



>>Entry Name: Titanium nitrides

CAS Registry Number: 11116-16-8

Molecular Formula: [NTi]

>>Variant: Titanium nitride (Ti₂N), 11Cl

CAS Registry Number: 12169-08-3

Molecular Formula: NTi₂

Molecular Weight: 109.767

Accurate Mass: 109.898968

Percentage Composition: N 12.76%; Ti 87.24%

Source/Synthesis: Synth. by condensing Ti in a controlled pressure N₂ plasma or by heating Ti to 900-1000° in N₂ or heating Ti in HCN

Use/Importance: Of limited use in coatings

>>Variant: Titanium nitride (TiN), 11Cl

CAS Registry Number: 25583-20-4

Molecular Formula: NTi

Molecular Weight: 61.887

Accurate Mass: 61.951021

Percentage Composition: N 22.63%; Ti 77.37%

bonding has been studied by variable energy x-ray pe

Source/Synthesis: Quick and convenient low temp. synth. available from TiCl₄ and Li₃N, in a sealed ampoule, initiated by heating to 400° or by rapid agitation with completion in 2-3s

Use/Importance: Uses range from coatings for cutting tools to gold colours for jewellery, ceramics, conductors for electrical contacts etc. to components in battery cathodes and abrasives

Physical Description: Black cryst.

Aldrich: 33324-7

References:

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