

Crucible Steel CPM® REX® M35HCHS High Speed Steel, AISI M35

Category : Metal , Ferrous Metal , Tool Steel

Material Notes:

CPM REX M35HCHS is a 5% cobalt modification of M2 high speed steel used almost exclusively for hobs and other gear cutting tools where higher red hardness is required. Made by the Crucible Particle Metallurgy process, CPM REX M35HCHS has excellent machinability and grindability characteristics. Information provided by Crucible Industries

Order this product through the following link:

http://www.lookpolymers.com/polymer_Crucible-Steel-CPM-REX-M35HCHS-High-Speed-Steel-AISI-M35.php

Physical Properties	Metric	English	Comments
Density	8.11 g/cc	0.293 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Brinell	225 - 255	225 - 255	
Hardness, Rockwell C	66	66	hardened at 2150°F
	52	52	hardened at 2150°F then tempered
	@Tempering Temp. 649 °C	@Tempering Temp. 1200 °F	
	57	57	hardened at 2150°F then tempered
	@Tempering Temp. 621 °C	@Tempering Temp. 1150 °F	
	61	61	hardened at 2150°F then tempered
	@Tempering Temp. 593 °C	@Tempering Temp. 1100 °F	
	62.5	62.5	hardened at 2150°F then tempered
	@Tempering Temp. 566 °C	@Tempering Temp. 1050 °F	
	63	63	hardened at 2150°F then tempered
	@Tempering Temp. 551.7 °C	@Tempering Temp. 1025 °F	
	64	64	hardened at 2150°F then tempered
	@Tempering Temp. 538 °C	@Tempering Temp. 1000 °F	
Modulus of Elasticity	207 GPa	30000 ksi	

Thermal Properties	Metric	English	Comments
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Thermal Properties CTE, linear	Metric	English	Comments
	@Temperature 21.1 - 399 °C	@Temperature 70.0 - 750 °F	
	11.5 µm/m-°C	6.40 µin/in-°F	
	@Temperature 21.1 - 593 °C	@Temperature 70.0 - 1100 °F	

Component Elements Properties	Metric	English	Comments
Carbon, C	0.98 %	0.98 %	
Chromium, Cr	4.05 %	4.05 %	
Cobalt, Co	5.0 %	5.0 %	
Iron, Fe	75.65 %	75.65 %	as balance
Manganese, Mn	0.70 %	0.70 %	
Molybdenum, Mo	5.0 %	5.0 %	
Silicon, Si	0.40 %	0.40 %	
Sulfur, S	0.22 %	0.22 %	
Tungsten, W	6.0 %	6.0 %	
Vanadium, V	2.0 %	2.0 %	

Chemical Properties	Metric	English	Comments
Critical Temperature	827 °C	1520 °F	

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