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>>Entry Name: Acetyl chloride

CAS Registry Number: 75-36-5

Related CAS Registry Numbers(s): 19259-90-6

$\text{H}_3\text{CCOCl}$

**Molecular Formula:**  $\text{C}_2\text{H}_3\text{ClO}$

**Molecular Weight:** 78.498

**Accurate Mass:** 77.987242

**Percentage Composition:** C 30.60%; H 3.85%; Cl 45.16%; O 20.38%

**Use/Importance:** Acetylating agent. Reduces sulfoxides to sulfides. Used in titrimetric detn. of  $\text{H}_2\text{O}$  in org. solns.

**Physical Description:** Very pungent liq., fuming in air

**Melting Point:** Mp  $-112^\circ$

**Boiling Point:** Bp  $51-52^\circ$

**Solubility:** Sol.  $\text{Et}_2\text{O}$ ,  $\text{C}_6\text{H}_6$

**Hazard & Toxicity:** Highly flammable, fl. p.  $4^\circ$ . Reacts violently with  $\text{H}_2\text{O}$  and DMSO. Lachrymator. Corrosive and irritating to all tissues

**Aldrich:** 23957-7

**Fluka:** 1000

**Sigma:** A0772

**References:**

*Aldrich Library of FT-IR Spectra*, 1st edn., 1985, **1**, 723A, (ir)

Gmuender, J., *Helv. Chim. Acta*, 1953, **36**, 2021, (synth)

*Fieser and Fieser's Reagents for Organic Synthesis*, Wiley, 1979, **7**, 3, (use)

Lewis, R.J., *Sax's Dangerous Properties of Industrial Materials*, 8th edn., Van Nostrand Reinhold, 1992, ACF750

Bretherick, L., *Handbook of Reactive Chemical Hazards*, 4th edn., Butterworths, 1990, 0691

Luxon, S.G., *Hazards in the Chemical Laboratory*, 5th edn., Royal Society of Chemistry, 1992, 5; 11