



>>Entry Name: Acetamide, 9CI

Synonym(s): Ethanamide. Methanecarboxamide

CAS Registry Number: 60-35-5

H_3CCONH_2

Molecular Formula: $\text{C}_2\text{H}_5\text{NO}$

Molecular Weight: 59.068

Accurate Mass: 59.037114

Percentage Composition: C 40.67%; H 8.53%; N 23.71%; O 27.09%

Biological Source: Isol. from some plants e.g. *Chimonanthus fragrans*. Produced industrially by distillation of ammonium acetate or by hydration of Acetonitrile [HFC99-Z](#)

Use/Importance: Solubiliser, plasticiser, stabiliser, used industrially as solv. in molten form. Dissolves virtually all classes of organic and inorganic compds.

Physical Description: Deliquescent, hexagonal cryst. Odourless when pure but usually has characteristic "mouse" odour

Melting Point: Mp 82-83°

Boiling Point: Bp 222°. Bp₅ 92°

Solubility: V. sol. H_2O , EtOH; sol. CHCl_3 ; prac. insol. Et_2O

pKa Value: $\text{p}K_{\text{a}1}$ -1.4 (25°)

Other Data: Triboluminescent

Hazard & Toxicity: Fl. p. >104°. Possible human carcinogen. Irritant. Exp. carcinogen (v. large dose). Exp. reprod. and teratogenic effects (large doses)

Aldrich: A105-3

Fluka: 160

Rare Chemicals Library: S44664-5

Sigma: A6082

>>Derivative: Hydrochloride (2:1)

CAS Registry Number: 13507-16-9

Physical Description: Cryst. (MeCN)

Melting Point: Mp 130-131°

>>Derivative: Hydrobromide (2:1)

CAS Registry Number: 20731-46-8

Use/Importance: Reagent for brominating acid-sensitive compds.

Physical Description: Needles

Melting Point: Mp 138-139°

>>Derivative: Picrate

Melting Point: Mp 117°

>>Derivative: *N*-Ac

see Diacetamide, [CZK56-F](#)

>>Derivative: *N*-Me

see *N*-Methylacetamide, [DCK26-C](#)

>>Derivative: *N,N*-Di-Me

see *N,N*-Dimethylacetamide, [BGP25-G](#)