

PLASTIC MOULD STEELS

PREHARDENED STEEL

Available Product Variants

Long Products*

Plates**

* test 123344

** test 123344

Product Description

BÖHLER M238 is a hardened and tempered, not corrosion resistant plastic mould steel. Because of the Ni-addition, there is no hardness decrease in the center of large sizes (up to 600 mm). A special melting technology offers good machinability.

Process Melting

Airmelted

Properties

- > Toughness & Ductility: very high
- > Wear Resistance: high
- > Machinability: good
- > Dimensional stability: good
- > Polishability: very high
- > No heat treatment necessary:
- > Prehardened:

Applications

- > Injection Molding
- > General Components for Mechanical Engineering
- > Standard Parts (Molds, Plates, Pins, Punches)
- > Lamps/Lenses for Automotive
- > Tool Holders (milling, drilling, turning & chucks)
- > Hotrunner systems

Technical data

Material designation		Standards	
1.2738	SEL	4957	EN ISO
40CrMnNiMo8-6-4	EN		

Chemical composition (wt. %)

C	Si	Mn	Cr	Mo	Ni
0.38	0.3	1.5	2	0.2	1.1

Delivery condition

Hardened and Tempered	
Hardness (HB)	355 to 395

Heat treatment

Stress relieving		
Temperature	500 °C 932 °F	In hardened and tempered condition approx. 30 to 50 °C (86 to 122 °F) below the tempering temperature / after through heating. Hold at temperature in neutral atmosphere for 1 to 2 hours. Slow cooling in furnace

Physical Properties

Temperature (°C °F)	20 68
Density (kg/dm ³ lb/in ³)	7.81 0.28
Thermal conductivity (W/(m.K) BTU (IT) ft/hr/ft ² /F)	35.2 20.34
Specific heat (J/(kg.K) BTU (IT) lb/F)	465 111.06
Spec. electrical resistance (Ohm.mm ² /m 10 ⁻⁴ Ohm.inch ² /ft)	-
Modulus of elasticity (10 ³ N/mm ² 10 ³ ksi)	212 30.75

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

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))	11.88 6.6	12.44 6.9	13 7.2	13.45 7.5	13.85 7.7

For more information see <https://www.voestalpine.com/boehler-edelstahl/de/>

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