

# TOOL STEELS

## HARDENABLE CORROSION RESISTANT STEEL

### Application Segments

Plastic Mould

Cold Work

### Beschikbare uitvoeringen

Stafstaal

### Product omschrijving

Geharde gereedschappen met hoge snijcapaciteit, zoals bijvoorbeeld meslemmeten, snijdende chirurgische instrumenten, cirkelmessen voor de vleesindustrie, weegschaalmessen en -pannen

### Eigenschappen

- > Taaiheid & Vervormbaarheid : goed
- > Slijtageweerstand : zeer hoog
- > Bewerkbaarheid : goed
- > Dimensionale stabiliteit : goed
- > Polijstbaarheid : goed
- > Corrosiebestendigheid : hoog

### Toepassingen

- > Verpakking
- > Foodindustry like extrusion screws, can closing rolls
- > Screws for plastic injection and back flow valves
- > Cutting-typical instruments and knives
- > Moulds for plastic injection (PIM)
- > Pharmaceutical industry like pill punches and -dies
- > Extrusion screws for plastic processing
- > PIM and screws for processing of GF-reinforced plastics
- > Hot-runners (nl)

### Technische gegevens

Materiaal aanduiding	
1.4528	SEL
X105CrCoMo18-2	EN

### Chemische samenstelling

C	Si	Mn	Cr	Mo	V	Co
1,08	0,4	0,4	17,3	1,1	0,1	1,5

## Leveringsconditie

### gegloeid

Hardheid (HB)	max. 285
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## Warmtebehandeling

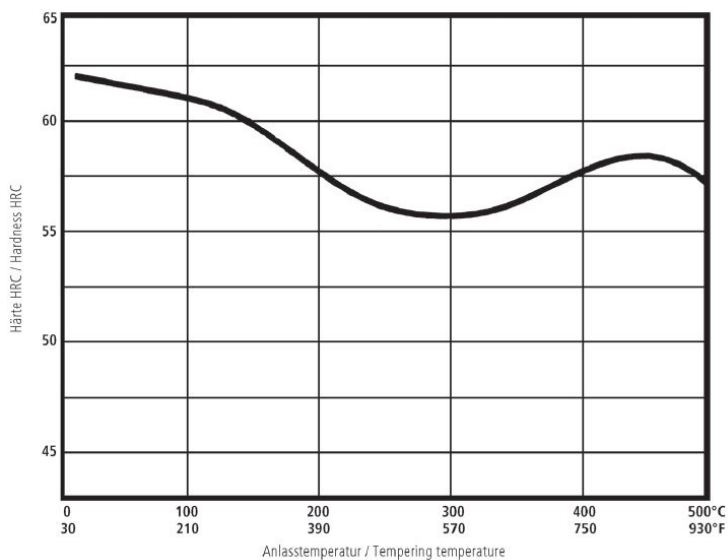
### Stress relieving

Temperatuur	650 °C	After warming up completely, keep at temperature for 1 to 2 hours in a neutral atmosphere. Slow furnace cooling
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### Harden en ontlaten

Temperatuur	1.000 naar 1.060 °C	Holding time after complete soaking, max. 30 minutes / 25 mm cross section.
Temperatuur	150 naar 350 °C	Tempering treatment required after hardening to the desired working hardness - see tempering chart. Tempering of min. 2h after complete soaking. Tempering shall be made immediately after hardening. After each tempering a cooling RT shall be done.

## Tempering chart



Hardening temperature: 1030°C / 1886°F

Tempering: 2x2h

Sample cross-section: Square 20mm

Hardness up to 59-61 HRC

## Fysische eigenschappen

Temperatuur (°C)	20
Soortelijk gewicht (kg/dm <sup>3</sup> )	7,7
Thermische conductiviteit (W/(m.K))	15
Soortelijke warmte (kJ/kg K)	0,43
Specifieke elektrische weerstand (Ohm.mm <sup>2</sup> /m)	0,8
Elasticiteitsmodus (10 <sup>3</sup> N/mm <sup>2</sup> )	223

## Thermische expansie

Temperatuur (°C)	100	200	300	400	500
Thermische expansie (10 <sup>-6</sup> m/(m.K))	10,4	10,8	11,2	11,6	11,9

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

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