

# HIGH SPEED STEELS

## Available Product Shapes

Long Products

## Product Description

### BÖHLER S404 – "The discounter"

This very economical class is primarily used for spiral drill bits and has a nearly unbeatable ratio of price to performance.

## Properties

- High Toughness & Ductility
- Good Wear Resistance
- Good Compressive strength
- Good Edge Stability
- High Grindability
- Good Hot Hardness

Material designation			Standards		
1.3326	SEL		4957	EN ISO	
HS1-4-2	EN		A600	ASTM	

## Chemical composition

C	Si	Mn	Cr	Mo	V	W
0.89	0.30	0.30	3.80	4.30	1.80	1.00

## Material characteristics

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

## Physical Properties

Temperature (°C / °F)	20 / 68
Density (kg/dm <sup>3</sup> / lb/in <sup>3</sup> )	7.9 / 0.29
Thermal conductivity (W/(m.K) / BTU (IT) ft/hr/ft <sup>2</sup> /F)	460 / 265.78
Specific heat (J/(kg.K) / BTU (IT) lb/F)	19 / 4.54
Spec. electrical resistance (Ohm.mm <sup>2</sup> /m / Ohm.inch <sup>2</sup> /ft)	0.5 / <0.001
Modulus of elasticity (10 <sup>3</sup> N/mm <sup>2</sup> / 10 <sup>3</sup> ksi)	217 / 31.47

## Thermal Expansions

Temperature (°C / °F)	100 / 212	200 / 392	300 / 572	400 / 752	500 / 932	600 / 1112	700 / 1292
Thermal expansion (10 <sup>-6</sup> m/(m.K) / 10 <sup>-6</sup> inch/(inch.F))	11.5 / 6.389	11.7 / 6.5	12.2 / 6.778	12.4 / 6.889	12.7 / 7.056	13 / 7.222	13 / 7.222

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

voestalpine BÖHLER Edelstahl GmbH & Co KG

Mariazeller Straße 25

8605 Kapfenberg, AT

T. +43/50304/20-0

E. [info@boehler-edelstahl.at](mailto:info@boehler-edelstahl.at)

[www.voestalpine.com/boehler-edelstahl](http://www.voestalpine.com/boehler-edelstahl)

voestalpine

ONE STEP AHEAD.