

PLASTIC MOULD STEELS

PREHARDENED CORROSION RESISTANT STEEL

Application Segments

Mucegai din plastic

Available Product Variants

Long Products*

Plates

* Datele prezentate se referă exclusiv la produsele lungi. Vă rugăm să respectați explicațiile detaliate de la sfârșitul fișei tehnice (pdf).

Product Description

BÖHLER M315 is a prehardened, corrosion-resistant martensitic plastic mold steel. Due to its chemical composition, BÖHLER M315 has improved machinability compared to 1.2085 and is approved for food contact.

Process Melting

Aer topit

Properties

- > Rezistență și ductilitate : good
- > Rezistență la uzură : good
- > Machinability : very high
- > Stabilitatea dimensională : good
- > Rezistență la coroziune : good
- > No heat treatment necessary
- > Prehardened

Applications

- > Turnare prin suflare
- > Industria ambalajelor
- > Componente pentru prelucrarea alimentelor și hrana animalelor
- > Mineral Processing
- > Industria electronică
- > Vytlačanie plastov
- > Piese standard (matrițe, plăci, pini, perforatoare)
- > Pumping
- > Turnare prin injecție
- > Sisteme Hotrunner
- > Suporturi de scule (frezare, găurire, strunjire și mandrine)
- > Wear Applications

Technical data

Material designation	
~1.2099	SEL

Chemical composition (wt. %)

C	Si	Mn	S	Cr	Ni
0.05	0.4	0.9	0.12	12.5	+

Delivery condition

Durificat și temperat

Hardness (HB)	290 to 330 If necessary the steel can be supplied with a hardness of up to 350 HB (~ Rm = 1200 MPa / 174 ksi).
---------------	--

Heat treatment

Eliminarea stresului

Temperature	max. 470 °C	Prehardened material: When stress-relieving the material after processing, keep the material at temperature in a neutral atmosphere for at least 2 hours after complete heating, then slowly cool the oven at 20°C [68 °F]/hour to 200°C [392 °F], then cool in air.
Temperature		Newly hardened and tempered material: Carry out the stress relief tempering treatment at approx. 50°C [122 °F] below the tempering temperature. After complete heating, hold at temperature for 1 to 2 hours in a neutral atmosphere, then slowly cool down the furnace.

Physical Properties

Temperature (°C)	20
Density (kg/dm ³)	7.72
Thermal conductivity (W/(m.K))	23.9
Specific heat (kJ/kg K)	0.462
Spec. electrical resistance (Ohm.mm ² /m)	-
Modulus of elasticity (10 ³ N/mm ²)	215

Thermal Expansions between 20°C | 68°F and ...

Temperature (°C)	100	200	300	400	500
Thermal expansion (10 ⁻⁶ m/(m.K))	10.3	10.7	11.1	11.6	12

If other available product variants are listed in addition to long products, please note that these may differ in terms of melting process, technical data, delivery and surface condition as well as available product dimensions. For mandatory technical specifications, other requirements and dimensions, please contact our regional voestalpine BÖHLER sales companies. 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.

voestalpine BÖHLER Edelstahl GmbH & Co KG

Mariazeller Straße 25
8605 Kapfenberg, AT
T. +43/50304/20-0
E. info@bohler-edelstahl.at
<https://www.voestalpine.com/bohler-edelstahl/de/>