



>>Entry Name: Manganese(II) fluoride (MnF₂), 11CI

Synonym(s): Manganese difluoride

CAS Registry Number: 7782-64-1

MnF₂

Molecular Formula: F₂Mn

Molecular Weight: 92.935

Accurate Mass: 92.934853

Percentage Composition: F 40.89%; Mn 59.11%

Source/Synthesis: Synth. from MnCO₃ and aq. HF

Use/Importance: Compd. in which exciton and exciton-magnon magnetic struct. of electronic transitions in antiferromagnetic insulators first discovered

Physical Description: Pink cryst.

Melting Point: Mp 867 ° (*ca.* 929.5°)

Solubility: Spar. sol. H₂O

Other Data: $\mu_{\text{eff}} = 5.98\mu_{\text{B}}$. Magnetic and spectroscopic props. have been studied in detail. Antiferromagnetic at low temp.

Aldrich: 33928-8

>>Derivative: Tetrahydrate

CAS Registry Number: 13817-36-2

Molecular Formula: F₂H₈MnO₄

Molecular Weight: 164.996

Accurate Mass: 164.977113

Percentage Composition: F 23.03%; H 4.89%; Mn 33.30%; O 38.79%

Source/Synthesis: Synth. from MnCO₃ and aq. HF

Physical Description: Thermally unstable orthorhombic cryst.

Other Data: Isotype of ZnF₂·4H₂O

>>Variant: II-form

Molecular Formula: F₂Mn

Molecular Weight: 92.935

Accurate Mass: 92.934853

Percentage Composition: F 40.89%; Mn 59.11%

Source/Synthesis: Formed at 25° and 3 x 10⁴ atm.

>>Variant: III-form

Molecular Formula: F₂Mn

Molecular Weight: 92.935

Accurate Mass: 92.934853

Percentage Composition: F 40.89%; Mn 59.11%

Source/Synthesis: Formed at r.t. and 1.5 x 10⁴ atm.

>>Variant: IV-form

Molecular Formula: F₂Mn

Molecular Weight: 92.935

Accurate Mass: 92.934853

Percentage Composition: F 40.89%; Mn 59.11%

Source/Synthesis: Formed at 10⁴ atm. and 100°

>>Variant: V-form

Molecular Formula: F₂Mn

Molecular Weight: 92.935

Accurate Mass: 92.934853

Percentage Composition: F 40.89%; Mn 59.11%

Source/Synthesis: Formed at 300° and >3 x 10⁴ atm.

References: