



>>Entry Name: Manganese fluoride (MnF₃), 11Cl

Synonym(s): Manganese trifluoride

CAS Registry Number: 7783-53-1

MnF₃

Molecular Formula: F₃Mn

Molecular Weight: 111.933

Accurate Mass: 111.933256

Source/Synthesis: Prepared by heating any Mn(II) halide or MnO with F₂

Use/Importance: Widely used as a fluorinating agent in organic systems

Physical Description: Red-purple solid, thermally stable but instantly hydrol. by traces of moisture

Solubility: In anhydrous HF its solubility is 0.164g/100ml at 11.5°. Readily sol. H₂O

Other Data: $\Delta H_f -996 \text{ kJ mol}^{-1}$, $\Delta H_{\text{subl}} 285 \text{ kJ mol}^{-1}$. Becomes antiferromagnetic at v. low temps. $\mu_{\text{eff}} = 4.94 \mu_B$ (293K) T_N 43K or 47K

Aldrich: 33929-6

References:

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