BÖHLER

BÖHLER S690 MICROCLEAN®

SNELDRAAISTAAL

Beschikbare uitvoeringen

Stafstaal* | Plaat

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

Product omschrijving

BÖHLER S690 MICROCLEAN – "Het eenvoudige"

Het taaie snelstaal voor de veeleisende verspaning en koudvervorming.

Smeltroute

Powder metallurgy

Eigenschappen

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

Toepassingen

- Autoracen
- Kopfrezen
- Speciale snijwerktuigen
- Trekfrezen en ruimers
- Fijn stanswerk / ponsen / stampen
- Koudvervorming / munten
- Persen van poeders

Technische gegevens

Materiaal aanduiding	
M4	AISI
HS6-5-4	EN

Chemische samenstelling

C	Cr	Mo	V	W
1,44	4	5,2	4	5,6

Materiaaleigenschappen

	Drukbelastingscapaciteit	Vervormbaarheid	Hete hardheid	Taaiheid	Slijtvastheid	Behoud van snijkant
BÖHLER S690 MICROCLEAN®	★★★	★★★	★★	★★★★★	★★★	★★
BÖHLER S290 MICROCLEAN®	★★★★★	★	★★★★	★★	★★★★★	★★★★
BÖHLER S390 MICROCLEAN®	★★★★	★★★	★★★★	★★★★	★★★★	★★★★
BÖHLER S393 MICROCLEAN®	★★★★	★★★	★★★★	★★★★	★★★★	★★★★
BÖHLER S590 MICROCLEAN®	★★★★	★★★	★★★★	★★★	★★★	★★★
BÖHLER S790 MICROCLEAN®	★★★	★★★	★★	★★★★	★★	★★★
BÖHLER S793 MICROCLEAN®	★★★	★★★	★★★★	★★★	★★★	★★★

Leveringsconditie

gegloeid

Hardheid (HB)	max. 280 | drawn execution max. 300 HB
Treksterkte (N/mm²)	max. 1.020

Warmtebehandeling

Annealing

Temperatuur	870 naar 900 °C	Slow cooling in furnace.

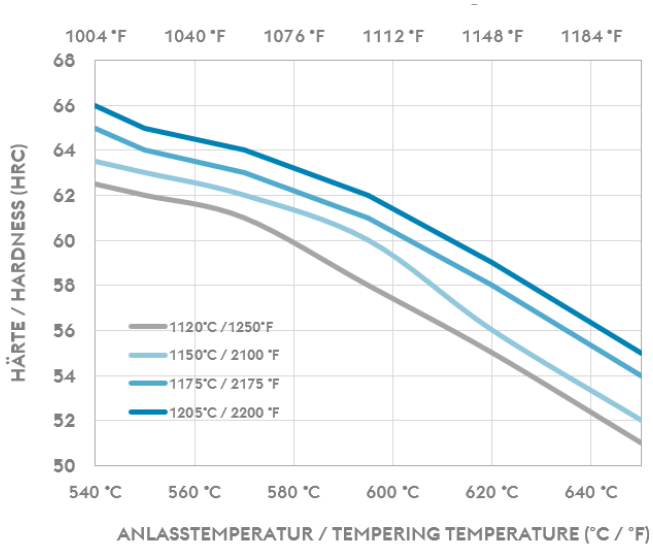
Stress relieving

Temperatuur	600 naar 650 °C	Slow cooling 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.

Harden en ontlaten

Temperatuur	1.100 naar 1.220 °C	Salt bath, vacuum || Preheating: 1st stage ~ 500 °C (930 °F), 2nd stage ~ 850 °C (1560 °F), 3rd stage ~1050 °C (1920 °F) || Austenitising: 1100 - 1200 °C (2010 °F - 2230 °F), holding time after complete heating 80 seconds, maximum 150 seconds, to avoid material damage due to overheating. ||Quenching: oil, warm bath (500 - 550 °C (930 °F - 1020 °F)), gas
Temperatuur	540 naar 570 °C	Slow heating to tempering temperature immediately after austenitising. || Holding time in the furnace 1 hour per 20 mm material thickness (at least 1 hour) || Slow cooling to room temperature between each tempering step || 3 tempering cycles recommended || Hardness see tempering chart

Tempering Chart



Fysische eigenschappen

Temperatuur (°C)	**20**
Soortelijk gewicht (kg/dm^3)	8,1
Thermische conductiviteit (W/(m.K))	20
Soortelijke warmte (kJ/kg K)	0,46
Specifieke elektrische weerstand (Ohm.mm^2/m)	0,53
Elasticiteitsmodus (10^{3}N/mm^2)	217

Thermische expansie

Temperatuur (°C)	100	200	300	400	500	600	700
Thermische expansie (10^{-6} m/(m.K))	11,5	11,7	12,2	12,4	12,7	13	12,9

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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