

KOUDVERVORMSTAAL

Beschikbare uitvoeringen

Stafstaal*

Plaat

vrijvormsmeden

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

Product omschrijving

BÖHLER K490 MICROCLEAN – dit materiaal combineert slijtvastheid en taaiheid op een hoog niveau! Het voordeel voor de klant: uitstekende hardverspaanbaarheid, flexibiliteit in de warmtebehandeling, alsook verbeterde standtijden bij gebruik van het gereedschap.

Smeltroute

Powder metallurgy

Eigenschappen

- > Taaiheid & Vervormbaarheid : hoog
- > Slijtageweerstand : hoog
- > Samenpersende sterkte : hoog
- > Dimensionale stabiliteit : zeer hoog

Toepassingen

- > Machinale messen (voor fabrikanten)
- > Coining
- > Schroeven en vaten
- > Rollen
- > Glasfibre reinforced plastics
- > Walsen
- > Fijn stanswerk / ponsen / stampen
- > Slijtstukken
- > Componenten voor de recyclingindustrie
- > Cold Forming
- > Persen van poeders
- > Algemene componenten voor werktuigbouw
- > Pill punching dies

Chemische samenstelling

C	Cr	Mo	V	W	Nb
1,40	6,40	1,50	3,70	3,50	+

Materiaaleigenschappen

	Drukbelastingcapaciteit	Dimensionale stabiliteit tijdens warmtebehandeling	Taatheid	Slijtvast abrasief	Slijtvaste lijm
BÖHLER K490 MICROCLEAN®	★★★★	★★★★★	★★★★	★★★★	★★★★
BÖHLER K100	★★	★★	★	★★★	★★
BÖHLER K105	★★	★★	★	★★	★★
BÖHLER K107	★★	★★	★	★★★	★★
BÖHLER K110	★★	★★★	★	★★★	★★
BÖHLER K190 MICROCLEAN®	★★★★	★★★★★	★★★★	★★★★	★★★★
BÖHLER K294 MICROCLEAN®	★★★★★	★★★★★	★★★	★★★★★	★★★★★
BÖHLER K340 ECOSTAR®	★★★	★★★	★★	★★	★★
BÖHLER K340 ISODUR®	★★★	★★★★	★★★	★★★	★★★★
BÖHLER K346	★★★	★★★	★★★	★★★★	★★
BÖHLER K353	★★	★★★	★★	★★	★★
BÖHLER K360 ISODUR®	★★★	★★★★	★★★	★★★★	★★★★
BÖHLER K390 MICROCLEAN®	★★★★★	★★★★★	★★★★	★★★★★	★★★★★
BÖHLER K497 MICROCLEAN®	★★★★★	★★★★★	★★★	★★★★★	★★★★★
BÖHLER K888 MATRIX	★★★★	★★★★★	★★★★★	★★	★★
BÖHLER K890 MICROCLEAN®	★★★★	★★★★★	★★★★★	★★★	★★★

Leveringsconditie

gegloeid

Hardheid (HB)	max. 280
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Warmtebehandeling

