

SNELDRAAISTAAL

Beschikbare uitvoeringen

Stafstaal*

Plaat

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

Product omschrijving

BÖHLER S705 – "Het industriële"

Het conventionele snelstaal voor industriële toepassing in de verspaningssector. Door zijn afgewogen legeringstoestand en zijn kobaltgehalte slaagt dit type erin telkens weer te overtuigen in zijn toepassing.

Smeltroute

Airmelted

Eigenschappen

- > Taaiheid & Vervormbaarheid : goed
- > Slijtageweerstand : hoog
- > Samenpersende sterkte : zeer hoog
- > Randstabiliteit : hoog
- > Slijpbaarheid : goed
- > Hete hardheid (rode hardheid) : zeer hoog

Toepassingen

- > Trekfrezen en ruimers
- > Kopfrezen
- > Gereedschap voor snijden, schrapen en steken van tandwielen
- > Spiraalboren en tappen
- > Speciale snijwerktuigen
- > Bladen voor zaagmachines

Technische gegevens

Materiaal aanduiding		Normen	
1.3243	SEL	4957	EN ISO
HS6-5-2-5	EN		

Chemische samenstelling

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

Materiaaleigenschappen

	Drukbelastingcapaciteit	Verdraaibaarheid	Hete hardheid	Taaheid	Slijtvastheid	Behoud van snijkant
BÖHLER S705	★★★	★★★	★★★★	★★	★★	★★★★
BÖHLER S200	★★★	★★	★★★	★★	★★★	★★
BÖHLER S400	★★★	★★★	★★★	★★★	★★	★★
BÖHLER S401	★★	★★★	★★	★★★	★★	★★★
BÖHLER S404	★★	★★★	★★	★★★	★★	★★
BÖHLER S430	★★	★★★	★★	★★★	★★	★★
BÖHLER S500	★★★★	★★★	★★★★	★★	★★★	★★★
BÖHLER S600	★★★	★★★	★★★	★★	★★	★★★
BÖHLER S607	★★★	★★★	★★★	★★	★★★	★★★
BÖHLER S630	★★★	★★★	★★★	★★	★★	★★★
BÖHLER S730	★★★	★★★	★★★★	★★	★★	★★★★

Leveringsconditie

gegloeid

Hardheid (HB)	max. 280 drawn execution max. 290HB
Treksterkte (N/mm ²)	max. 980

Warmtebehandeling

Annealing

Temperatuur	770 naar 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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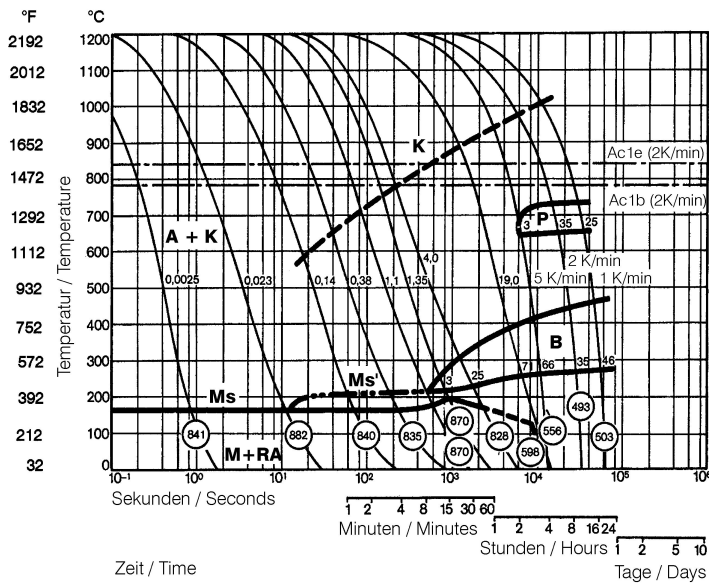
Stress relieving

Temperatuur	600 naar 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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Harden en ontlaten

Temperatuur	1.190 naar 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
Temperatuur	550 naar 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

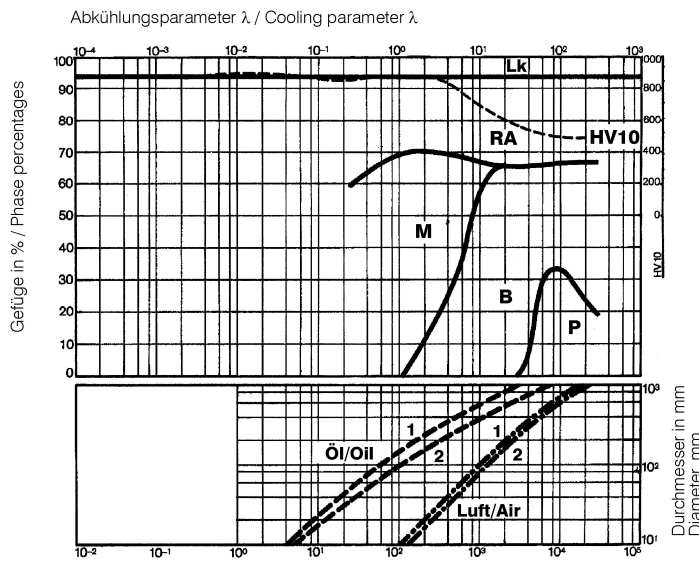
Continuous cooling CCT curves



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

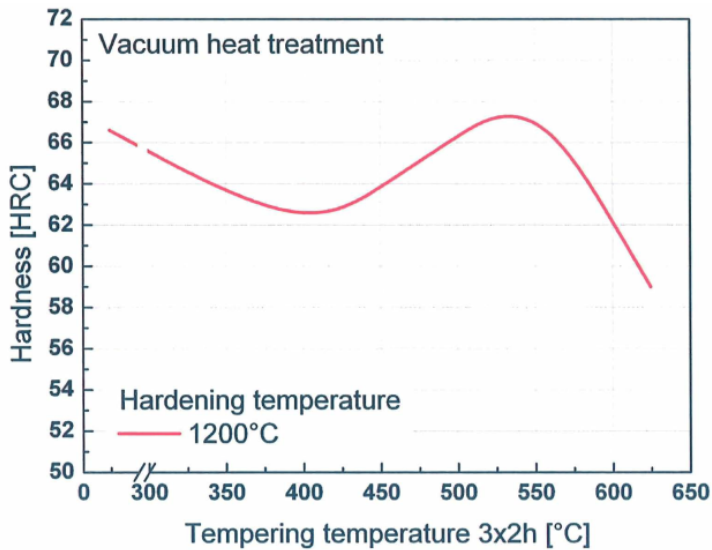


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- 1....Edge or Face
- 2....Core
- 3....Jominy test: distance from quenched end

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

Fysische eigenschappen

Temperatuur (°C)	20
Soortelijk gewicht (kg/dm ³)	7,9
Thermische conductiviteit (W/(m.K))	21
Soortelijke warmte (kJ/kg K)	0,42
Specifieke elektrische weerstand (Ohm.mm ² /m)	0,49
Elasticiteitsmodus (10 ³ N/mm ²)	224

Thermische expansie

Temperatuur (°C)	100	200	300	400	500	600	700
Thermische expansie (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.

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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ONE STEP AHEAD.