

COLD WORK STEELS

Available Product Shapes

Round Bar

Product Description

Just as mountaineers need the best equipment to conquer the highest peaks, it's essential to use the best materials for your tooling to ensure trouble-free production and achieve outstanding tool life.

Three reasons why BÖHLER K390 MICROCLEAN is highly cost effective:

Extremely high wear resistance, excellent toughness and very high compressive strength. The high-performance powder-metallurgy steel BÖHLER K390 MICROCLEAN is a reliable solution for your difficult cutting, die-cutting and cold forming operations, and it has a very good track record for applications in the plastics industry.

Properties

Benefits for tool & die production in comparison to 10V PM

- Good machinability because of uniform mechanical properties
- Excellent grindability even with deep engraving in the tool & die centre
- Uniform low dimensional change during heat treatment
- Non sensitive against overheating or long soak times
- Optimal EDM characteristic due to uniform carbide distribution

Benefits for tool & die use

- Low unit cost due to longer service life
- Safety against failure and cutting-edge fractures

Chemical composition

C	Si	Mn	Cr	Mo	V	W	Co
2.47	0.55	0.40	4.20	3.80	9.00	1.00	2.00

Material characteristics

	Compressive strength	Dimensional stability during heat treatment	Toughness	Wear resistance abrasive	Wear resistance adhesive
BÖHLER K390 MICROCLEAR®	★★★★★	★★★★★	★★★★	★★★★★	★★★★★
BÖHLER K100	★★	★★	★	★★★	★★
BÖHLER K105	★★	★★	★	★★	★★
BÖHLER K107	★★	★★	★	★★★	★★
BÖHLER K110	★★	★★★	★	★★★	★★
BÖHLER K190 MICROCLEAR®	★★★★	★★★★★	★★★★	★★★★	★★★★
BÖHLER K294 MICROCLEAR®	★★★★★	★★★★★	★★★	★★★★★	★★★★★
BÖHLER K340 ISODUR®	★★★	★★★★	★★★	★★★	★★★★
BÖHLER K340 ECOSTAR®	★★★	★★★	★★	★★	★★
BÖHLER K360 ISODUR®	★★★	★★★★	★★★	★★★★	★★★★
BÖHLER K346	★★★	★★★	★★★	★★★★	★★
BÖHLER K353	★★	★★★	★★	★★	★★
BÖHLER K890 MICROCLEAR®	★★★★	★★★★★	★★★★★	★★★	★★★
BÖHLER K490 MICROCLEAR®	★★★★	★★★★★	★★★★	★★★★	★★★★
BÖHLER K497 MICROCLEAR®	★★★★★	★★★★★	★★★	★★★★★	★★★★★

Physical Properties at 20°C / 68°F

Thermal Expansions

Temperature (°C / °F)	100 / 212	200 / 392	300 / 572	400 / 752	500 / 932	600 / 1112
Thermal expansion (10 ⁻⁶ m/(m.K) / 10 ⁻⁶ inch/(inch.F))	10.3 / 5.722	10.67 / 5.928	11.03 / 6.128	11.38 / 6.322	11.7 / 6.5	11.97 / 6.65

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

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ONE STEP AHEAD.