



>>Entry Name: Oxalyl chloride, 8Cl

Synonym(s): Ethanedioyl dichloride, 9Cl

CAS Registry Number: 79-37-8

ClCOCOCl

Molecular Formula: C₂Cl₂O₂

Molecular Weight: 126.926

Accurate Mass: 125.927534

Percentage Composition: C 18.93%; Cl 55.86%; O 25.21%

Source/Synthesis: Prepd. on lab. scale (and formerly industrially) by PCl₅ chlorination of Oxalic acid CWF22-Y. Now made industrially by photochemical chlorination of 1,3-Dioxolan-2-one CTX64-D

Use/Importance: Widely used chlorinating agent and reagent for synth. of acyl chlorides. Preferred reagent in DMSO soln. (Swern reagent) for oxidn. of primary alcohols to aldehydes. Monomer used in polyamide manuf.

Physical Description: Fuming liq., needles at -80° (Et₂O or petrol)

Melting Point: Mp -16° (-12°)

Boiling Point: Bp₇₆₃ 63.5-64°

Solubility: Sol. most. org. solvs.

Density: d₄²⁰ 1.48

Other Data: Forms addn. compd., Mp 68°, with dioxan in petrol at -5°. Violently dec. by H₂O or EtOH

Hazard & Toxicity: Mixtures with K or K/Na alloy are explosive. Reacts violently with water. Explodes on contact with DMSO. Severe eye, skin and respiratory tract irritant

Aldrich: O-880-1

Fluka: 75760

Sigma: O5376

References:

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