

**1 Identification of substance****Product details**

Trade name

**Oxalyl chloride**

Stock number:

A18012, L11582

Manufacturer/Supplier:

Alfa Aesar GmbH & Co.KG  
Benzstrasse 3  
D-76185 Karlsruhe / GermanyE-mail: gcat@matthey.com  
www.alfa-chemcat.com

Informing department:

Product safety department.

Emergency information:

Giftnotruf Universität Mainz / Poison Information Center Mainz  
www.giftinfo.uni-mainz.de Telefon:+49(0)6131/19240**2 Hazards identification**

Hazard designation:



C Corrosive

Information pertaining to particular dangers for man and environment

R 14 Reacts violently with water.  
R 20/22 Harmful by inhalation and if swallowed.  
R 29 Contact with water liberates toxic gas.  
R 34 Causes burns.

GHS label elements

**Danger**

H331 - Toxic if inhaled.

**Danger**

H314 - Causes severe skin burns and eye damage.

**Warning**

H302+EUH029 - Harmful if swallowed. Contact with water liberates toxic gas.

EUH014 - Reacts violently with water.

Prevention:

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response:

P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.

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.

Storage:

P402+P404 Store in a dry place. Store in a closed container.

**3 Composition/information on ingredients**

Chemical characterization:

Designation: (CAS#)

Oxalyl chloride (CAS# 79-37-8): 98%  
Phosgene (CAS# 75-44-5): <0.5%  
Trichloroacetyl chloride (CAS# 76-02-8): <1%

Identification number(s):

EINECS Number:

201-200-2

**4 First aid measures**General information  
After inhalationInstantly remove any clothing soiled by the product.  
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

After skin contact

Seek immediate medical advice.  
Instantly wash with water and soap and rinse thoroughly.

After eye contact

Seek immediate medical advice.  
Rinse opened eye for several minutes under running water. Then consult doctor.

After swallowing

Seek immediate medical advice.

**5 Fire fighting measures**

Suitable extinguishing agents

Use fire fighting measures that suit the environment.  
In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.

For safety reasons unsuitable extinguishing agents

Water.

Special hazards caused by the material, its products of combustion or flue gases:

Reacts violently with water  
Can be released in case of fire:  
Carbon monoxide and carbon dioxide  
Phosgene gas

Protective equipment:

Hydrogen chloride (HCl)  
Wear self-contained breathing apparatus.  
Wear full protective suit.**6 Accidental release measures**

Person-related safety precautions:

Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation

Measures for environmental protection:

Measures for cleaning/collecting:

Do not allow material to be released to the environment without proper governmental permits.  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Use neutralizing agent.

Additional information:

Dispose of contaminated material as waste according to item 13.  
Ensure adequate ventilation.  
Do not flush with water or aqueous cleansing agents  
See Section 7 for information on safe handling  
See section 8 for information on personal protection equipment.  
See Section 13 for information on disposal.**7 Handling and storage**

Handling

Information for safe handling:

Handle under dry protective gas.  
Keep containers tightly sealed.  
Store in cool, dry place in tightly closed containers.  
Ensure good ventilation/exhaustion at the workplace.

Information about protection against explosions and fires:

Keep ignition sources away - Do not smoke.  
The product is not flammable

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**Storage Requirements to be met by storerooms and containers:**  
**Information about storage in one common storage facility:**

No special requirements.  
Store away from water.  
Store away from strong bases.  
Store away from oxidizing agents.

**Further information about storage conditions:**

Store under dry inert gas.  
Protect from humidity and keep away from water.  
This product is moisture sensitive.  
Keep container tightly sealed.  
Store in cool, dry conditions in well sealed containers.  
Store in a locked cabinet or with access restricted to technical experts or their assistants.

**8 Exposure controls and personal protection**

**Additional information about design of technical systems:**

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

**Components with critical values that require monitoring at the workplace:**  
**Additional information:**

Not required.  
No data

**Personal protective equipment**  
**General protective and hygienic measures**

The usual precautionary measures should be adhered to in handling the chemicals.  
Keep away from foodstuffs, beverages and food.  
Instantly remove any soiled and impregnated garments.  
Wash hands during breaks and at the end of the work.  
Avoid contact with the eyes and skin.

**Breathing equipment:**

Use breathing protection in case of insufficient ventilation.  
Use breathing protection with high concentrations.

**Protection of hands:**  
**Material of gloves**

Check protective gloves prior to each use for their proper condition.  
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

**Eye protection:**

Safety glasses  
Tightly sealed safety glasses.  
Full face protection

**Body protection:**

Face protection  
Protective work clothing.

