

Crucible Steel CPM® 15V® Tool Steel

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

Material Notes:

CPM 15V is intended for applications requiring exceptional wear resistance. It has more vanadium carbides in its microstructure than CPM 10V and provides more wear resistance and longer tool life in those applications where 10V has proven to be successful. CPM 15V also offers an alternative to solid carbide where carbide fails by fracture or where intricate tool design makes carbide difficult or risky to fabricate. The CPM (Crucible Particle Metallurgy) process produces very homogeneous, high quality steel characterized by superior dimensional stability, grindability, and toughness compared to steels produced by conventional processes. Information provided by Crucible Specialty Metals.

Order this product through the following link:

http://www.lookpolymers.com/polymer_Crucible-Steel-CPM-15V-Tool-Steel.php

Physical Properties	Metric	English	Comments
Density	7.25 g/cc	0.262 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	255 - 277	255 - 277	Annealed
Hardness, Rockwell C	61 - 63	61 - 63	
Modulus of Elasticity	235 GPa	34100 ksi	
Charpy Impact	11.0 J	8.11 ft-lb	Austenitizing Temperature- 1175°C
	12.0 J	8.85 ft-lb	Austenitizing Temperature- 1120°C

Thermal Properties	Metric	English	Comments
	10.5 μm/m-°C	5.83 µin/in-°F	
CTE, linear	@Temperature 21.0 - 93.0 °C	@Temperature 69.8 - 199 °F	
	11.1 μm/m-°C	6.17 μin/in-°F	
	@Temperature 21.0 - 260 °C	@Temperature 69.8 - 500 °F	
	12.1 μm/m-°C	6.72 μin/in-°F	
	@Temperature 21.0 - 593 °C	@Temperature 69.8 - 1100 °F	

Component Elements Properties	Metric	English	Comments	
Carbon, C	3.4 %	3.4 %		



Chromium, Cr Component Elements Properties	5.25 % Metric	English	Comments
Iron, Fe	75.55 %	75.55 %	As Remainder
Molybdenum, Mo	1.3 %	1.3 %	
Vanadium, V	14.5 %	14.5 %	

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