



>>Entry Name: Diazenedicarboxylic acid, 9CI

ENTRY UNDER REVIEW

Synonym(s): Azoformic acid. Azodicarboxylic acid. Azodiformic acid. $\Delta^{2,2'}$ -Bicarbamic acid. Azobisformic acid

CAS Registry Number: 504-89-2

HOOCN=NCOOH

Molecular Formula: $C_2H_2N_2O_4$

Molecular Weight: 118.049

Accurate Mass: 118.001458

Percentage Composition: C 20.35%; H 1.71%; N 23.73%; O 54.21%

General Statement: Free acid unknown. Known in the form of unstable salts and stable esters

Other Data: K salt dec. by $H_2O \rightarrow K_2CO_3 + CO_2 + N_2H_4 + N_2$

Hazard & Toxicity: K salt deflagrates at 100°

>>Derivative: Di-Me ester

Synonym(s): Dimethyl azodiformate

CAS Registry Number: 2446-84-6

Molecular Formula: $C_4H_6N_2O_4$

Molecular Weight: 146.102

Accurate Mass: 146.032758

Percentage Composition: C 32.88%; H 4.14%; N 19.17%; O 43.80%

Use/Importance: Dienophile

Physical Description: Oil

Melting Point: Fp 10°

Boiling Point: Bp₂₅ 96°

Hazard & Toxicity: Shock-sensitive explosive, burns explosively

>>Derivative: Di-Et ester

Synonym(s): Diethyl azodiformate

CAS Registry Number: 1972-28-7

Molecular Formula: $C_6H_{10}N_2O_4$

Molecular Weight: 174.156

Accurate Mass: 174.064058

Percentage Composition: C 41.38%; H 5.79%; N 16.09%; O 36.75%

Melting Point: Fp 6°

Boiling Point: Bp₅ 90-95°

Hazard & Toxicity: Shock-sensitive explosive

Aldrich: 34210-6

Fluka: 11627

Sigma: D2394

>>Derivative: Diisopropyl ester

CAS Registry Number: 2446-83-5

Molecular Formula: $C_8H_{14}N_2O_4$

Molecular Weight: 202.21

Accurate Mass: 202.095358

Percentage Composition: C 47.52%; H 6.98%; N 13.85%; O 31.65%

Physical Description: Liq.

Boiling Point: Bp_{0.25} 75°

Aldrich: 22554-1

Fluka: 11626