

PLASTIC MOULD STEELS - HEAT TREATABLE STEELS AND PRECIPITATION HARDENING STEELS

Available Product Shapes

- Long Products
- Plates

Properties

- High toughness & ductility
- Good wear resistance
- Good machinability
- Good dimensional stability
- Very good polishability

Applications

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

Chemical composition

C	Si	Mn	Cr	Ni	Cu	Al
0.13	0.30	2.00	0.35	3.50	1.20	1.20

Material characteristics

	Etchability	Machinability in as supplied condition	Polishability	Through hardenability	Toughness	Wear resistance
	★★★	★★★	★★★	★★★	★★★	★★★
	★	★★★★★	★★	★	★★	★★
	★★	★★★	★★★	★★★★	★★★★	★★
	★★★★	★★	★★★★	★★★★	★★★	★★★★
	★★★★★	★★	★★★★★	★★★★	★★★★★	★★★★★
	★★	★★★★	★★	★★★	★★	★★★

Delivery condition

Solution annealed + precipitation hardened

Hardness	350 - 390 HB
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Heat treatment

Precipitation hardening

Temperature (°C / °F)	For temperatures see Age hardening chart.
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Physical Properties at 20°C / 68°F

Density	7.76 / 0.28	[kg/dm ³ / lb/in ³]
Thermal conductivity	29 / 16.76	[W/(m.K) / BTU (IT) ft/hr/ft ² /F]
Specific heat	465 / 111.06	[J/(kg.K) / BTU (IT) lb/F]
Modulus of elasticity	205 / 29.73	[10 ³ N/mm ² / 10 ³ ksi]

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))	12.5 / 6.944	13 / 7.222	13.43 / 7.461	13.84 / 7.689	14.21 / 7.894

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

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ONE STEP AHEAD.