

PLASTIC MOULD STEELS

HARDENABLE CORROSION RESISTANT STEEL

Formatos disponibles

Productos largos*

Chapas

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

Descripción

BÖHLER M398 MICROCLEAN is a martensitic chromium steel produced with powder metallurgy. Due to its alloying concept this steel offers extremely high wear resistance and high corrosion resistance – the perfect combination for highly wear-resistant tools.

Método de obtención

Pulvimetalurgia

Propiedades

- > Dureza y Ductilidad : buena
- > Resistencia al desgaste : muy alta
- > Maquinabilidad : buena
- > Estabilidad dimensional : muy alta
- > Pulibilidad : muy alta
- > Resistencia a la corrosión : buena
- > Micro-limpieza : muy alta

Aplicaciones

- > Componentes para el procesamiento de alimentos y piensos
- > Cizallas / Cuchillas
- > Industria de procesamiento de alimentos
- > Extrusión de plástico
- > Moldeo por inyección
- > Cuchillas de mano personalizadas
- > Industria médica
- > Compactación de polvo
- > Tornillos y cilindros
- > Industria electrónica
- > Embalaje

Composición Química

C	Si	Mn	Cr	Mo	V	W
2,7	0,5	0,5	20	1	7,2	0,7

Estado de suministro

Soft annealed

Dureza (HB) | máx. 330

Tratamiento térmico

Alivio de tensiones		
Temperatura	650 °C	After through-heating, soak for 4 hours in a neutral atmosphere. Furnace cooling down to 300 °C (570 °F), followed by air. After hardening and tempering, stress relieving has to be performed 50°C (90°F) below last tempering temperature.

Temple y revenido		
Temperatura	1.120 a 1.180 °C	For hardening hold at temperature for 20 to 30 min (for hardening temperature 1180°C/ 2156°F 5-10 min). An optional sub-zero treatment at -80°C/-112°F can be applied after hardening. For highest corrosion resistance, temper once for a minimum of 2h at 200-300°C/ 392-572°F. For best wear resistance, temper twice for a minimum of 2h at 540-560°C/ 1004-1040°F (without sub-zero treatment) or 510-530°C/950-986°F (with sub-zero treatment). After each heat treatment step, material should be cooled down to approx. 30°C!

Propiedades físicas

Temperatura (°C)	20
Densidad (kg/dm ³)	7,46
Conductividad térmica (W/(m.K))	15,2
Calor específico (kJ/kg K)	0,49
Resistencia eléctrica específica (Ohm.mm ² /m)	-
Módulo de elasticidad (10 ³ N/mm ²)	231

Expansión térmica

Temperatura (°C)	100	200	300	400	500
Expansión térmica (10 ⁻⁶ m/(m.K))	10,4	10,6	10,9	11,2	11,5

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.

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