



Section 1. Product and Company Identification

**Product Name** Diethylene Glycol Bis(chloroformate)  
**CAS Number** 106-75-2

**Parchem - fine & specialty chemicals**

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EMERGENCY RESPONSE NUMBER  
CHEMTEL

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Collect Calls Accepted

Section 2. Hazards Identification

**Classification of the substance or mixture**

**Classification according to Regulation 1272/2008/EC (CLP)**

Acute Tox. 4 - H302

Skin Irrit. 2 - H315

Eye Dam. 1 - H318

Aquatic Chronic 2 - H411

**GHS Label Elements**

**Pictograms:**



**Signal word:** WARNING

**Hazard and precautionary statements**

**Hazard Statements**

H302 - Harmful if swallowed.

H315 - Causes skin irritation.

H318 - Causes serious eye damage.

H411 - Toxic to aquatic life with long lasting effects.

**Precautionary Statements**

P202 - Do not handle until all safety precautions have been read and understood.

P273 - Avoid release to the environment.

P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.



P405 - Store locked up.  
P501 - Dispose of contents/container to hazardous waste collection point.

**Classification according to Directive 67/548/EEC**

Xn - Harmful - R22  
Xi - Irritant - R38, R41  
N - Environmental hazard - R51/53

**R Phrases** referring to the hazards/risks:

R 22 - Harmful if swallowed.  
R 38 - Irritating to skin.  
R 41 - Risk of serious damage to eyes.  
R 51/53 - Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

**Other hazards:** The substance does not meet the PBT and vPvB criteria according to Annex XIII of Regulation 1907/2006/EC. Information concerning specific hazards for human and environment: See Section 11 and 12.

Section 3. Composition / Information on Ingredients

**Common Name** Diethylene Glycol Bis(chloroformate)  
**Synonym(s)** Oxydiethylene bis (chloroformate)  
**Formula** C<sub>6</sub>H<sub>8</sub>O<sub>5</sub>Cl<sub>2</sub>  
**CAS Number** 106-75-2

COMPONENT	CAS NUMBER	CONCENTRATION
Diethylene Glycol Bis(chloroformate)	106-75-2	≥ 99.5%

Section 4. First Aid Measures

**Description of first aid measures**

**Ingestion:** Obtain immediate medical attention and show him the label. Place the victim into comfortable position. Do not give the victim anything to eat or drink, and do not induce vomiting if the victim is unconscious. In case of vomiting turn the head down of the injured person.

**Inhalation:** Take the victim into fresh air, loosen his clothes and let him rest. If the victim is unconscious and breathing, place him into recovery position. Obtain immediate medical attention and show him the label.

**Skin Contact:** Immediately remove the contaminated clothes. Immediately wash the contaminated area with plenty of flowing water and soap (for 15 minutes). If symptoms occur, obtain immediate medical attention and show him the label.

**Eye Contact:** In case of contact with eyes flush with water holding eyelids apart and moving the eyeballs (for at least 15 minutes). Call a specialist.



**Most important symptoms and effects, both acute and delayed:** See section 11 for information on health effects and symptoms.

**Indication of any immediate medical attention and special treatment needed:** See section 11 for information on health effects and symptoms.

#### Section 5. Firefighting Measures

##### **Extinguishing media**

**Suitable extinguishing media:** Powder, carbon dioxide, foam.

**Unsuitable extinguishing media:** Water.

**Special hazards arising from the substance or mixture:** Smoke and other combustion products (hydrochloric acid). The inhalation of such combustion products can cause serious adverse effects on health.

**Advice for firefighters:** Wear a self-contained respiratory device operating with overpressure and compressed air (self-rescue breathing apparatus) and appropriate full protective clothing and protective equipment which avoids contact of the product with skin, eyes, and the inhalation of hazardous gases and smoke generated during the combustion.

#### Section 6. Accidental Release Measures

##### **Personal precautions, protective equipment, and emergency procedures**

**For non-emergency personnel:** Keep unprotected people away, allow only well trained experts wearing suitable protective clothing to abide in the field of accident.

**For emergency responders:** Evacuate the unauthorized persons for the place of the accident. Remove all ignition sources from the affected area. Close the designated area. Ensure adequate ventilation.

