>>**Entry Name: Aluminium(*III*) iodide (AlI_3)**
Synonym(s): Aluminium triiodide

CAS Registry Number: 7784-23-8
AlI_3

Molecular Formula: AlI_3
Molecular Weight: 407.695
Accurate Mass: 407.694958
Percentage Composition: Al 6.62%; I 93.38%
General Statement: In cryst., AlI_4 tetrahedra share corners to give chains as in SO_3
Use/Importance: Lewis acid. Friedel-Crafts catalyst. Commercially available
Physical Description: White moisture sensitive cryst.
Melting Point: Mp 179-189°
Other Data: $\Delta\overset{\circ}{H}_f$ AlI_3(s) –280.4 kJ mol^{-1}, $\overset{\circ}{S}_{298}$ 219.9 J K^{-1} mol^{-1}. Many complexes descr.
Hazard & Toxicity: Reacts violently with H_2O

Aldrich: 40932-4

>>**Derivative:** Tris-Py complex

Molecular Formula: $C_{15}H_{15}AlI_3N_3$
Molecular Weight: 644.999
Accurate Mass: 644.821555
Percentage Composition: C 27.93%; H 2.34%; Al 4.18%; I 59.03%; N 6.51%
Physical Description: White moisture-sensitive solid
Melting Point: Mp 195-198 dec.°
Solubility: Sol. MeOH; spar. sol. most org. solvs.

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