

PLASTIC MOULD STEELS

PRECIPITATION HARDENED STEEL

Available Product Variants

Long Products*

Plates

*) Presented data refer exclusively to long products. Please observe the detailed explanations at the end of the data sheet (pdf).

Product Description

BÖHLER M261 is a precipitation-hardening steel grade for plastic moulds, featuring excellent machinability in the as-supplied, i.e. solution annealed and aged, condition. There is no need for an additional heat treatment, significantly shortening the workload time.

Process Melting

Airmelted

Properties

- > Toughness & Ductility : good
- > Wear Resistance : high
- > Machinability : very high
- > Polishability : good
- > Dimensional stability : good

Applications

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

Technical data

Material designation	
X13NiCuAlS4-1-1	EN
X13NiCuAl4-1-1	

Chemical composition (wt. %)

C	Si	Mn	S	Cr	Ni	Cu	Al
0.13	0.3	2	0.15	0.35	3.5	1.2	1.2

Delivery condition

Solution annealed + precipitation hardened

Hardness (HB)	340 to 390
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Physical Properties

Temperature (°C °F)	20 68
Density (kg/dm ³ lb/in ³)	7.73 0.28
Thermal conductivity (W/(m.K) BTU/ft h °F)	29 16.76
Specific heat (kJ/kg K BTU/lb °F)	0.465 0.1111
Spec. electrical resistance (Ohm.mm ² /m 10 ⁻⁴ Ohm.inch ² /ft)	0.37 1.75
Modulus of elasticity (10 ³ N/mm ² 10 ³ ksi)	204 29.59

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)	12.63 7	13.06 7.3	13.5 7.5	13.89 7.7	14.27 7.9

Long Products: For additional specifications and technical requirements, please contact our regional voestalpine BÖHLER sales companies.

Sheet & Plates: Product Variant may differ in terms of melting process, technical data, delivery, and surface condition as well as available product dimensions. Please contact voestalpine BÖHLER Bleche GmbH & Co KG.

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.