

Carbonyl Dichloride

COCl₂

1. Identification of the substance/mixture and of the company/undertaking

Product identifier	
Name of product	Carbonyl chloride
	Art-Nr.: 2500
Name of substance	carbonyl chloride
Index No	006-002-00-8
EC No	200-870-3
CAS No	75-44-5

Manufacturer / Distributor:

Ehsan International Gases

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2. Hazards identification

Classification according to 67/548/EEC or 1999/45/EC

T+; R26

C; R34

R-phrases

26 Very toxic by inhalation.

34 Causes burns.

! Classification according to Regulation (EC) No 1272/2008 [CLP/GHS]

Hazard classes and Hazard categories	Hazard Statements	Classification procedure
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Liquef. Gas	H280
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Acute Tox. 1	H330
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! Skin Corr. 1B	H314
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H314	Causes severe skin burns and eye damage.	H330	Fatal if inhaled.
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Additional hints

Listed substance (Regulation (EC) No 1272/2008, Annex VI, part 3).

Labelling according to Regulation (EC) No 1272/2008 [CLP/GHS]

Hazard statements for physical hazards

H280 Contains gas under pressure; may explode if heated.

Hazard statements for health hazards

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GHS04



GHS05



GHS06

! Signal word

Danger

! Hazard statements for physical hazards

H280 Contains gas under pressure; may explode if heated.

! Hazard statements for health hazards

H314 Causes severe skin burns and eye damage. H330
Fatal if inhaled.

Precautionary Statements

! Prevention

P260 Do not breathe gas/vapours.

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.

P304 + P340 IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

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

P315 ! Get immediate medical advice/attention.

Storage

P403 Store in a well-ventilated place.

P405 Store locked up.

Hazardous ingredients for labeling

carbonyl chloride

Supplemental Hazard information (EU)

Health properties

Corrosive to the respiratory tract.

! Information pertaining to special dangers for human and environment

Gas/vapour heavier than air. May accumulate in confined spaces, particularly at or below ground level. Contact with liquid may cause cold burns/frostbite.

3. Composition/information on ingredients

CAS No 75-44-5

carbonyl chloride

EC No 200-870-3

Index No 006-002-00-8

4. First aid measures

General information

Remove contaminated soaked clothing immediately and dispose it safely.

Adhere to personal protective measures when giving first aid.

Seek medical treatment immediately.

In case of inhalation

Remove the casualty into fresh air and keep him immobile.

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In case of breathing difficulties give oxygen.

In the event of pulmonary irritation treat initially with corticoid spray, e.g. Ventolair- or Pulmicort- metered-dose aerosol (Ventolair and Pulmicort are registered trademarks).

Seek medical treatment immediately.

In case of respiratory standstill give artificial respiration by respiratory bag (Ambu bag) or respirator. Send for a doctor.

In case of skin contact

In case of contact with skin wash off immediately with soap and water.

Seek medical treatment immediately.

In case of eye contact

Eye rinsing with water carefully while protecting unhurt eye.

Medical treatment by eye specialist.

Call for a doctor immediately.

In case of ingestion

Ingestion is not considered a potential route of exposure.

Physician's information / possible dangers

Risk of pulmonary oedema

Treatment (Advice to doctor)

Pulmonary oedema prophylaxis.

5. Firefighting measures

Suitable extinguishing media

water

Product does not burn, fire-extinguishing activities according to surrounding.

Foam

Dry powder

Carbon dioxide

Extinguishing media which must not be used for safety reasons

Full water jet

Special hazards arising from the substance or mixture

In the event of fire the following can be released:

Carbon monoxide (CO)

Chlorine (Cl₂)

Special protective equipment for fire-fighters

Use breathing apparatus with independent air supply (isolated). Wear full protective clothing.

! Additional information

Cool endangered containers with water spray jet.

Exposure to fire may cause containers to rupture / explode.

6. Accidental release measures

Personal precautions

See chapter 8.

Remove persons to safety.

Evacuate area.

Keep people away and stay on the upwind side.

Pay attention to extension of gas especially at ground (heavier than air) and in direction of the wind.

Environmental precautions

If possible, stop flow of product.

Do not discharge into the drains/surface waters/groundwater.

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Prevent spread (e.g. by saving in a salvage packaging).
Suppress gases/vapours/mists with water spray jet Do not discharge into the subsoil/soil.

Methods for cleaning up

Ensure adequate air ventilation.
Take up with absorbent material (e.g. general-purpose binder).

Additional Information

Informations for safe handling see chapter 7.
Informations for personal protective equipment see chapter 8.
No water on the leaks.

7. Handling and storage

! Advice on safe handling

Use only in thoroughly ventilated areas.
Transfer and handle only in enclosed systems.
Prevent cylinders from falling over.
Ensure valve outlet cap nut or plug is correctly fitted.
Ensure valve protection device is correctly fitted.
Open valve slowly to avoid pressure shock.
Use only properly specified equipment which is suitable for this product, its supply pressure and temperature.
Do not allow backfeed into the container.
Suck back of water into the container must be prevented.
No water to valves, flanges and other fittings.
Purging of pipes and valves with inert gases - to avoid: water, solvents.

Advice on protection against fire and explosion

Avoid effect of heat.

