HIGH SPEED STEELS

Application Segments

Cutting Tools

Available Product Variants

Long Products

Product Description

BÖHLER MC90 INTERMET is the revolutionary cutting material supporting enhanced requirements for improved productivity and highest quality in the gear cutting industry. Its unique alloying composition and properties build the basis for the next generation of tools competing in spheres, where up to now only cemented carbide was applied. Hardenability up to 68 HRC.

Process Melting

Powder metallurgy

Properties

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

Applications

- Gear Cutting, Shaving and Shaping Tools

Chemical composition (wt. %)

C	Mo	Co
0.06	15	25

Material characteristics

	Compressive strength	Grindability	Red hardness	Toughness	Wear resistance	Edge Stability
BÖHLER MC90 INTERMET	★★★★	★★	★★★★	★★	★★★★★	★★★★★

Delivery condition

Annealed

Hardness (HRC)	42 to 45

Heat treatment

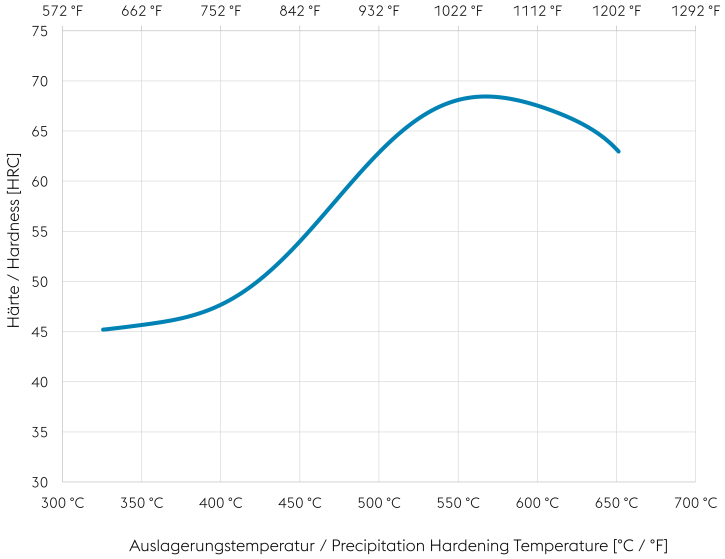
Solution annealing

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

Precipitation hardening

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

Tempering Chart



Solution annealing: 1190°C (2174°F)

Physical Properties

Temperature (°C)	**20**
Density (kg/dm³)	8.2
Thermal conductivity (W/(m.K))	21.8
Specific heat (kJ/kg K)	0.386
Spec. electrical resistance (Ohm.mm²/m)	0.47
Modulus of elasticity (10³N/mm²)	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.