

PSM Industries Ferro-TiC® MS-5A Age Hardenable Martensitic Stainless Steel

Category : Ceramic , Carbide , Metal , Ferrous Metal , Martensitic

Material Notes:

Ferro-TiC® Steel alloy bonded titanium carbide (TiC) materials are made by advanced powder metallurgy technologies. Unlike tungsten carbide, Ferro-TiC® is bonded by hardenable alloy matrices. Excellent corrosion resistance. Excellent size stability at elevated temperatures. Replaces 27-4 PH Stainless. Slightly magnetic. An FDA approved material. Ferro-TiC® Unique Characteristics Provides the lightweight, size, stability, and hardness Virtually porosity free - significantly better than the A1 ASTM B-276-79 Standard Low specific mass. Ferro-TiC® is 10-20% lighter than its steel counterpart and about 50% lighter than tungsten carbide 10 times the wear resistance of tool steels Economical fabrication (conventionally machinable in the annealed stage by milling and turning, conventionally heat treatable to achieve high hardness) 50-90% less linear size change in heat treat than tool steels Information Provided by Ferro-TiC®, a division of PSM Industries

Order this product through the following link:

http://www.lookpolymers.com/polymer_PSM-Industries-Ferro-TiC-MS-5A-Age-Hardenable-Martensitic-Stainless-Steel.php

Physical Properties	Metric	English	Comments
Density	6.55 g/cc	0.237 lb/in ³	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	48	48	Annealed
	61	61	Hardened
Flexural Strength	1770 MPa	256000 psi	Transverse Rupture
Compressive Strength	2860 MPa	415000 psi	
Charpy Impact Unnotched	6.002 J/cm ²	28.58 ft-lb/in ²	

Thermal Properties	Metric	English	Comments
CTE, linear	3.55 µm/m-°C	1.97 µin/in-°F	
	@Temperature 21.1 - 449 °C	@Temperature 70.0 - 840 °F	
Maximum Service Temperature, Air	449 °C	840 °F	

Descriptive Properties	Value	Comments
Carbide (Vol. %)	41	
Linear Size Change Thru Heat Treat %	-0.009	
Thermal Shock (No. Cycles)	9	

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