEROS RÁPIDOS

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 S705 - "El industrial"

El acero rápido convencional para aplicaciones industriales en mecanizado. Gracias a su equilibrada aleación y contenido en Cobalto, esta calidad de acero siempre cumple su trabajo con éxito.

Método de obtención

[Convencional](#)

Propiedades

- > Dureza y Ductilidad : buena
- > Resistencia al desgaste : alto
- > Resistencia a la compresión : muy alta
- > Estabilidad de los bordes : alto
- > Afilabilidad : buena
- > Dureza en caliente (dureza roja) : muy alta

Aplicaciones

- > Broches y escariadores
- > Brocas helicoidales y grifos
- > Puntas de brocas
- > Herramientas de corte especiales
- > Talladura de engranajes, herramientas de rasurado y perfiladoras
- > Hojas para sierras

Datos técnicos

Designación		Estándares	
1,3243	SEL	4957	EN ISO
HS6-5-2-5	EN		

Composición Química

C	Cr	Mo	V	W	Co
0,92	4,1	5	1,9	6,2	4,8

Características

	Resistencia a la compresión	Aptitud para el rectificado	Dureza en caliente	Tenacidad	Resistencia al desgaste	Retención del filo de la navaja
BÖHLER S705	★★★	★★★	★★★★	★★	★★	★★★★
BÖHLER S200	★★★	★★	★★★	★★	★★★	★★
BÖHLER S400	★★★	★★★	★★★	★★★	★★	★★
BÖHLER S401	★★	★★★	★★	★★★	★★	★★★
BÖHLER S404	★★	★★★	★★	★★★	★★	★★
BÖHLER S430	★★	★★★	★★	★★★	★★	★★
BÖHLER S500	★★★★	★★★	★★★★	★★	★★★	★★★
BÖHLER S600	★★★	★★★	★★★	★★	★★	★★★
BÖHLER S607	★★★	★★★	★★★	★★	★★★	★★★
BÖHLER S630	★★★	★★★	★★★	★★	★★	★★★
BÖHLER S730	★★★	★★★	★★★★	★★	★★	★★★★

Estado de suministro

recocido

Dureza (HB)	máx. 280 drawn execution max. 290HB
Resistencia a la tracción (N/mm ²)	máx. 980

Tratamiento térmico

Recocido

Temperatura	770 a 840 °C	Controlled slow cooling in furnace (10 to 20°C/h / (50 to 68°F/h)) to approx. 600°C (1112°F), air cooling.
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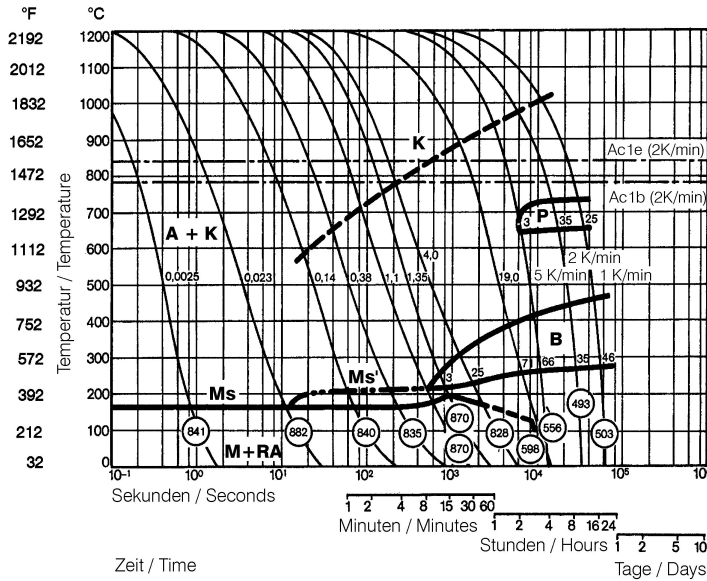
Alivio de tensiones

Temperatura	600 a 650 °C	Slow cooling in furnace. To relieve stresses set up by extensive machining or in tools of intricate shape. After through heating, hold in neutral atmosphere for 1 to 2 hours.
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Temple y revenido

