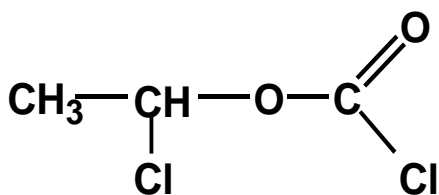


1-CHLOROETHYL CHLOROFORMATE

1CECF



Molecular formula:	C ₃ H ₄ Cl ₂ O ₂
Molecular weight:	143.0
CAS number:	50893-53-3
EC number:	256-834-2

SYNONYMS

Carbonochloridic acid, 1-chlorethyl ester.
 α -Chloroethyl chloroformate.

APPEARANCE

Clear liquid with pungent odor.

PHYSICAL PROPERTIES

Density (20°C): 1.295 g/cm³

Boiling point: 117 °C / 101 kPa

Melting point: - 65 °C

Solubility:

Soluble in usual organic solvents (acetone, toluene, chloroform, THF).

CHEMICAL PROPERTIES

- Reacts by hydrolysis yielding hydrochloric acid, carbon dioxide and acetaldehyde.
- Reacts with amines yielding carbamates.
- Reacts with alcohols yielding carbonates.

USES

- Organic synthesis intermediate.

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SPECIFICATION

Parameter	Guaranteed value	Method	Operating procedure
Appearance	Clear liquid	Visual	
Color	≤ 50 APHA	Colorimetry	C – 210
Purity	≥ 98.0 %	Gas chromatography	GC – 830
Phosgene	≤ 0.05 %	Iodometry	I – 230
Hydrogen chloride	≤ 0.1 %	Acidimetry	A – 220
1,1-Dichloroethane	≤ 0.5 %	Gas chromatography	GC – 830
Acetaldehyde	≤ 0.1 %	Gas chromatography	GC – 830

PACKAGING

Polyethylene lined metal drum containing 30 or 60 kg.

Polyethylene drum containing 265 kg.
In bulk.

HANDLING PRECAUTIONS

- Physicochemical hazard:

Flash point: (closed cup) 45 °C

- Health hazards:

LD 50 (oral, rat): 470 mg/kg

Irritating on skin, mucous membrane and eyes.

- Recommended:

When handling this product wear gloves, goggles, mask and protective clothes.

If eyes or skin are contaminated wash immediately with clean water for at least 15 minutes. In case of inhalation of concentrated vapors take person to fresh air. In both cases consult a physician.

- Neutralization:

Neutralize by reaction with an alkaline solution.

STORAGE

Stored in its closed original packaging, protected from direct sunshine, in a covered, dry, cool and well-ventilated warehouse the product is stable.

However, in case of prolonged storage it is recommended to check again the product before use by measuring typical parameters such as color, hydrogen chloride and acetaldehyde levels.

TRANSPORTATION

Refer to MSDS.