**9 Physical and chemical properties:****General Information**

**Form:** Liquid  
**Colour:** Colourless  
**Smell:** Acrid

**Change in condition**

**Melting point/Melting range:** -12°C  
**Boiling point/Boiling range:** 63-64°C  
**Sublimation temperature / start:** Not determined

**Flash point:** Not determined

**Ignition temperature:** Not determined

**Decomposition temperature:** Not determined

**Danger of explosion:** Product is not explosive.

**Critical values for explosion:**

**Lower:** Not determined  
**Upper:** Not determined

**Steam pressure at 19°C:** 232 hPa

**Density at 20°C** 1.455 g/cm<sup>3</sup>

**Solubility in / Miscibility with Water:** Reacts violently

**10 Stability and reactivity**

**Thermal decomposition / conditions to be avoided:**

No decomposition if used and stored according to specifications.

**Materials to be avoided:**

Water/moisture  
Bases  
Alcohols  
Amines  
Active metals  
Oxidizing agents

**Dangerous reactions:**

Reacts violently with water  
Contact with water releases toxic gases

**Dangerous products of decomposition:**

Carbon monoxide and carbon dioxide  
Hydrogen chloride (HCl)  
Phosgen

**11 Toxicological information****Acute toxicity:****LD/LC50 values that are relevant for classification:**

Oral	LD50	600 mg/kg (rat) (external SDS)
Inhalative	LC50/1H	1840 ppm/1H (rat) (RTECS)
	LC50/4H	4500 mg/m <sup>3</sup> /4H (rat) (external SDS) 855 ppm/4H (rat) (external SDS)

**Primary irritant effect:**

**on the skin:**

Corrosive effect on skin and mucous membranes.

**on the eye:**

Strong corrosive effect.

**Sensitization:**

Lachrymatory effect.  
No sensitizing effect known.

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**Safety Data Sheet**  
according to 1907/2006/EC, Article 31

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**Trade name Oxalyl chloride****Additional toxicological information:**

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To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach. No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

**12 Ecological information:****Additional ecological information:  
General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water. Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system. Do not allow material to be released to the environment without proper governmental permits.

**13 Disposal considerations****Product:  
Recommendation**

Consult state, local or national regulations for proper disposal. Hand over to disposers of hazardous waste. Must be specially treated under adherence to official regulations.

**Uncleaned packagings:  
Recommendation:**

Disposal must be made according to official regulations.

**14 Transport information****Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)**

**ADR/RID-GGVS/E Class:** 6.1 (TC1) Toxic substances.  
**Kemler Number:** 68  
**UN-Number:** 2927  
**Packaging group:** II  
**Label:** 6.1+8  
**Designation of goods:** 2927 TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (Oxalyl chloride)  
**Limited quantities (LQ):** LQ17  
**Transport category:** 2  
**Tunnel restriction code:** D/E

**Maritime transport IMDG/GGVSea:**

**IMDG/GGVSea Class:** 6.1  
**UN Number:** 2927  
**Label:** 6.1+8  
**Packaging group:** II  
**EMS Number:** F-A,S-B  
**Marine pollutant:** No  
**Correct technical name:** TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (Oxalyl chloride)

**Air transport ICAO-TI and IATA-DGR:**

**ICAO/IATA Class:** 6.1  
**UN/ID Number:** 2927  
**Label:** 6.1+8  
**Packaging group:** II  
**Correct technical name:** TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S. (Oxalyl chloride)

**UN "Model Regulation":**

UN2927, TOXIC LIQUID, CORROSIVE, ORGANIC, N.O.S., 6.1 (8), II

**15 Regulatory information****Designation according to EC guidelines:****Code letter and hazard designation of product:**

C Corrosive

**Risk phrases:**

14 Reacts violently with water.  
20/22 Harmful by inhalation and if swallowed.  
29 Contact with water liberates toxic gas.  
34 Causes burns.

**Safety phrases:**

8 Keep container dry.  
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
30 Never add water to this product.  
36/37/39 Wear suitable protective clothing, gloves and eye/face protection.  
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**National regulations****Information about limitation of use:**

Employment restrictions concerning young persons must be observed. For use only by technically qualified individuals.

**Water hazard class:**

Water hazard class 1 (Self-assessment): slightly hazardous for water.

**16 Other information:**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.

**Department issuing data specification sheet:** Health, Safety and Environmental Department.**Contact:** Zachariah Holt**Abbreviations and acronyms:** ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

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GB

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RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)  
ICAO: International Civil Aviation Organization  
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)  
GHS: Globally Harmonized System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent

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