**Environmental precautions:** Dispose of spillage and waste (product/packaging) in accordance with all applicable environmental laws. Do not allow to enter sewers/soil/surface or ground water. Notify the respective authorities in accordance with local law in the case of environmental pollution immediately.

**Methods and material for containment and cleaning up:** Collect the spilled material with inert, non-combustible, mineral absorbent (sand, earth, perlite), then place into a suitable, closed, properly labelled chemical waste container till removal/disposal. During the collection/placement/disposal of the hazardous waste use appropriate personal protective equipment.

**Reference to other sections:** For further and detailed information see section 8 and 13.

#### Section 7. Handling and Storage

**Precautions for safe handling:** Observe conventional hygiene precautions. Avoid contact of the product with skin, eyes and clothing.

**Technical measures:** Ensure adequate ventilation / local extraction.

**Precautions against fire and explosion:** No special measures required.

**Conditions for safe storage, including any incompatibilities**

**Technical measures and storage condition:** Keep in closed and appropriately labelled container. The place of storage has to be properly ventilated and cleanable. Store in cool and dry place. Follow all instructions on the label.

**Incompatible materials:** Water, alcohols, bases, acids, amines.

**Packaging material:** Metal container lined with polyethylene. Do not use metal containers without lining.

Section 8. Exposure Controls / Personal Protection

**Control parameters**

**Exposure limit values:** None.

**DNEL - Worker:** No data available

**DNEL - Consumer:** No data available

**Acute - Dermal:** No data available

**Acute - Inhalation:** No data available

**Acute - Oral:** No data available

**PNEC - Water:** No data available

**PNEC - Soil:** No data available

**PNEC - Air:** No data available

**Exposure frequency:** No data available

**Exposure controls:** In case of a hazardous material with no controlled concentration limit it is the employer's duty to keep concentration levels down to a minimum achievable by existing scientific and technological means, where the hazardous substance poses no harm to workers.

**Appropriate engineering controls:** In pursuance of work is proper foresight needed to avoid spilling onto clothes and floors and to avoid contact with eyes and skin (protective goggles are recommended). Ensure adequate ventilation, especially in closed areas. Do not eat or smoke during the processing. Do not inhale the vapors. Wash and hand wash thoroughly after work. In the vicinity of the workplace safety shower and eye wash fountain has to be installed.

**Individual protection measures, such as personal protective equipment:**

**Eye/face protection:** use appropriate protective glasses/protective mask according to EN 166.

**Skin protection**

**Hand protection:** Conform to EN 374. Use appropriate protective gloves.

**Other:** use appropriate, acid resistant protective clothes according to EN ISO 6529.

**Respiratory protection:** use appropriate respiratory device (against organic vapors) according to EN 136, 141.

**Thermal hazard:** None known.

**Environmental exposure controls:** No special measures required.  
**The requirements detailed in Section 8 assume skilled work under normal conditions and usage of the product for appropriate aims. If conditions differ from normal or work is carried out under extreme conditions an expert's advice should be sought out before deciding upon further protective measures.**

Section 9. Physical and Chemical Properties

**Appearance:** Light, colorless liquid  
**Odor:** Pungent  
**Odor threshold:** No data available  
**pH Value:** Not applicable  
**Melting point/ freezing point:** 5.8 °C  
**Initial boiling point/boiling range:** No data available  
**Flash point:** 159°C  
**Evaporation rate:** No data available  
**Flammability:** No data available  
**Upper/lower flammability or explosive limits:** No data available  
**Vapor pressure:** 0.22 Pa 20 °C  
**Vapor density:** 7.9 air = 1  
**Relative density:** No data available  
**Solubility(ies):** Reacts with water while hydrochloric acid is formed. Soluble in organic solvents.  
**Partition coefficient (n-Octanol/water):** Not applicable  
**Auto-ignition temperature:** No data available  
**Degradation temperature:** 115°C  
**Viscosity:** No data available  
**Explosive properties:** No data available  
**Oxidizing properties:** No data available

**Other information:** No data available.  
**Density (20°C):** 1,386 g/cm<sup>3</sup>

Section 10. Stability and Reactivity

**Reactivity**

**Decomposition temperature:** 115 °C. Decomposition temperature: 600 J/g (ATD - 2, °C / min).  
**Chemical stability:** At normal temperature and general conditions of work stable.  
**Possibility of hazardous reactions:** Reacts with water.  
**Conditions to avoid:** Contact with water.  
**Incompatible materials:** Alkalis, water, amines, alcohol.  
**Hazardous decomposition products:** Hydrochloric acid, carbon dioxide.

