

HIGH SPEED STEELS

Available Product Shapes

Plates

Product Description

BÖHLER S590 MICROCLEAN – "The expert"

High-speed steel manufactured in a power metallurgy process, with good hot hardness, compressive strength, and wear resistance. PM technology gives it good toughness and excellent workability, such as the best machinability.

Properties

High Toughness & Ductility

Good Wear Resistance

High Compressive strength

High Edge Stability

High Grindability

High Hot Hardness

Material designation		Standards	
1.3244	SEL	4957	EN ISO
HS6-5-3-8	EN		

Chemical composition

C	Si	Mn	Cr	Mo	V	W	Co
1.29	0.60	0.30	4.20	5.00	3.00	6.30	8.40

Material characteristics

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

Physical Properties

Temperature (°C / °F)	20 / 68
Density (kg/dm ³ / lb/in ³)	8.05 / 0.29
Thermal conductivity (W/(m.K) / BTU (IT) ft/hr/ft ² /F)	22 / 12.71
Specific heat (J/(kg.K) / BTU (IT) lb/F)	420 / 100.32
Spec. electrical resistance (Ohm.mm ² /m / Ohm.inch ² /ft)	0.61 / 0
Modulus of elasticity (10 ³ N/mm ² / 10 ³ ksi)	240 / 34.81

Thermal Expansions

Temperature (°C / °F)	100 / 212	200 / 392	300 / 572	400 / 752	500 / 932	600 / 1112	700 / 1292
Thermal expansion (10 ⁻⁶ m/(m.K) / 10 ⁻⁶ inch/(inch.F))	10 / 5.556	10.5 / 5.833	10.8 / 6	11.2 / 6.222	11.3 / 6.278	11.4 / 6.333	11.6 / 6.444

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

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ONE STEP AHEAD.