

# PLASTIC MOULD STEELS

## HARDENABLE CORROSION RESISTANT STEEL

### Dostupne varijante proizvoda

Šipkasti proizvodi\*

Ploče

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

### Opis proizvoda

Za povećanje produktivnosti u visokotehnološkoj proizvodnji kalupa neophodna je uporaba odgovarajućih čelika za kalupe čija su svojstva optimizirana za konkretnu namjenu. Sljedeća svojstva imaju presudni značaj: Otpornost na trošenje, otpornost na koroziju, žilavost, pogodnost za obradu jetkanjem i za poliranje. Optimalna kombinacija svojstava prikladna za konkretnu namjenu postiže se preciznim prilagođavanjem postupka toplinske obrade. BÖHLER M340 ISOPLAST vam pruža pomenute pogodnosti.

### Put taljenja

Airmelted + Remelted

### Karakteristike

- > Žilavost i duktilnost : dobar
- > Otpornost na habanje : visok
- > Obradivost : dobar
- > Dimenzionalna stabilnost : vrlo visoka
- > Mogućnost poliranja : dobar
- > Otpornost na koroziju : visok
- > Mikro čistoća : visok

### Korištenje

- > Sklopovi za prehrambenu industriju i hranu za životinje
- > Istiskivanje plastike
- > Medicinski
- > Components for Displays
- > Oblikovanje utiskivanjem praškastih materijala
- > Prehrambena industrija
- > Vijci i cijevi
- > Camera lenses
- > Prilagođeni ručni noževi
- > Pill punching dies
- > Lijevanje ubrizgavanjem
- > Standardni dijelovi (kalupi, ploče, klinovi, probijači)
- > Pakiranje
- > Elektronička industrija
- > Glasfibre reinforced plastics

### Kemijski sastav

C	Si	Mn	Cr	Mo	V	N
0,54	0,45	0,4	17,3	1,1	0,1	+

## Materijal

	Otpornost na koroziju	Obrađivost u stanju isporuke	Poliranje	Žilavost	Otpornost na habanje
<b>BÖHLER M340</b> <b>ISOPLAST®</b>	★★★	★★★	★★	★★	★★★
<b>BÖHLER M310</b> <b>ISOPLAST®</b>	★★★★	★★★★	★★	★★	★★
<b>BÖHLER M333</b> <b>ISOPLAST®</b>	★★★★★	★★★★★	★★★★★	★★★★★	★★
<b>BÖHLER M368</b> <b>MICROCLEAN®</b>	★★★★	★★★	★★★★	★★★	★★★
<b>BÖHLER M390</b> <b>MICROCLEAN®</b>	★★	★	★★★	★★	★★★★
<b>BÖHLER M398</b> <b>MICROCLEAN®</b>	★★	★	★★★	★★	★★★★★
<b>BÖHLER M380</b> <b>ISOPLAST®</b>	★★★★★	★★★★★	★★★★★	★★★★★	★★★

## Isporka

### Soft annealed

Tvrdoća (HB)	max. 260
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## Toplinska obrada

### Stress relieving

Temperatura	650 °C	After temperature equalization, soak for 1 to 2 hours in neutral atmosphere. Slow cooling in furnace. After hardening and tempering, stress relieving has to be performed 50°C (90°F) below last tempering temperature.
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### Hardening and Tempering

Temperatura	980 do 1.000 °C	For hardening hold at temperature for 15 to 30 min. An optional sub-zero treatment at -80°C/-112°F can be applied after hardening. For highest corrosion resistance, temper once for a minimum of 2h at 250-350°C/482-662°F. For best wear resistance, temper twice for a minimum of 2h at 505-520°C/941-968°F (without sub-zero treatment) or 490-505°C/914-941°F (with sub-zero treatment). After each heat treatment step, material should be cooled down to approx. 30°C!
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## Fizička svojstva

Temperatura (°C)	<b>20</b>
Gustoća (kg/dm <sup>3</sup> )	7,67
Toplinska vodljivost (W/(m.K))	18,2
Specifični toplinski kapacitet (kJ/kg K)	0,46
Spec. Otpornik (Ohm.mm <sup>2</sup> /m)	-
Modul elastičnosti (10 <sup>3</sup> N/mm <sup>2</sup> )	219

## Toplinska ekspanzija

Temperatura (°C)	100	200	300	400	500
Toplinska ekspanzija (10 <sup>-6</sup> m/(m.K))	10,88	10,78	11,21	11,61	11,9

**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.

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