Requirements for storage rooms and vessels

Ventilate store-rooms thoroughly.
Use transportable pressure equipment.
Suitable materials: Normalised steel and carbon steel, tempered steel, stainless steel.
Valve: Suitable materials: Brass, copper alloys, carbon steels, stainless steel. Unsuitable materials: Aluminium alloys.

! Advice on storage compatibility

Do not store with spontaneously flammable materials.
Do not store together with combustible liquids or combustible solids.
Do not store together with feedstuff.
Do not store together with explosives.
Do not store together with infectious substances.
Do not store together with radioactive material.
Do not store together with toxic liquids or toxic solids.
Do not store together with food.
Do not store together with oxidizing agents.

Further information on storage conditions

Store closed container at cool and aired place.
Store only in original container at temperature of 50°C maximum (=122°F).
Protect of heat.

Recommendation(s) for intended use

no

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8. Exposure controls/personal protection

Ingredients with occupational exposure limits to be monitored

CAS No	Name	Code	[mg/m ³]	[ppm]	Remark
75-44-5	Phosgene	WEL, 8 hours	0,08	0,02	UK, EH40, 2007
		Short-term	0,25	0,06	
75-44-5	Phosgene	PEL, 8 hours	0,4	0,1	OSHA, Table Z-1, USA

Indicative occupational exposure limit values (91/322/EEC, 2000/39/EC, 2006/15/EC or 2009/161/EU)

CAS No	Name	Code	[mg/m ³]	[ppm]	Remark
75-44-5	phosgene	8 hours	0,08	0,02	
		Short-term	0,4	0,1	

Respiratory protection

Keep self contained breathing apparatus readily available for emergency use.

Hand protection

Leather gloves

Eye protection safety goggles, in case of increased risk add protective face shield

! Skin protection

Safety shoes with steel toe.

Body covering work clothing, or chemical resistant suit at increased risk.

General protective measures

Do not inhale gases/vapours/aerosols.

Hygiene measures

At work do not eat, drink, smoke or take drugs.

Wash hands before breaks and after work.

Limitation and surveillance of the environment

See chapter 7.

9. Physical and chemical properties

Form	Colour	Odour
Gaseous / liquefied under pressure.	light green	pungent

Important health, safety and environmental information

	Value	Temperature	at	Method	Remark
pH value in delivery state	not applicable				

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	Value	Temperature	at	Method	Remark
Acid number	not applicable				
boiling point	7,44 °C			1013 hPa	
melting point	-127,8 °C				
Flash point	no				
Flammability (gas)	no				
Ignition temperature	no				
Vapour pressure	1564 hPa	20 °C			
Density	1,4 g/cm ³	7,44 °C		1013 hPa	liquid phase
Rel. vapour density	3,5				air = 1
Solubility in water	6,83 g/l	25 °C			hydrolyses
Solubility/other					soluble in organic solvent
Partition coefficient (log p_{OW})	not determined				
Explosive properties	no				

10. Stability and reactivity

Conditions to avoid

Heat sources / heat - risk of bursting.

Materials to avoid

Reactions with numerous chemical compounds.

Hazardous decomposition products

Carbon monoxide

Chlorine

Thermal decomposition

Remark No decomposition below 250°C.

Additional information

Stable under normal conditions.

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11. Toxicological information

Acute toxicity/Irritability/Sensitization

	Value/Validation	Species	Method	Remark
LC50 acute inhalation	0,084 mg/l (30 min)	rat	OECD 403	

Subacute Toxicity - Carcinogenicity

	Value	Species	Method	Validation
Reproduction-Toxicity	not determined			

Reproduction-Toxicity

not determined

Carcinogenicity not determined

Toxicity test (Additional information)

No experimental indication of genotoxicity in vitro

Experiences made from practice

Risk of strong eye injuries.

nes-test negative).

12. Ecological information

General regulation

Because of product characteristics not examinable.
Hydrolysis.

13. Disposal considerations

Waste code No.

16 05 04*

Name of waste

gases in pressure containers (including halons) containing dangerous substances

Wastes marked with an asterisk are considered to be hazardous waste pursuant to Directive 91/689/EEC on hazardous waste.

! Recommendations for the product

Dispose of in accordance with the local official regulations.

Recommendations for packaging

Transportable pressure equipment (empty, residual pressure): Return to supplier / manufacturer.

14. Transport information

Land and inland navigation transport ADR/RID

UN 1076 PHOSGENE, 2.3 (8), (C/D), Classification code: 2TC

Marine transport IMDG

UN 1076 PHOSGENE, 2.3 (8), Marine pollutant: no

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Ems: F-C, S-U

Air transport ICAO/IATA-DGR

UN 1076 Phosgene, 2.3 (8)

FORBIDDEN

15. Regulatory information

! Chemical Safety Assessment

For this substance a chemical safety assessment has not been carried out.

16. Other information

Recommend uses and restrictions

National and local regulations concerning chemicals shall be observed.

Further information

All declarations of safety-data-sheet refer to pure substance.

The information contained herein is based on the state of our knowledge. It characterizes the product with regard to the appropriate safety precautions. It does not represent a guarantee of the properties of the product.

Wording of the R/H-phrases specified in chapter 3 (not the classification of the mixture!)

R 26 Very toxic by inhalation.

R 34 Causes burns.

H280 Contains gas under pressure; may explode if heated.

H314 Causes severe skin burns and eye damage.

H330 Fatal if inhaled.