



>>Entry Name: Ammonium iron(II) sulfate ((NH₄)₂Fe(SO₄)₂)

Synonym(s): Ferrous ammonium sulfate. Iron(II) ammonium sulfate

CAS Registry Number: 10045-89-3

FeSO₄·(NH₄)₂SO₄

Molecular Formula: FeH₈N₂O₈S₂

Molecular Weight: 284.051

Accurate Mass: 283.907147

Percentage Composition: Fe 19.66%; H 2.84%; N 9.86%; O 45.06%; S 22.58%

General Statement: Obt. as hydrates

Use/Importance: Catalyst; fertiliser component, fire retardant

>>Derivative: Hexahydrate

Synonym(s): Ferrous ammonium sulfate hexahydrate. Mohr's salt. Tutton's salt

CAS Registry Number: 7783-85-9

Molecular Formula: FeH₂₀N₂O₁₄S₂

Molecular Weight: 392.142

Accurate Mass: 391.970537

Percentage Composition: Fe 14.24%; H 5.14%; N 7.14%; O 57.12%; S 16.35%

Source/Synthesis: Obt. by mixing solns. of ferrous and ammonium sulfates

Use/Importance: Analytical reagent; metallurgical applications, polym. catalyst. Commercially available

Physical Description: Pale green cryst. (H₂O); deliquescent; light sensitive

Melting Point: Mp 100-110 dec.°

Solubility: Sol. H₂O; insol. EtOH

Other Data: In soln., contains [Fe(OH₂)₆]²⁽⁺⁾ ion. More resistant to oxidation than simple ferrous sulfate

Aldrich: 34290-4

Fluka: 9721

Sigma: F2262

References:

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