



>>Entry Name: Glyoxal, 8Cl

Synonym(s): Ethanedial, 9Cl. Diformyl. Oxaldehyde. Biformyl. Oxalaldehyde. Glyoxylaldehyde. Glyfix CS 50

CAS Registry Number: 107-22-2

OHCCHO

Molecular Formula: C₂H₂O₂

Molecular Weight: 58.037

Accurate Mass: 58.00548

Percentage Composition: C 41.39%; H 3.47%; O 55.14%

Source/Synthesis: Manuf. by oxidn. of acetaldehyde or ethylene glycol

Use/Importance: Intermed. in synth. of quinoxalines and quinones. Monomer for glyoxal resins

Biological Use/Importance: Disinfectant for surgical instruments

Physical Description: Yellow prisms

Melting Point: Mp 15°

Boiling Point: Bp 51°

Density: d₄²⁰ 1.29

Refractive Index: n_D²⁰ 1.3826

Other Data: Vapour has green colour and burns with violet flame. Polym. readily to form complex polymeric structs. Reacts with H₂O to give a complex mixt. of linear and cyclic oligomers. Aq. solns. behave chemically as the monomer

Hazard & Toxicity: Violent reactn. with some materials. Eye, skin and mucous membrane irritant. LD₅₀ (rat, orl) 1100 mg/kg

Aldrich: 12846-5

Fluka: 50660

Sigma: G3140

>>Derivative: Sodium bisulfite addn. compd.

CAS Registry Number: 517-21-5

Use/Importance: Convenient, non-aqueous form of glyoxal

Melting Point: Mp 193 dec.° (as hydrate)

Fluka: 50690

>>Derivative: Dioxime

>>Derivative: Hydrazone

>>Derivative: Semicarbazone

Melting Point: Mp 273°

>>Derivative: Di-Ac

Synonym(s): Diacetoxyacetaldehyde

Molecular Formula: C₆H₈O₅

Molecular Weight: 160.126

Accurate Mass: 160.037175

Percentage Composition: C 45.01%; H 5.04%; O 49.96%

Boiling Point: Bp₆ 92-93°

>>Derivative: Di-Ac, 2,4-dinitrophenylhydrazone

Melting Point: Mp 143-144°

>>Derivative: Mono-Et hemiacetal

Synonym(s): 2-Ethoxy-2-hydroxyacetaldehyde

CAS Registry Number: 20036-59-3

Molecular Formula: C₄H₈O₃

Molecular Weight: 104.105

Accurate Mass: 104.047345

Percentage Composition: C 46.15%; H 7.75%; O 46.11%

Boiling Point: Bp₉ 53-54°