

# HEAT TREATABLE CORROSION RESISTANT STEELS

## Available Product Shapes

- Long Products
- Plates

## Product Description

BÖHLER M315 is a corrosion resistant mould frame / bolster steel with a significantly improved machinability.

## Properties

- Good toughness & ductility
- High wear resistance
- Very good machinability
- Good dimensional stability
- Good corrosion resistance
- No heat treatment necessary
- Pre-paid

## Applications

- > Blow Molding
- > Electronic Industry
- > General Components for Mechanical Engineering
- > Injection Molding
- > Packaging
- > Plastic Extrusion
- > Hotrunner systems

## Chemical composition

C	Si	Mn	S	Cr	Ni
0.05	0.40	0.90	0.12	12.50	+

## Material characteristics

	Corrosion resistance	Machinability in as supplied condition	Polishability	Toughness	Wear resistance
<b>BÖHLER M315</b>	★★	★★★★★	★	★★	★★
<b>BÖHLER M300</b>	★★★★	★★★	★★	★★★	★★★
<b>BÖHLER M303</b>	★★★★	★★★	★★★★★	★★★★★	★★★
<b>BÖHLER M303 HIGH HARD</b>	★★★	★★	★★★★★	★★★	★★★★★
<b>BÖHLER M314</b>	★★	★★★★	★	★★	★★

## Delivery condition

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

## Heat treatment

Hardening and Tempering	
Temperature (°C / °F)	1050 / 1922   After through-heating, hold for 30 minutes. Quenching medium: oil, N <sub>2</sub> . Tempering time: at least 2x2 hours

## Physical Properties at 20°C / 68°F

Density	7.72 / 0.28	[kg/dm <sup>3</sup> / lb/in <sup>3</sup> ]
Thermal conductivity	23.9 / 13.81	[W/(m.K) / BTU (IT) ft/hr/ft <sup>2</sup> /F]
Specific heat	462 / 110.35	[J/(kg.K) / BTU (IT) lb/F]
Modulus of elasticity	215 / 31.18	[10 <sup>3</sup> N/mm <sup>2</sup> / 10 <sup>3</sup> ksi]

## Thermal Expansions

Temperature (°C / °F)	100 / 212	200 / 392	300 / 572	400 / 752	500 / 932
Thermal expansion (10 <sup>-6</sup> m/(m.K) / 10 <sup>-6</sup> inch/(inch.F))	10.25 / 5.694	10.72 / 5.956	11.14 / 6.189	11.58 / 6.433	12.02 / 6.678

For more information see [www.voestalpine.com/boehler-edelstahl](http://www.voestalpine.com/boehler-edelstahl)

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ONE STEP AHEAD.