



>>Entry Name: Formic acid, 9CI, 8CI

ENTRY UNDER REVIEW

Synonym(s): Methanoic acid. FEMA 2487

CAS Registry Number: 64-18-6

Related CAS Registry Numbers(s): 71-47-6 917-71-5 920-42-3 925-94-0

HCOOH

Molecular Formula: CH₂O₂

Molecular Weight: 46.026

Accurate Mass: 46.00548

Percentage Composition: C 26.10%; H 4.38%; O 69.52%

Biological Source: Observed by S. Fisher in 1670 from red ants (*Formica rufa*). Vesicant principle of nettles (*Urtica* spp.), widespread in plants. Manuf. from CO and MeOH

Use/Importance: Used as decalcifier, wool dye reducer, depilatory for hides and tanning, electroplating, rubber regeneration and silage and grain preservation. Reactive alkylating agent for alcohols; carboxylating agent for tertiary compds. Used in detritylation. Reducing agent; used for gravimetric detn. of Au(III), Pt(IV), Rh(III), Rh(III), Hg(II)

Biological Use/Importance: Defensive secretion of ants, butterfly larvae. beetles and other insects. Pheromone in some ant spp.

Physical Description: Liq. with pungent odour

Melting Point: Mp 8.4°

Boiling Point: Bp 100.5°. Bp₁₂₀ 50°

Solubility: Misc. H₂O, EtOH, Et₂O; mod. sol. C₆H₆

Density: d₄²⁰ 1.22

Refractive Index: n_D²⁰ 1.3714

Other Data: Good solvent props. Strong reducing agent, burns with a blue flame

Hazard & Toxicity: Fl. p. 69°, autoignition temp. 539°. Slow dec. can lead to build up of pressure in closed containers. Vapour is a skin and eye irritant. Liquid is corrosive to skin, eyes and mucous membranes. LD₅₀ (rat, orl) 1100 mg/kg. OES: long-term 5 ppm

Aldrich: W24870-3

Fluka: 6419

Sigma: F4636

Supelco: R41-2236

>>Derivative: NH₄ salt

Synonym(s): Ammonium formate

CAS Registry Number: 540-69-2

Molecular Formula: CH₅NO₂

Molecular Weight: 63.056

Accurate Mass: 63.032029

Percentage Composition: C 19.05%; H 7.99%; N 22.21%; O 50.75%

Use/Importance: Reagent for catalytic hydrogen transfer reacns.

Physical Description: White granules

Melting Point: Mp 116°

Solubility: V. sol. H₂O, EtOH

Other Data: V. hygroscopic

Aldrich: 15626-4

Fluka: 9739

Sigma: F2004

>>Derivative: Me ester

see Methyl formate, [DCV45-K](#)

>>Derivative: Et ester

see Ethyl formate, [CTZ11-V](#)

>>Derivative: Vinyl ester

see Vinyl formate, [MGF46-G](#)