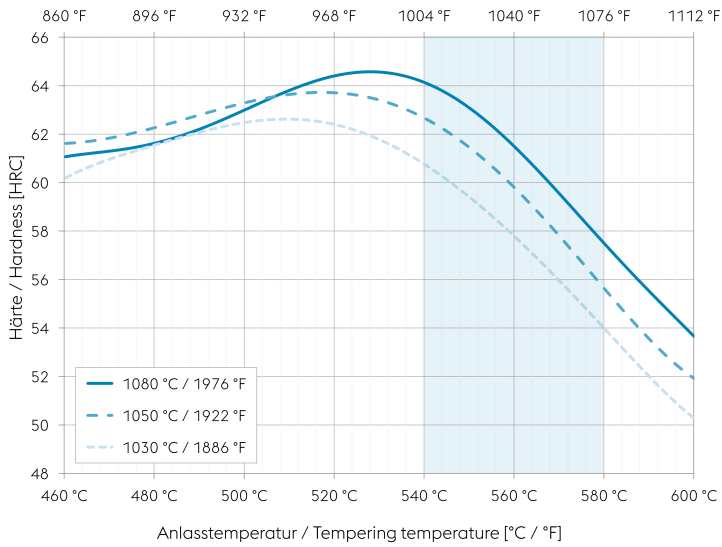
Stress relieving

Temperatuur	650 naar 700 °C	After through-heating, soak for 1 to 2 hours in a neutral atmosphere. Cool slowly in furnace.
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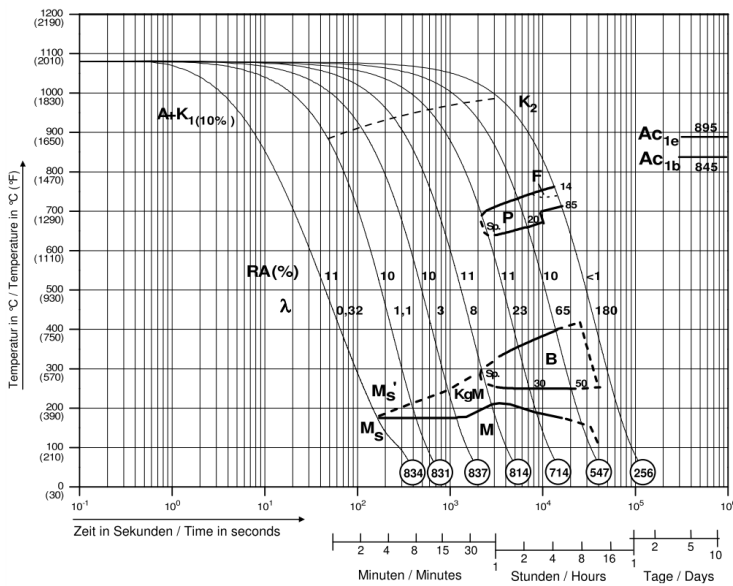
Harden en ontlaten

Temperatuur	1.030 naar 1.080 °C	Oil, N. Following temperature equalisation: 20 - 30 minutes for a hardening temperature of 1030 - 1080 °C (1885 - 1980 °F). After hardening, tempering to the desired working hardness, see tempering chart.
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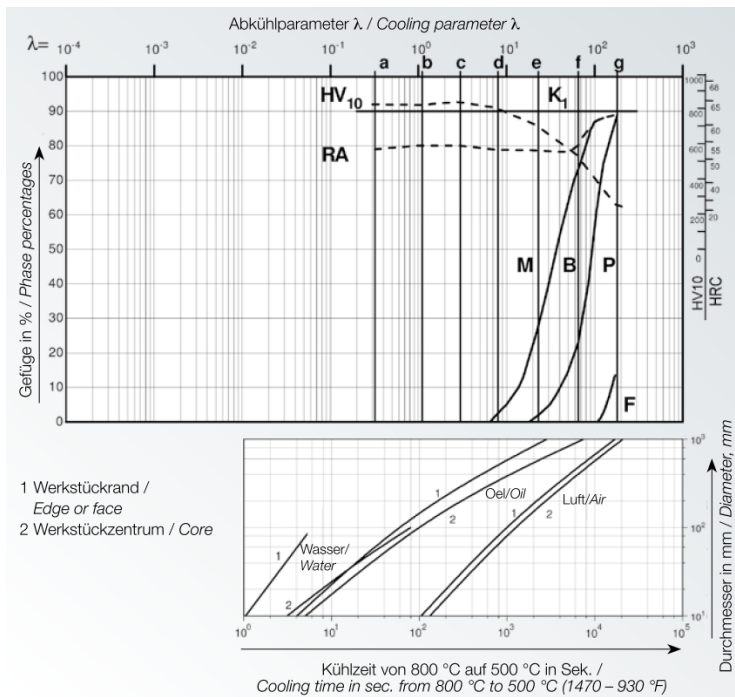
Tempering chart



Continuous cooling CCT curves



Quantitative phase diagram



Fysische eigenschappen

Temperatuur (°C)	20
Soortelijk gewicht (kg/dm ³)	7,79
Thermische conductiviteit (W/(m.K))	19,6
Soortelijke warmte (kJ/kg K)	0,45
Specifieke elektrische weerstand (Ohm.mm ² /m)	0,55
Elasticiteitsmodus (10 ³ N/mm ²)	223

Thermische expansie

Temperatuur (°C)	100	200	300	400	500	600	700
Thermische expansie (10 ⁻⁶ m/(m.K))	10,6	11,1	11,6	11,9	12,3	12,6	12,8

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

Open Die Forgings: Product Variant may differ in terms of melting process, technical data, delivery, and surface condition as well as available product dimensions. Please contact the business unit Open Die Forgings of voestalpine BÖHLER Edelstahl GmbH & Co KG.

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ONE STEP AHEAD.