



>>Entry Name: Manganese nitrides

Molecular Formula: [MnN]

Use/Importance: Used in nitrogen-containing alloys for steel making

Physical Description: All phases slowly dec. by H₂O and dissolve in dilute non-oxidising acids

>>Variant: Manganese nitride (Mn₄N), 11Cl

CAS Registry Number: 12033-07-7

Molecular Formula: Mn₄N

Molecular Weight: 233.759

Accurate Mass: 233.755262

Percentage Composition: Mn 94.01%; N 5.99%

Source/Synthesis: Synth. from Mn powder at 800° under N₂ at 550 mm Hg

Use/Importance: Used in steel making

Other Data: Face centred cubic (perovskite) struct. Ferromagnetic. Dec. by H₂O

>>Variant: Manganese nitride (Mn₅N₂), 11Cl

CAS Registry Number: 12033-08-8

Molecular Formula: Mn₅N₂

Molecular Weight: 302.703

Accurate Mass: 302.696383

Percentage Composition: Mn 90.75%; N 9.25%

Source/Synthesis: Synth. by heating electrolytic Mn in a stream of N₂ at 850°

>>Variant: Manganese nitride (Mn₂N), 11Cl

CAS Registry Number: 12163-53-0

Molecular Formula: Mn₂N

Molecular Weight: 123.883

Accurate Mass: 123.879168

Percentage Composition: Mn 88.69%; N 11.31%

>>Variant: Manganese nitride (Mn₃N₂), 11Cl

CAS Registry Number: 12033-03-3

Molecular Formula: Mn₃N₂

Molecular Weight: 192.827

Accurate Mass: 192.820289

Percentage Composition: Mn 85.47%; N 14.53%

Source/Synthesis: Synth. from Mn powder and NH₃ at 550-700°

Other Data: Paramagnetic. Dec. by H₂O

>>Variant: Manganese nitride (Mn₆N₅), 11Cl

CAS Registry Number: 64886-63-1

Molecular Formula: Mn₆N₅

Molecular Weight: 399.661

Accurate Mass: 399.643652

Percentage Composition: Mn 82.48%; N 17.52%

Source/Synthesis: Synth. from Mn/Hg and NH₃ at 400°

References: