

Crucible Steel CPM® REX® 66 (HS) High Speed Steel

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

Material Notes:

CPM Rex 66 is a super high speed steel made by the Crucible Particle Metallurgy (CPM) process. It is a tungsten type high speed with a high vanadium content for excellent abrasion resistance, similar to that of CPM Rex T15, and 8% cobalt for a higher red hardness than CPM Rex T15. It also offers high compressive strength due to its high attainable hardness. It is best suited for applications requiring both a high red hardness and high wear resistance. The CPM process results in a homogeneous microstructure with a finer, more uniform carbide distribution imparting superior dimensional stability, grindability and toughness when compared to steels produced by conventional processes. The CPM process also allows the design of more highly alloyed grades which cannot be produced by conventional steelmaking. Information provided by Crucible Industries

Order this product through the following link:

http://www.lookpolymers.com/polymer_Crucible-Steel-CPM-REX-66-HS-High-Speed-Steel.php

Physical Properties	Metric	English	Comments
Density	8.249 g/cc	0.2980 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	66	66	hardened at 2050°F then quenched
	48.5	48.5	hardened at 2050°F then quenched and tempered
	@Tempering Temp. 649 °C	@Tempering Temp. 1200 °F	
	59.5	59.5	hardened at 2050°F then quenched and tempered
	@Tempering Temp. 593 °C	@Tempering Temp. 1100 °F	
	63.5	63.5	hardened at 2050°F then quenched and tempered
@Tempering Temp. 566 °C	@Tempering Temp. 1050 °F		
Modulus of Elasticity	214 GPa	31000 ksi	

Thermal Properties	Metric	English	Comments
	9.90 µm/m-°C	5.50 µin/in-°F	

CTE linear Thermal Properties	Metric @ Temperature 20.0 - 260 °C	English @ Temperature 68.0 - 500 °F	Comments
	11.0 µm/m-°C	6.11 µin/in-°F	
	@Temperature 20.0 - 425 °C	@Temperature 68.0 - 797 °F	
	12.5 µm/m-°C	6.94 µin/in-°F	
	@Temperature 20.0 - 540 °C	@Temperature 68.0 - 1000 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	1.67 %	1.67 %	
Chromium, Cr	4.75 %	4.75 %	
Cobalt, Co	8.0 %	8.0 %	
Iron, Fe	69.22 %	69.22 %	as balance
Molybdenum, Mo	2.0 %	2.0 %	
Sulfur, S	0.060 %	0.060 %	
	0.22 %	0.22 %	added to improve machinability
Tungsten, W	9.5 %	9.5 %	
Vanadium, V	4.8 %	4.8 %	

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