

HIGH SPEED STEELS

Available Product Shapes

Round Bar

Product Description

BÖHLER S390 MICROCLEAN – "The decathlete"

This class is our PM steel with many positive usage properties. For spiral drill bits, taps, mills, broaches, or cold-work applications, BÖHLER S390 MICROCLEAN is always a high performer.

Properties

High Toughness & Ductility

High Wear Resistance

Very high Compressive strength

Very high Edge Stability

High Grindability

Very high Hot Hardness

Material designation		Standards	
1.3202	SEL	6557	AMS
~1.3253			
T11409	UNS		

Chemical composition

C	Si	Mn	Cr	Mo	V	W	Co
1.64	0.60	0.30	4.80	2.00	4.80	10.40	8.00

Material characteristics

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

Physical Properties at 20°C / 68°F

Density	8.1 / 0.29	[kg/dm ³ / lb/in ³]
Thermal conductivity	17 / 9.82	[W/(m.K) / BTU (IT) ft/hr/ft ² /F]
Specific heat	420 / 100.32	[J/(kg.K) / BTU (IT) lb/F]
Spec. electrical resistance	0.61 / 0	[Ohm.mm ² /m / Ohm.inch ² /ft]
Modulus of elasticity	231 / 33.5	[10 ³ N/mm ² / 10 ³ ksi]

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.