

# Ti<sub>3</sub>SiC<sub>2</sub> | MAX Phase



Catalogue no -

NS6130-12-000617











## **Titanium** Silicon Carbide Powder



There are more than ten MAX phase systems and more than fifty MAX phases. This work is focused to produce Ti3SiC2 MAX phase using Si, C, TiC powders. The MAX phases constitute a group of ternary ceramics which has received intense attention over the last decade due to their unique combination of properties. The Ti3SiC2 is the most well studied MAX phase to date and it has turned out to be a promising candidate for high temperature applications. It is oxidation resistant, refractory and not susceptible to thermal shock. It can be machined with conventional tools, which is of great technological importance.

# Quick Facts

Product	:	Titanium Silicon Carbide Powder
Stock No	:	NS6130-12-000617
CAS	:	12202-82-3
Molecular Formula	:	Ti3SiC2
Molecular Weight	:	195.71g/mol
Form	:	Powder
Colour		Dark aray



### **Properties:**

- High fracture toughness
- Low hardness to elastic modulus ratio
- Excellent damage tolerance
- Good thermal shock
- Oxidation resistance
- Good electric conductivities

#### **Applications:**

- Aerospace engine (procreative coating)
- Nano-adsorption
- **Biosensors**
- Ion sieving
- Catalysis
- Lithium-ion batteries
- Super capacitors
- Lubrication
- Jet engine applications

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