

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

Printing date 19.02.2010

Revision: 19.02.2010

1 Identification of the substance/preparation and of the company/undertaking

- **Product details**
- **Molecular formula:** C₃ H₆ O
- **Trade name:** propanal
- **Article number:** CH0495
- **Application of the substance / the preparation** Laboratory Reagent.
- **Manufacturer/Supplier:**
Carlo Erba Reagenti
Strada Rivoltana Km 6/7
I-20090 Rodano
Tel.: 0039 02 953251
- **Further information obtainable from:**
Q.A / Normative
email ITALY: MSDS_CER@carloerbareagenti.com
- **Information in case of emergency:**
CENTRO ANTIVELENI OSPEDALE CA GRANDA - NIGUARDA (MI)
tel: 0039 02 66 10 10 29

2 Hazards identification

- **Hazard description:**



Xi Irritant
F Highly flammable

- **Information concerning to particular hazards to man and environment:**
R 11 Highly flammable.
R 36/37/38 Irritating to eyes, respiratory system and skin.
- **Classification system:**
The product has to be labelled due to the calculation procedure of the "General Classification guideline for Substances of the EU", DIR. 67/548/EC, in the latest valid version.
- **GHS label elements**



Danger

H225 - Highly flammable liquid and vapour.



Warning

H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.

- **Prevention:**
P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P241 Use explosion-proof electrical/ventilating/lighting/equipment.
- **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.
- **Storage:**
P405 Store locked up.
- **Disposal:**
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

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3 Composition/information on ingredients

- **Chemical characterization:**
- **CAS No. Description**
Propionaldehyde
- **Identification number(s)**
- **EINECS Number:** 204-623-0
- **Index number:** 605-018-00-8

4 First-aid measures

- **After inhalation:** In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:**
Immediately wash with water and soap and rinse thoroughly. Wash contaminated clothing before reuse.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**
Wash out mouth with water provided person is conscious.
Do not induce vomiting; call for medical help immediately.
- **Information for doctor:** Show your the doctor this Material Safety Data Sheets.

5 Fire-fighting measures

- **General Information:**
As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear.
- **Suitable extinguishing agents:** CO₂ or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet.
- **Special hazards caused by the substance, its products of combustion or resulting gases:**
Carbon monoxide and carbon dioxide
- **Protective equipment:** No special measures required.

6 Accidental release measures

- **General Information:** Use proper personal protective equipment as indicated in Section 8.
- **Person-related safety precautions:**
Keep away any ignition source.
Wear protective equipment. Keep unprotected persons away.
If vapours / aerosols are formed, use personal protective equipment.
Exercise appropriate precautions to minimize direct contact with skin or eyes and prevent inhalation.
- **Measures for environmental protection:**
Do not allow product to reach sewage system or any water course.
Prevent seepage into sewage system, workpits and cellars.
- **Measures for cleaning/collecting:**
Allow to evaporate.
Collect the liquid with vacuum in a suitable container and absorb the remainder with a porous material (diatomite, acid binders, universal binders, etc).
Ensure adequate ventilation.
- **Additional information:**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

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7 Handling and storage

- **Handling:**
- **Information for safe handling:**
Only handle and refill product in closed systems or under local exhaust.
Pneumatic conveyance only with nitrogen or other inert gases.
- **Information about fire - and explosion protection:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**
Store in cool place. Keep container tightly closed in a dry and well-ventilated place.
- **Information about storage in one common storage facility:** Store away from oxidizing agents.

8 Exposure controls/personal protection

- **Additional information about design of technical facilities:** No further data; see item 7.

- **Ingredients with limit values that require monitoring at the workplace:**

Propionaldehyde

TLV (USA)	Long-term value: 48 mg/m ³ , 20 ppm
WEEL (USA)	Long-term value: 20 ppm

- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
- **Respiratory protection:**
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Suitable respiratory protective device recommended in case of leakages or handling in open devices.
Use suitable respiratory protective device in case of insufficient ventilation.
- **Protection of hands:**
The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.



Protective gloves

Rubber gloves

- **Material of gloves**

Neoprene gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

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.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

- **Eye protection:** Chemical safety goggles.

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· **Body protection:**

Choose body protection according to the amount and concentration of the dangerous substance at the work place.

9 Physical and chemical properties

- **Molecular weight** 58.08 g
- **Form:** Fluid
- **Colour:** Colourless
- **Odour:** Fruit-like

· **Change in condition**

Melting point/Melting range: -81°C

Boiling point/Boiling range: 48.8°C

- **Flash point:** < -20°C

- **Ignition temperature:** 190°C

- **Danger of explosion:** Product is not explosive. However, formation of explosive air/vapour mixtures are possible.

