

# COLD WORK STEELS

## Available Product Shapes

Round Bar

## Product Description

Punches and dies for blanking, piercing, cold heading and cold extrusions. Cold forming rolls. Knives for slitting, pelletizing and woodworking. Screws, nozzles and barrel liners for plastics compounding and injection moulding. Powder metal compaction tooling.

## Properties

Powder-metallurgical produced cold work tool steel with extremely high wear resistance, good toughness and high compressive strength.

Material designation	
1.2395	SEL
T30111	UNS
PM A11	AISI

## Chemical composition

C	Si	Mn	Cr	Mo	V
2.45	0.90	0.50	5.20	1.30	9.50

### Material characteristics

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

### Physical Properties at 20°C / 68°F

#### Thermal Expansions

Temperature (°C / °F)	93 / 199.4	260 / 500	427 / 800.6	593 / 1099.4
Thermal expansion (10 <sup>-6</sup> m/(m.K) / 10 <sup>-6</sup> inch/(inch.F))	10.7 / 5.944	11.1 / 6.167	11.8 / 6.556	12.3 / 6.833

For more information see [www.voestalpine.com/boehler-edelstahl](http://www.voestalpine.com/boehler-edelstahl)

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ONE STEP AHEAD.