

Carpenter Micro-Melt® T-15 Alloy (AISI T15)

Category: Metal, Ferrous Metal, Carbon Steel, High Carbon Steel, Tool Steel

Material Notes:

Micro-Melt® T-15 alloy is a high-carbon tungsten-cobalt-vanadium high speed powder metal tool steel possessing excellent abrasion resistance and red hardness. The advantages of Micro-Melt premium powder high speed steels include ease of grinding, response to heat treatment, more uniform structure, greater wear resistance and improved toughness. In addition, Carpenter's unique hot rolling and rotary forging capabilities impart minimal distortion characteristics to these alloys. Applications: Form tools, Lathe tools, Planer tools, Broaches, Milling cutters, Blanking dies, Punches, Drills, Screw machine tools, Cold work toolsInformation provided by Carpenter Technology Corporation. Micro-Melt® is a registered trademark of Carpenter Technology Corporation.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Carpenter-Micro-Melt-T-15-Alloy-AISI-T15.php

Physical Properties	Metric	English	Comments
Specific Gravity	8.19 g/cc	8.19 g/cc	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	46.5	46.5	Tempered at 1275°F
	67.5	67.5	Tempered at 1025°F
Modulus of Elasticity	200 - 207 GPa	29000 - 30000 ksi	
Izod Impact Unnotched	27.1 - 46.1 J	20.0 - 34.0 ft-lb	
Abrasion	8.0	8.0	loss in mm ³ , Tempered at 1025°F; ASTM G65
	32.3	32.3	loss in mm ³ , Tempered at 1275°F; ASTM G65

Thermal Properties	Metric	English	Comments
CTE, linear	9.93 μm/m-°C	5.52 μin/in-°F	
	@Temperature 37.8 - 260 °C	@Temperature 100 - 500 °F	
	11.95 μm/m-°C	6.639 μin/in-°F	
	@Temperature 37.8 - 816 °C	@Temperature 100 - 1500 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	1.5 %	1.5 %	
Chromium, Cr	4.75 %	4.75 %	



Component Elements Properties	5 0 % Metric	English	Comments	
Iron, Fe	70.69 %	70.69 %	As Balance	
Sulfur, S	0.060 %	0.060 %		
Tungsten, W	13 %	13 %		
Vanadium, V	5.0 %	5.0 %		

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