

## PSM Industries Ferro-TiC® HT-6A Age Hardenable Nickel Base

Category : Ceramic , Carbide , Metal , Nonferrous Metal , Nickel Alloy

### 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 oxidation and corrosion resistance at high temperatures. Replaces Stellite™/Inconel™. Non-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-HT-6A-Age-Hardenable-Nickel-Base.php](http://www.lookpolymers.com/polymer_PSM-Industries-Ferro-TiC-HT-6A-Age-Hardenable-Nickel-Base.php)

Physical Properties	Metric	English	Comments
Density	6.80 g/cc	0.246 lb/in <sup>3</sup>	

Mechanical Properties	Metric	English	Comments
Hardness, Rockwell C	46	46	Annealed
	52	52	Hardened
Flexural Strength	1320 MPa	191000 psi	Transverse Rupture
Compressive Strength	1970 MPa	285000 psi	
Charpy Impact Unnotched	5.36 J/cm <sup>2</sup>	25.5 ft-lb/in <sup>2</sup>	

Thermal Properties	Metric	English	Comments
CTE, linear	8.87 µm/m-°C	4.93 µin/in-°F	
	@Temperature 21.1 - 982 °C	@Temperature 70.0 - 1800 °F	
Maximum Service Temperature, Air	982 °C	1800 °F	

Descriptive Properties	Value	Comments
Carbide (Vol. %)	40	
Linear Size Change Thru Heat Treat %	-0.014	
Thermal Shock (No. Cycles)	11	

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

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