Temperatura	1.190 a 1.230 °C	Salt bath, vacuum Preheating: 1st stage ~ 500 °C, 2nd stage ~ 850 °C, 3rd stage ~1050 °C Austenitising: 1190 - 1230 °C, holding time after complete heating 80 seconds, maximum 150 seconds, to avoid material damage due to overheating. Quenching: oil, warm bath (500 - 550 °C), gas
Temperatura	550 a 570 °C	Slow heating to tempering temperature immediately after austenitising. Dwell time in the furnace 1 hour per 20 mm material thickness (at least 1 hour) Slow cooling to room temperature 3 tempering cycles recommended Hardness see tempering chart

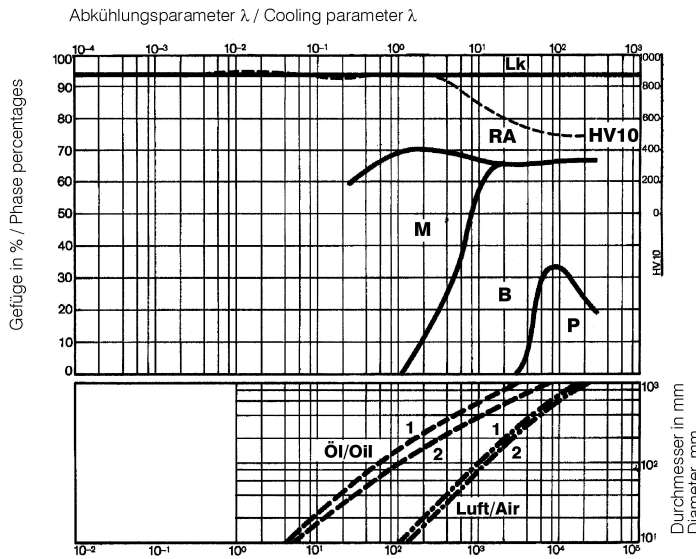
Continuous cooling CCT curves



Austenitising temperature: 1200°C (2192°F)
Holding time: 180 seconds

- A....Austenite
- B....Bainite
- K....Carbide
- P....Pearlite
- M....Martensite
- RA...Retained Austenite

Quantitative phase diagram

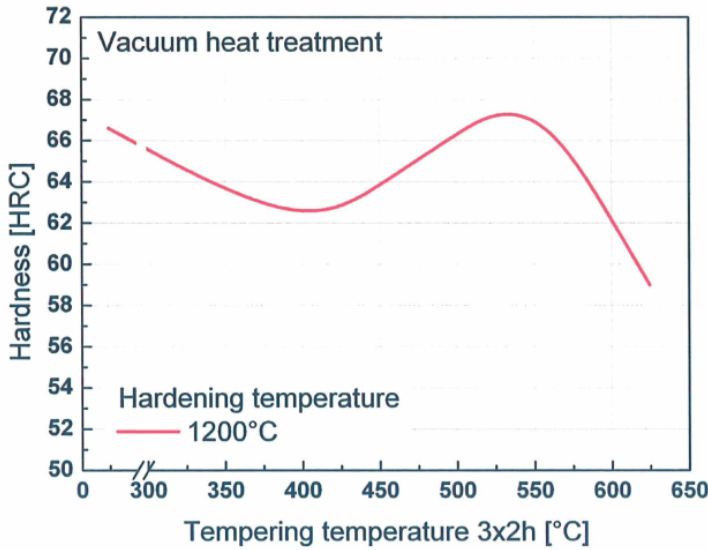


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- 1....Edge or Face
- 2....Core
- 3....Jominy test: distance from quenched end

Kühlzeit von 800°C auf 500°C in Sek. / Cooling time in sec. from 800°C to 500°C (1472 - 932°F)

Tempering Chart



Holding time 3 x 2 hours
Specimen size: square 25 mm

Propiedades físicas

Temperatura (°C)	20
Densidad (kg/dm ³)	7,9
Conductividad térmica (W/(m.K))	21
Calor específico (kJ/kg K)	0,42
Resistencia eléctrica específica (Ohm.mm ² /m)	0,49
Módulo de elasticidad (10 ³ N/mm ²)	224

Expansión térmica

Temperatura (°C)	100	200	300	400	500	600	700
Expansión térmica (10 ⁻⁶ m/(m.K))	10,5	10,83	11,14	11,47	11,81	12,12	12,44

Long Products: For additional specifications and technical requirements, 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.

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 ONE STEP AHEAD.