

Ti₃AlC₂|MAX Phase



Catalogue no -

NS6130-12-001042











Titanium

Aluminium Carbide Powder



Titanium aluminium carbide, Ti3AlC2, as one of the most promising advanced ceramics belonging to a member of the so-called MAX phases, has attracted increasing attention in recent years because of its unique combination of both metal and ceramic properties. Like metals, it has excellent electrical conductivity, high thermal conductivity, and high machinability. Like ceramics, it has low thermal expansion coefficient, high melting point, strength, and thermal stability. All of these prominent properties make Ti3AlC2 a potential material for various functional and structural applications.



Product	:	Titanium Aluminium Carbide Powder
Stock No	:	NS6130-12-001042
CAS	:	196506-01-1
Molecular Formula	:	Ti3AlC2
Molecular Weight	:	194.605 g/mol
Density	:	2.36g/cm3
Melting Point	:	2100 °C
Thermal Conductivity	:	32-37W/m.k
Resistivity	:	0.35±0.03μΩ.m
Form	:	Powder
Colour	:	Gray



Properties:

- Excellent electrical conductivity
- High thermal conductivity
- High machinability
- Low thermal expansion coefficient
- High melting point

Applications:

- Li-ion batteries
- Pseudo capacitors
- Super capacitor electrodes
- Reinforcement in composites
- Replacing layered transition metal oxides

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