

## Kinetics MIM 420 Stainless Steel (Oil Quench Heat Treat)

Category : Metal , Ferrous Metal , Stainless Steel , T 400 Series Stainless Steel

### Material Notes:

Martensitic stainless steel. Very good strength, hardness, and wear resistance while offering some corrosion resistance. Magnetic. Higher hardness typical with oil quench over that of vacuum heat treat. Often used for aerospace, automotive, cutlery, defense, power hand tools, sporting equipment industry, surgical instruments, and applications where high strength and hardness, and some corrosion resistance is required. Property values reported are typical for Kinetics' MIM products. Metal Injection Molding General Notes: Fine metal powders (generally

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Kinetics-MIM-420-Stainless-Steel-Oil-Quench-Heat-Treat.php](http://www.lookpolymers.com/polymer_Kinetics-MIM-420-Stainless-Steel-Oil-Quench-Heat-Treat.php)

Physical Properties	Metric	English	Comments
Density	7.61 g/cc	0.275 lb/in <sup>3</sup>	Sintered

Mechanical Properties	Metric	English	Comments
Tensile Strength, Ultimate	1370 MPa	198000 psi	
Elongation at Break	<= 1.0 %	<= 1.0 %	in 1 inch
Reduction of Area	<= 0.50 %	<= 0.50 %	
Charpy Impact, Unnotched	7.46 J	5.50 ft-lb	1/2 size bar

Component Elements Properties	Metric	English	Comments
Carbon, C	0.15 - 0.40 %	0.15 - 0.40 %	
Chromium, Cr	12 - 14 %	12 - 14 %	
Iron, Fe	81.6 - 87.9 %	81.6 - 87.9 %	by difference
Manganese, Mn	<= 1.0 %	<= 1.0 %	
Other	<= 2.0 %	<= 2.0 %	
Silicon, Si	<= 1.0 %	<= 1.0 %	

Descriptive Properties	Value	Comments
Hardness Rockwell R15N	85.5	
Surface Finish	40 Ra	

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