

HARDENABLE CORROSION RESISTANT STEELS

Available Product Shapes

[Long Products](#)[Plates](#)

Product Description

BÖHLER M368 MICROCLEAN is a martensitic chromium steel produced with powder metallurgy. Due to its alloying concept, this steel offers high wear resistance, high toughness and high corrosion resistance – the perfect combination for best application properties.

Properties

- High toughness & ductility
- High wear resistance
- Good machinability
- Very good dimensional stability
- Mirror finish polishability
- Very high corrosion resistance
- Very high micro-cleanliness

Applications

- > Comps. for Food processing and Animal Feed
- > Plastic Extrusion
- > Medical
- > Components for Displays
- > Powder Pressing
- > Food processing Industry
- > Screws and Barrels
- > Camera lenses
- > Custom Hand Knives
- > Pill punching dies
- > Injection Molding
- > Standard Parts (Molds, Plates, Pins, Punches)
- > Packaging
- > Electronic Industry

Chemical composition (wt. %)

C	Si	Mn	Cr	Mo	V	N
0.54	0.45	0.4	17.3	1.1	0.1	+

Material characteristics

	Corrosion resistance	Machinability in as supplied condition	Polishability	Toughness	Wear resistance
BÖHLER M368 MICROCLEAR®	★★★★	★★★	★★★★	★★★	★★★
BÖHLER M310 ISOPLAST®	★★★★	★★★★	★★	★★	★★
BÖHLER M333 ISOPLAST®	★★★★★	★★★★	★★★★★	★★★★★	★★
BÖHLER M340 ISOPLAST®	★★★	★★★	★★	★★	★★★
BÖHLER M390 MICROCLEAR®	★★	★	★★★	★★	★★★★
BÖHLER M398 MICROCLEAR®	★★	★	★★★	★★	★★★★★
BÖHLER M380 ISOPLAST®	★★★★★	★★★★	★★★★★	★★★★	★★★

Delivery condition

Soft annealed

Hardness	max. 280 HB
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Heat treatment

Hardening and Tempering

Temperature (°C °F)	980 1796 to 1000 1832	After through-heating, hold for 15 to 30 minutes. Quenching medium: N ₂ . For big moulds we recommend a low hardening temperature of 980 °C (1796 °F) and a high tempering temperature from 505 °C to 520 °C (941 - 968 °F).
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Physical Properties

Temperature (°C °F)	20 68
Density (kg/dm ³ lb/in ³)	7.7 0.28
Thermal conductivity (W/(m.K) BTU (IT) ft/hr/ft ² /F)	22.3 12.88
Specific heat (J/(kg.K) BTU (IT) lb/F)	460 109.87
Spec. electrical resistance (Ohm.mm ² /m 10 ⁻⁴ Ohm.inch ² /ft)	-
Modulus of elasticity (10 ³ N/mm ² 10 ³ ksi)	219 31.76

Thermal Expansions

Temperature (°C °F)	100 212	200 392	300 572	400 752	500 932
Thermal expansion (10 ⁻⁶ m/(m.K) 10 ⁻⁶ inch/(inch.F))	10.3 5.722	10.82 6.011	11.2 6.222	11.56 6.422	11.87 6.594

For more information see www.voestalpine.com/boehler-edelstahl

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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