



>>Entry Name: Aluminium sodium sulfate (AlNa(SO<sub>4</sub>)<sub>2</sub>)

ENTRY UNDER REVIEW

Synonym(s): Sulfuric acid, aluminium sodium salt (2:1:1), 8Cl

CAS Registry Number: 10102-71-3

NaAl(SO<sub>4</sub>)<sub>2</sub>

Molecular Formula: AlNaO<sub>8</sub>S<sub>2</sub>

Molecular Weight: 242.098

Accurate Mass: 241.874766

Percentage Composition: Al 11.14%; Na 9.50%; O 52.87%; S 26.49%

Source/Synthesis: Synth. by pptn. from aq. solns. of Na and Al sulphates with conc. sulfuric acid

Physical Description: Orthorhombic cryst.

Solubility: V. sol. H<sub>2</sub>O (40.9 g per 100 cm<sup>3</sup> at 20°)

>>Derivative: Dodecahydrate

Synonym(s): Sodium alum. γ-Alum. Hexaaquaaluminium hexaaquasodium sulfate (1:1:2). Sodium aluminium sulfate (NaAl(SO<sub>4</sub>)<sub>2</sub>)

CAS Registry Number: 7784-28-3

Molecular Formula: AlH<sub>24</sub>NaO<sub>20</sub>S<sub>2</sub>

Molecular Weight: 458.281

Accurate Mass: 458.001546

Percentage Composition: Al 5.89%; H 5.28%; Na 5.02%; O 69.82%; S 13.99%

Source/Synthesis: Obt. by evap. or pptn. from aq. solns. containing Na and Al sulfates. Occurs as \*Mendozite\*

Use/Importance: Food additive (baking powder); flame retardant

Physical Description: Cubic white cryst.

Melting Point: Mp 61°

Other Data: ΔH<sub>f</sub><sup>o</sup> -2353 kJ mol<sup>-1</sup>. Formulated as [Na(OH<sub>2</sub>)<sub>6</sub>][Al(OH<sub>2</sub>)<sub>6</sub>](SO<sub>4</sub>)<sub>2</sub>

#### References:

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