



>>Entry Name: Aluminium sulfate, USAN

ENTRY UNDER REVIEW

Synonym(s): Alunogenite

CAS Registry Number: 10043-01-3

Extra CAS Registry Numbers(s): 10124-29-5 10199-21-0 16828-11-8 17927-65-0

$\text{Al}_2(\text{SO}_4)_3$

Molecular Formula: $\text{Al}_2\text{O}_3 \cdot \text{S}_3$

Molecular Weight: 342.154

Accurate Mass: 341.818268

Percentage Composition: Al 15.77%; O 56.11%; S 28.12%

Source/Synthesis: Obt. from hydrates at 325°

Use/Importance: Used in water purif. (flocculant). Size for paper. Commercially available. Important industrial chemical, 43rd in order of volume for USA in 1994 (production 1.15 million tons/year)

Biological Use/Importance: Antiseptic

Physical Description: White solid

Other Data: Forms complex series of hydrates. Dec. at 450° to amorphous Al_2O_3 with high surface area. $\Delta H_{\text{f}298}^\circ - 3435 \text{ kJ mol}^{-1}$. $\text{Al}(\text{HSO}_4)_3$ also known

Aldrich: 20261-4

>>Derivative: Heptadecahydrate

Synonym(s): Alunogen

Source/Synthesis: Mineral, occurs mainly as an efflorescence or cavity filling in slates and shales

Physical Description: Colourless cryst.

>>Derivative: Octadecahydrate

CAS Registry Number: 7784-31-8

Source/Synthesis: Obt. from bauxite or clay + H_2SO_4

Physical Description: Colourless hygroscopic cryst. (H_2O)

Other Data: Exact amount of H_2O uncertain. Gives anhydrous salt during 24h at 380°

Aldrich: 22761-7

>>Derivative: Sodium alum

>>Derivative: Potassium alum