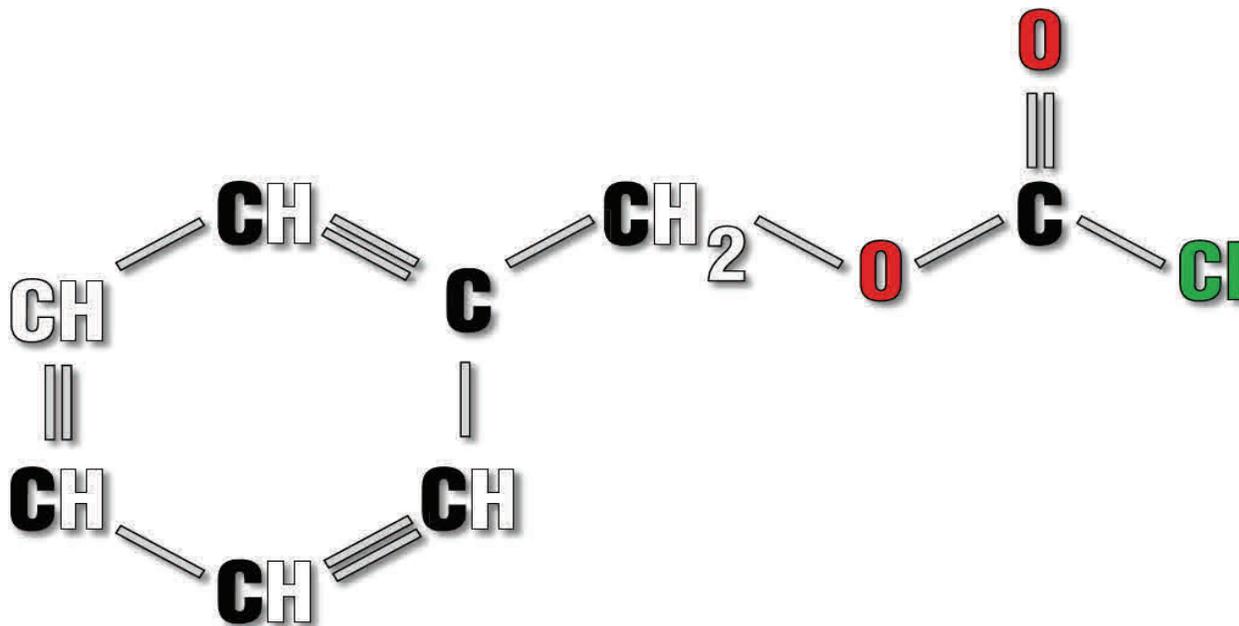


## Benzyl Chloroformate

(CHLOROFORMIC ACID, BENZYL ESTER)



Molecular Weight = 170.6

CAS# 501-53-1

### SPECIFICATIONS

Assay: 98.% min.

Benzyl Alcohol: 0.1% max.

Benzyl Chloride: 1.5% max.

Dibenzyl Carbonate: 0.5% max.

Color (APHA): 50 max.

Hydrogen Chloride: 0.1% max.

Phosgene: 0.1% max.

Iron: 1.5 PPM max.

### PHYSICAL PROPERTIES

Appearance: Clear liquid free of visible contaminants

Odor: Pungent

MP/Range: -30°C

BP: Decomposes at elevated temperature

Density: 1.195 -1.22

Flash Point: 126°C

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**APPLICATIONS**

Benzyl Chloroformate is a reactive chemical intermediate used in the synthesis of pharmaceutical and agrochemical products. It is used as a reagent in peptide synthesis to protect the amine functionality as the benzyloxycarbonyl (Cbz or Z) derivative.

**SAFETY AND HANDLING**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. Handle product only in closed system or provide appropriate exhaust ventilation at machinery. In case of insufficient ventilation, wear suitable respiratory equipment.

**FIRST AID**

Seek immediate medical attention. Show MSDS to doctor.

- Eye Contact:** Immediate medical attention is required. Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Do not rub affected area.
- Skin Contact:** Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Remove and wash contaminated clothing before re-use.
- Ingestion:** Call a physician or Poison Control Center immediately. Remove from exposure and lie down. Do NOT induce vomiting without medical advice. Clean mouth with water and then drink plenty of water. Never give anything by mouth to an unconscious person.
- Inhalation:** Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Seek immediate medical attention/advice.

**SPILLS AND DISPOSAL**

Use personal protective equipment (see MSDS). Evacuate personnel to safe areas. Dike far ahead of liquid spill for later disposal. Prevent further leakage if safe to do so. Cover liquid spill with sand, earth or other non-combustible absorbent material. Pick up and transfer to properly labeled containers. Dispose of as hazardous waste. Dispose of empty containers according to local regulations. DO NOT reuse empty containers.

**STORAGE**

Store at temperature at or below  $-15^{\circ}\text{C}$  ( $5^{\circ}\text{F}$ ) in a dry, well-ventilated location. All equipment and storage vessels must be constructed of Teflon or glass-lined steel. Keep container tightly closed. Protect from sunlight and avoid any contact with iron. Product is stable when stored properly at recommended storage temperature. Storage in recommended temperatures and conditions will ensure product quality for minimum 12 months before retesting may be needed to determine assay. Storage in conditions between  $-15^{\circ}\text{C}$  ( $5^{\circ}\text{F}$ ) and  $-5^{\circ}\text{C}$  ( $23^{\circ}\text{F}$ ) may require retesting after 6 months to determine assay. Storage above  $0^{\circ}\text{C}$  ( $32^{\circ}\text{F}$ ) not recommended.

**PACKAGING AND SHIPPING**

Benzyl Chloroformate is available in 20 kg (5 gal) pails and 200 kg (55 gal) drums. Other packaging can be considered upon request.

**EMERGENCY RESPONSE**

\*Contact CHEMTREC 1-800-424-9300 in case of a transportation incident.

\*Contact VanDeMark 1-716-433-6764 for all other incidents.