

# HIGH SPEED STEELS

## Available Product Shapes

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Plates

## Product Description

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### **BÖHLER S290 MICROCLEAN – "The hard stuff"**

The unusual alloy point of this bridge material between carbide and high-speed steel gives it a hardness of up to 70 HRC. In addition to its hot hardness and good wear resistance, its compressive strength is one of the most important properties of this powder-metallurgical high-speed steel class.

## Properties

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Good Toughness & Ductility

Very high Wear Resistance

Very high Compressive strength

Very high Edge Stability

Good Grindability

Very high Hot Hardness

### Material designation

Patent	SEL
Breveté	

## Chemical composition

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C	Si	Mn	Cr	Mo	V	W	Co
2.00	0.50	0.30	3.80	2.50	5.10	14.30	11.00

### Material characteristics

	Compressive strength	Grindability	Red hardness	Toughness	Wear resistance	Edge Stability
<b>BÖHLER S290</b> MICROCLEAN	★★★★★	★	★★★★★	★★	★★★★★	★★★★★
<b>BÖHLER S200</b>	★★★	★★	★★★	★★	★★★	★★
<b>BÖHLER S390</b> MICROCLEAN	★★★★★	★★★	★★★★★	★★★★★	★★★★★	★★★★★
<b>BÖHLER S400</b>	★★★	★★★	★★★	★★★	★★	★★
<b>BÖHLER S401</b>	★★	★★★	★★	★★★	★★	★★★
<b>BÖHLER S404</b>	★★	★★★	★★	★★★	★★	★★
<b>BÖHLER S500</b>	★★★★★	★★★	★★★★★	★★	★★★	★★★
<b>BÖHLER S590</b> MICROCLEAN	★★★★★	★★★	★★★★★	★★★	★★★	★★★
<b>BÖHLER S600</b>	★★★	★★★	★★★	★★	★★	★★★
<b>BÖHLER S607</b>	★★★	★★★	★★★	★★	★★★	★★★
<b>BÖHLER S690</b> MICROCLEAN	★★★	★★★	★★	★★★★★	★★★	★★
<b>BÖHLER S705</b>	★★★	★★★	★★★★★	★★	★★	★★★★★
<b>BÖHLER S790</b> MICROCLEAN	★★★	★★★	★★	★★★★★	★★	★★★

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

#### Thermal Expansions

Temperature (°C / °F)	100 / 212	200 / 392	300 / 572	500 / 932	600 / 1112	700 / 1292
Thermal expansion (10 <sup>-6</sup> m/(m.K) / 10 <sup>-6</sup> inch/(inch.F))	9.6 / 5.333	10 / 5.556	10.3 / 5.722	10.9 / 6.056	11.2 / 6.222	11.6 / 6.444

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

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ONE STEP AHEAD.