Section 11. Toxicological Information

**Information on toxicological effects**

**Acute toxicity:** Harmful if swallowed.

**Skin corrosion/irritation:** Causes skin irritation.

**Serious eye damage/eye irritation:** Causes serious eye damage.

**Respiratory or skin sensitization:** None known.

**Germ cell mutagenicity:** None known.

**Carcinogenicity:** None known.

**Reproductive toxicity:** None known.

**STOT - single exposure:** None known.

**STOT - repeated exposure:** None known.

**Aspiration hazard:** None known.

**For substances subject to registration, brief summaries of the information derived from the test conducted:** No data available.

**Relevant toxicological properties of the hazardous substances**

**LD50 (oral, rat):** 220 mg/kg.

**LD50 (inhalative, mouse):** 169 ppm (1h)

**Information on likely routes of exposure:** Ingestion, inhalation, skin contact, eye contact.

**Symptoms related to the physical, chemical, and toxicological characteristics**

**Acute effects:** Irritates the mucous membranes. May cause pneumonia if inhaled. The symptoms may be delayed.

**Ingestion:** Harmful if swallowed.

**Inhalation:** No data available.

**Skin contact:** Skin irritating.

**Eye contact:** Strongly irritant, may cause serious eye damage.

**Irritation:** None known.

**Sensitization:** No sensitizing effect known.

**Subacute toxicity:**

**Symptoms by intensive or prolonged exposition:** Not known

**Delayed and immediate effects as well as chronic effects from short and long-term exposure:** Harmful if swallowed. Causes skin irritation. Causes serious eye damage.

**Interactive effects:** No data available.

**Absence of specific data:** No information.



**Other information**

**Carcinogenicity:** None known.

**Toxicity for reproduction:** None known.

**Mutagenicity:** None known.

**Summarized evaluation of the CMR properties:** None.

**Specific symptoms observed in animal studies:** None known.

Section 12. Ecological Information

**Toxicity:** Toxic to aquatic life with long lasting effects.

Algae (*Scenedesmus quadricauda*): 2700 mg/l; *Daphnia magna*: LC50: 0,3 - 1 mg/l;

Fish (gold fish): LD50: > 5000 mg/l/ 24 h; Bacteria (*Pseudomonas putida*): 8000 mg/l.

**Persistence and degradability:** No data available.

**Bioaccumulation potential:** No data available.

**Mobility in soil:** During the hydrolysis, the product decomposes while hydrochloric acid, carbon dioxide and alcohol are formed.

Diethylene glycol: Diethylen glycol: logPow (DEG) = -1,98 (calculated).

**Results of PBT and vPvB assessment:** This substance does not meet the criteria of PBT or vPvB.

**Other adverse effects:** No data available.

Section 13. Disposal Considerations

**Waste Treatment Methods:** Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

**UN Number:** 3277

**UN proper shipping name:** Chloroformates, Toxic, Corrosive N.O.S. Oxydiethylene bis(chloroformate)

**Transport Hazard Class(es):** Class 6.1

**Packaging group:** PG II

**Environmental Hazard**

**ADR/RID:** Yes

**IMDG:** Yes

**IATA:** Yes

**Special precautions for user:** No relevant information available.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code:** Not applicable.



Section 15. Regulatory Information

**Safety, health, and environmental regulations/legislation specific for the substance or mixture**

REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC

COMMISSION REGULATION (EC) No 790/2009 of 10 August 2009 amending, for the purposes of its adaptation to technical and scientific progress, Regulation (EC) No 1272/2008 of the European Parliament and of the Council on classification, labelling and packaging of substances and mixtures

REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006

COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)

**Chemical Safety Assessment:** No information available.

Section 16. Other Information

**Disclaimer:** 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.

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