

## **PSM Industries Ferro-TiC® PK Maraging Steel**

Category: Ceramic, Carbide, Metal, Ferrous Metal, Maraging Steel

## **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. Combination of excellent transverse rupture strength, impact strength, and corrosion resistance. Good thermal shock resistance. Magnetic. 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-PK-Maraging-Steel.php

Physical Properties	Metric	English	Comments
Density	6.60 g/cc	0.238 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments	
Hardness, Rockwell C	50	50	Annealed	
	61	61	Hardened	
Flexural Strength	1380 MPa	200000 psi	Transverse Rupture	
Compressive Strength	2880 MPa	417000 psi		
Charpy Impact Unnotched	7.367 J/cm <sup>2</sup>	35.08 ft-lb/in <sup>2</sup>		

Thermal Properties	Metric	English	Comments
CTE, linear	3.80 µm/m-°C	2.11 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. %)	42	
Linear Size Change Thru Heat Treat %	-0.029	
Thermal Shock (No. Cycles)	84	



## **Contact Songhan Plastic Technology Co.,Ltd.**

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