



>>Entry Name: Methyl formate

Synonym(s): Formic acid methyl ester, 9CI

CAS Registry Number: 107-31-3

Related CAS Registry Numbers(s): 23731-38-6

HCOOMe

Molecular Formula: C₂H₄O₂

Molecular Weight: 60.052

Accurate Mass: 60.02113

Percentage Composition: C 40.00%; H 6.71%; O 53.28%

Use/Importance: Reagent for lactone α -methylenations

Physical Description: Liq.

Melting Point: Fp -99°

Boiling Point: Bp 31.5°

Density: d¹⁵ 0.987

Hazard & Toxicity: Extremely flammable, fl. p. <19°, autoignition temp. 449/470°. Unstable in presence of base, may dec. explosively to MeOH + CO. Eye, skin and respiratory tract irritant. High vapour conc. can cause narcosis and death from pulmonary irritation. LD₅₀ (rbt, orl) 1622 mg/kg. OES: long-term 100 ppm; short-term 150 ppm

Aldrich: 29105-6

Fluka: 6547

Sigma: F0260

References:

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Young, S. *et al.*, *J.C.S.*, 1893, **63**, 1195, (synth)

Ger. Pat., 1933, 595 307; *CA*, **28**, 4072, (synth)

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Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, MKG750

Bretherick, L., *Handbook of Reactive Chemical Hazards*, 4th edn., Butterworths, 1990, 0782

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