

Carpenter Micro-Melt® 9 Hardened and Tempered Tool Steel

Category : Metal , Ferrous Metal , Tool Steel

Material Notes:

Micro-Melt® 9 tool steel is a high vanadium tool steel produced using the Carpenter Micro-Melt powder process. This grade possesses wear resistance superior to most other tool steels along with good strength and toughness characteristics. In addition, it provides higher toughness characteristics than Micro-Melt® 10 alloy with slightly lower wear resistance. Micro-Melt 9 tool steel changes size only slightly after hardening. An expansion of about 0.0005 inches/inch is typical. Applications: punches, dies for blanking, piercing dies, forming rolls and dies, cold heading, steel mill rolls, cold extrusion, slitter knives, shears, pelletizer blades, nozzles, woodworking tools, cold extrusion barrels, cold extrusion liners, plastic injection molds, compacting tools. Information 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-9-Hardened-and-Tempered-Tool-Steel.php

Physical Properties	Metric	English	Comments
Specific Gravity	7.45 g/cc	7.45 g/cc	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	35.5	35.5	Tempered at 1200°F Austenitized at 1900°F
	62	62	As quenched, Austenitized at 2100°F
Modulus of Elasticity	200 GPa	29000 ksi	

Thermal Properties	Metric	English	Comments
CTE, linear	11.25 µm/m-°C	6.250 µin/in-°F	
	@Temperature 21.0 - 100 °C	@Temperature 69.8 - 212 °F	
	12.2 µm/m-°C	6.78 µin/in-°F	
	@Temperature 21.0 - 649 °C	@Temperature 69.8 - 1200 °F	
	12.96 µm/m-°C	7.200 µin/in-°F	
	@Temperature 260 - 788 °C	@Temperature 500 - 1450 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	1.7 - 1.85 %	1.7 - 1.85 %	
Chromium, Cr	4.75 - 5.75 %	4.75 - 5.75 %	

Iron, Fe Component Elements Properties	79.67 - 79.7 % Metric	79.67 - 79.7 % English	As Balance Comments
Manganese, Mn	0.35 - 0.60 %	0.35 - 0.60 %	
Molybdenum, Mo	1.1 - 1.5 %	1.1 - 1.5 %	
Silicon, Si	0.75 - 1.1 %	0.75 - 1.1 %	
Sulfur, S	<= 0.030 %	<= 0.030 %	
Vanadium, V	8.25 - 9.5 %	8.25 - 9.5 %	

Contact Songhan Plastic Technology Co.,Ltd.

Website : www.lookpolymers.com

Email : sales@lookpolymers.com

Tel : +86 021-51131842

Mobile : +86 13061808058

Skype : lookpolymers

Address : United North Road 215,Fengxian District, Shanghai City,China