

**Material Safety Data Sheet**

Version 5.0  
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**1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : Triphosgene  
Product Number : 330752  
Brand : Aldrich  
Supplier : Sigma-Aldrich  
3050 Spruce Street  
SAINT LOUIS MO 63103  
USA  
Telephone : +1 800-325-5832  
Fax : +1 800-325-5052  
Emergency Phone # (For both supplier and manufacturer) : (314) 776-8555  
Preparation Information : Sigma-Aldrich Corporation  
Product Safety - Americas Region  
1-800-521-8956

**2. HAZARDS IDENTIFICATION**

**Emergency Overview**

**OSHA Hazards**  
Highly toxic by inhalation, Corrosive

**GHS Classification**  
Acute toxicity, Oral (Category 5)  
Acute toxicity, Inhalation (Category 1)  
Acute toxicity, Dermal (Category 5)  
Skin corrosion (Category 1B)  
Serious eye damage (Category 1)

**GHS Label elements, including precautionary statements**

Pictogram 

Signal word : Danger

Hazard statement(s)  
H303 + H313 : May be harmful if swallowed or in contact with skin.  
H314 : Causes severe skin burns and eye damage.  
H330 : Fatal if inhaled.

Precautionary statement(s)  
P260 : Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P280 : Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P284 : Wear respiratory protection.  
P305 + P351 + P338 : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 : Immediately call a POISON CENTER or doctor/ physician.

**HMS Classification**  
Health hazard: 4  
Flammability: 0  
Physical hazards: 0

**NFPA Rating**  
Health hazard: 4  
Fire: 0  
Reactivity Hazard: 0

**Potential Health Effects**

**Inhalation** : May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.  
**Skin** : May be harmful if absorbed through skin. Causes skin burns.  
**Eyes** : Causes eye burns.  
**Ingestion** : May be harmful if swallowed.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Synonyms : Bis(trichloromethyl) carbonate  
Formula : C<sub>3</sub>Cl<sub>6</sub>O<sub>3</sub>  
Molecular Weight : 296.75 g/mol

Component	Concentration
<b>Bis(trichloromethyl) carbonate</b>	
CAS-No.	32315-10-9
EC-No.	250-986-3

**4. FIRST AID MEASURES**

**General advice**  
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.  
**If inhaled**  
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.  
**In case of skin contact**  
Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.  
**In case of eye contact**  
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.  
**If swallowed**  
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**5. FIREFIGHTING MEASURES**

**Conditions of flammability**  
Not flammable or combustible.  
**Suitable extinguishing media**  
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.  
**Special protective equipment for firefighters**  
Wear self contained breathing apparatus for fire fighting if necessary.  
**Hazardous combustion products**  
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions**  
Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

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**Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**Methods and materials for containment and cleaning up**

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

**7. HANDLING AND STORAGE****Precautions for safe handling**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

**Conditions for safe storage**

Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature: 2 - 8 °C

Moisture sensitive. Heat sensitive.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

Contains no substances with occupational exposure limit values.

**Personal protective equipment****Respiratory protection**

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand protection**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Eye protection**

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin and body protection**

Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Hygiene measures**

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

**9. PHYSICAL AND CHEMICAL PROPERTIES****Appearance**

Form	solid
Colour	beige

**Safety data**

pH	no data available
Melting point/freezing point	Melting point/range: 79 - 83 °C (174 - 181 °F) - lit.
Boiling point	203 - 206 °C (397 - 403 °F) - lit.
Flash point	no data available
Ignition temperature	no data available
Autoignition	no data available

**temperature**

Lower explosion limit	no data available
Upper explosion limit	no data available
Vapour pressure	no data available
Density	no data available
Water solubility	no data available
Partition coefficient: n-octanol/water	no data available
Relative vapour density	no data available
Odour	no data available
Odour Threshold	no data available
Evaporation rate	no data available

**10. STABILITY AND REACTIVITY****Chemical stability**

Stable under recommended storage conditions.

**Possibility of hazardous reactions**

no data available

**Conditions to avoid**

Avoid moisture. Heat.

**Materials to avoid**

Strong oxidizing agents, acids, Strong bases, Amines

**Hazardous decomposition products**

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Hydrogen chloride gas  
Other decomposition products - Phosgene  
Other decomposition products - no data available

**11. TOXICOLOGICAL INFORMATION****Acute toxicity****Oral LD50**

LD50 Oral - rat - > 2,000 mg/kg

**Inhalation LC50**

no data available

**Dermal LD50**

LD50 Dermal - rat - > 2,000 mg/kg

**Other information on acute toxicity**

no data available

**Skin corrosion/irritation**

no data available

**Serious eye damage/eye irritation**

no data available

**Respiratory or skin sensitization**

no data available

**Germ cell mutagenicity**

no data available

**Carcinogenicity**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

#### Reproductive toxicity

no data available

#### Teratogenicity

no data available

#### Specific target organ toxicity - single exposure (Globally Harmonized System)

no data available

#### Specific target organ toxicity - repeated exposure (Globally Harmonized System)

no data available

#### Aspiration hazard

no data available

#### Potential health effects

**Inhalation** May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

**Ingestion** May be harmful if swallowed.

**Skin** May be harmful if absorbed through skin. Causes skin burns.

**Eyes** Causes eye burns.

#### Signs and Symptoms of Exposure

burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

#### Synergistic effects

no data available

#### Additional Information

RTECS: Not available

## 12. ECOLOGICAL INFORMATION

#### Toxicity

no data available

#### Persistence and degradability

no data available

#### Bioaccumulative potential

no data available

#### Mobility in soil

no data available

#### PBT and vPvB assessment

no data available

#### Other adverse effects

no data available

## 13. DISPOSAL CONSIDERATIONS

#### Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

#### Contaminated packaging

Dispose of as unused product.

## 14. TRANSPORT INFORMATION

#### DOT (US)

UN number: 2928 Class: 6.1 (8) Packing group: II  
Proper shipping name: Toxic solids, corrosive, organic, n.o.s. (Bis(trichloromethyl) carbonate)  
Marine pollutant: No  
Poison Inhalation Hazard: No

#### IMDG

UN number: 2928 Class: 6.1 (8) Packing group: II EMS-No: F-A, S-B  
Proper shipping name: TOXIC SOLID, CORROSIVE, ORGANIC, N.O.S. (Bis(trichloromethyl) carbonate)  
Marine pollutant: No

#### IATA

UN number: 2928 Class: 6.1 (8) Packing group: II  
Proper shipping name: Toxic solid, corrosive, organic, n.o.s. (Bis(trichloromethyl) carbonate)

## 15. REGULATORY INFORMATION

#### OSHA Hazards

Highly toxic by inhalation, Corrosive

#### SARA 302 Components

SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

#### SARA 313 Components

SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

#### SARA 311/312 Hazards

Acute Health Hazard

#### Massachusetts Right To Know Components

No components are subject to the Massachusetts Right to Know Act.

#### Pennsylvania Right To Know Components

	CAS-No.	Revision Date
Bis(trichloromethyl) carbonate	32315-10-9	

#### New Jersey Right To Know Components

	CAS-No.	Revision Date
Bis(trichloromethyl) carbonate	32315-10-9	

#### California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## 16. OTHER INFORMATION

#### Further information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.sigma-aldrich.com](http://www.sigma-aldrich.com) and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.

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