

## Bohler-Uddeholm BÖHLER S590 MICROCLEAN® High Speed Steel

Category : Metal , Ferrous Metal , Tool Steel

### Material Notes:

Description: High speed steel produced by powder-metallurgy methods with highest red hardness, compressive strength and wear resistance. The PM technology imparts to the material also excellent toughness and machinability properties, e.g.. high satisfactory grindability. Applications: Heavy-duty machining tools-Not only for the machining of steels but also for nonferrous metals such as nickel-base and titanium alloy shaper cutters shobsmilling cutters broaching tools of all type step twist drills chasing tools reamers bimetal strips for saw blades Tools used under extreme compressive stresses-e.g... precision blanking tools for high-strength materials (shaping punches and dies)

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Bohler-Uddeholm-BHLER-S590-MICROCLEAN-High-Speed-Steel.php](http://www.lookpolymers.com/polymer_Bohler-Uddeholm-BHLER-S590-MICROCLEAN-High-Speed-Steel.php)

Physical Properties	Metric	English	Comments
Density	8.05 g/cc	0.291 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Modulus of Elasticity	240 GPa	34800 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	10.0 µm/m-°C	5.56 µin/in-°F	
	@Temperature 100 °C	@Temperature 212 °F	
	10.5 µm/m-°C	5.83 µin/in-°F	
	@Temperature 200 °C	@Temperature 392 °F	
	10.8 µm/m-°C	6.00 µin/in-°F	
	@Temperature 300 °C	@Temperature 572 °F	
	11.2 µm/m-°C	6.22 µin/in-°F	
	@Temperature 400 °C	@Temperature 752 °F	
	11.3 µm/m-°C	6.28 µin/in-°F	
	@Temperature 500 °C	@Temperature 932 °F	
	11.4 µm/m-°C	6.33 µin/in-°F	
	@Temperature 600 °C	@Temperature 1110 °F	
	11.6 µm/m-°C	6.44 µin/in-°F	
	@Temperature 700 °C	@Temperature 1290 °F	
Specific Heat Capacity	0.418 J/g-°C	0.100 BTU/lb-°F	

Thermal Properties	Metric /m-K	English J-in/hr-ft <sup>2</sup> -°F	Comments
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Component Elements Properties	Metric	English	Comments
Carbon, C	1.29 %	1.29 %	
Chromium, Cr	4.2 %	4.2 %	
Cobalt, Co	8.4 %	8.4 %	
Iron, Fe	70.91 %	70.91 %	As remainder
Manganese, Mn	0.30 %	0.30 %	
Molybdenum, Mo	5.0 %	5.0 %	
Silicon, Si	0.60 %	0.60 %	
Tungsten, W	6.3 %	6.3 %	
Vanadium, V	3.0 %	3.0 %	

Electrical Properties	Metric	English	Comments
Electrical Resistivity	0.0000610 ohm-cm	0.0000610 ohm-cm	

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