

HIGH SPEED STEELS

Application Segments

Cutting Tools

Available Product Variants

Long Products

Product Description

Sustainable Performance – "our resource efficient material solutions deliver the highest efficiency and help create a more sustainable tomorrow, today!"

BÖHLER MC90SP – The new cutting class with a small footprint. Powerful. Sustainable. Future-oriented. BÖHLER MC90SP is the revolutionary cutting material for the highest demands in the gear manufacturing industry. With its innovative alloy composition and hardenability up to 68 HRC, it sets new standards – in areas where only carbide was used before.

Thanks to resource-efficient production and longer tool life, it actively contributes to reducing the ecological footprint.

Process Melting

Powder metallurgy

Properties

- > Toughness & Ductility : good
- > Wear Resistance : very high
- > Compressive strength : good
- > Edge Stability : very high
- > Grindability : high
- > Hot Hardness (red hardness) : very high

Applications

- > Gear Cutting, Shaving and Shaping Tools

Chemical composition (wt. %)

C	Mo	Co
0.06	15	25

Delivery condition

Annealed

Hardness (HRC)	42 to 45
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Heat treatment

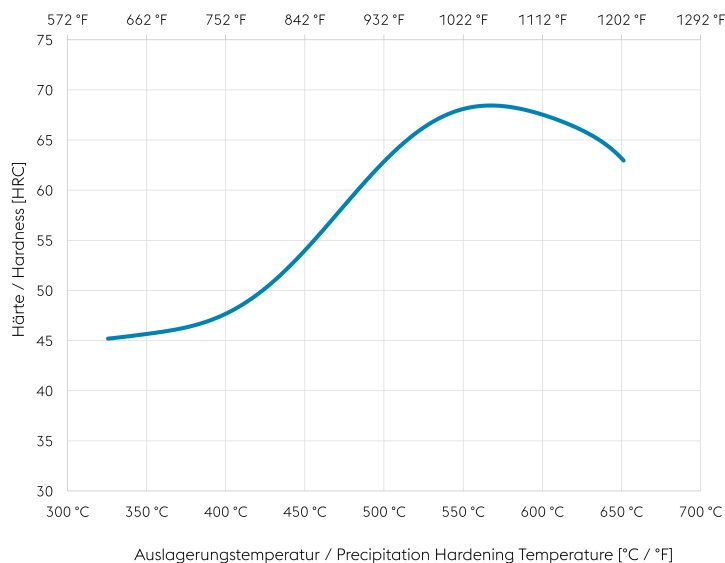
Solution annealing

Temperature	1,180 to 1,190 °C	Using normal preheating and holding times for high speed steels. Quenching Oil or nitrogen atmosphere.
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Precipitation hardening

Temperature	590 to 630 °C	Single precipitation hardening for three hours
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Tempering Chart



Solution annealing: 1190°C (2174°F)

Physical Properties

Temperature (°C)	20
Density (kg/dm ³)	8.2
Thermal conductivity (W/(m.K))	21.8
Specific heat (kJ/kg K)	0.386
Spec. electrical resistance (Ohm.mm ² /m)	0.47
Modulus of elasticity (10 ³ N/mm ²)	223

If other available product variants are listed in addition to long products, please note that these may differ in terms of melting process, technical data, delivery and surface condition as well as available product dimensions. For mandatory technical specifications, other requirements and dimensions, please contact our regional voestalpine BÖHLER sales companies. 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.

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ONE STEP AHEAD.