· **Explosion limits:**

Lower: 2.3 Vol %

Upper: 21 Vol %

- **Vapour pressure at 20°C:** 343 hPa

- **Density at 20°C:** 0.8171 g/cm³

· **Solubility in / Miscibility with**

water at 20°C: 340 g/l

- **organic solvents:** Miscible with many organic solvents.

10 Stability and reactivity

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

No decomposition if used according to specifications.

Conditions to Avoid: Heat, flames and sparks.

· **Materials to be avoided:**

Strong bases

Strong Reducing.

- **Dangerous reactions** Danger of polymerization.

- **Dangerous decomposition products:** Carbon monoxide, Carbon dioxide.

11 Toxicological information

· **Acute toxicity:**

· **LD/LC50 values relevant for classification:**

Oral	LD50	1410 mg/kg (rat)
Dermal	LD50	2460 mg/kg (rabbit)
Inhalative	LC50/4 h	21.8 mg/L (mouse)
Irritation of eyes	Draize test	++ (rabbit)

· **Primary irritant effect:**

- **on the skin:** Irritant to skin and mucous membranes.

- **on the eye:** Classified as having irritating properties.

- **Ingestion:** It can be harmful if swallowed.

- **Inhalation:** Harmful if inhaled. May cause respiratory tract irritation.

- **Sensitization:** No sensitizing effects known.

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· **Other information (about experimental toxicology):** No more relevant data available.

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12 Ecological information

· **Information about elimination (persistence and degradability):**

· **Method**

· **Ecological information** Not available

· **Other information:** The product is biodegradable.

· **Ecotoxicological effects:**

· **Acquatic toxicity:**

LC50 aq. (96 h) 130 mg/L (fishes)

· **Additional ecological information:**

· **General notes:**

Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

13 Disposal considerations

· **Product:**

· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Reutilise if possible or contact a waste processors for recycling or safe disposal.

· **Waste disposal key:**

The European Union does not establish uniform rules for the disposal of chemical waste, which are special waste. Their treatment and elimination of the domestic legislation of each country. So, in each case, you should contact the relevant authorities, or those companies legally authorized for elimination of waste.

2001/573/EC: Council Decision of 23 July 2001 amending the list of wastes contained in Decision 2000/532/EC.

Council Directive 91/156/EEC of 18 March 1991 amending Directive 75/442/EEC on waste.

· **Uncleaned packaging:**

The containers and packing materials contaminated with dangerous substances or preparations, have the same treatment products.

Directive 94/62/EC of the European Parliament and the Council of 20 December 1994 on packaging and packaging waste.

· **Recommendation:**

Disposal must be made according to official regulations.

Wash with solvents to be incinerated.

· **Recommended cleansing agents:** Acetone

14 Transport information

· **Land transport ADR/RID (cross-border)**



· **ADR/RID class:** 3 (F1) Flammable liquids.

· **Danger code (Kemler):** 33

· **UN-Number:** 1275

· **Packaging group:** II

· **Hazard label** 3

· **Description of goods:** 1275 PROPIONALDEHYDE

· **Excepted quantities (EQ):** E2

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- **Limited quantities (LQ)** LQ4
- **Transport category** 2
- **Tunnel restriction code** D/E

· **Maritime transport IMDG:**



- **IMDG Class:** 3
- **UN Number:** 1275
- **Label** 3
- **Packaging group:** II
- **EMS Number:** F-E,S-D
- **Marine pollutant:** No
- **Proper shipping name:** PROPIONALDEHYDE

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



- **ICAO/IATA Class:** 3
- **UN/ID Number:** 1275
- **Label** 3
- **Packaging group:** II
- **Proper shipping name:** PROPIONALDEHYDE

· **UN "Model Regulation":** UN1275, PROPIONALDEHYDE, 3, II

15 Regulatory information

· **Labelling according to EU guidelines:**

The product has been classified and marked in according to the calculation procedure of the "General Classification guideline for Substances of the EU", DIR. 67/548/EC, in the latest valid version.

· **Code letter and hazard designation of product:**



Xi Irritant
F Highly flammable

· **Risk phrases:**

11 Highly flammable.
36/37/38 Irritating to eyes, respiratory system and skin.

· **Safety phrases:**

2 Keep out of the reach of children.
9 Keep container in a well-ventilated place.
16 Keep away from sources of ignition - No smoking.
29 Do not empty into drains.

· **National regulations:**

· **Technical instructions (air):**

Class	Share in %
NK	100.0

· **Waterhazard class:** Water hazard class 1 (Assessment by list): slightly hazardous for water.

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16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing MSDS:** Q.A / Normative

· **Contact:**

ITALY:

email: MSDS-CER@carloerbareagenti.com

Phone: 00 39 02 953251

Phone: 00 39 02 953251

· **References**

ECDIN (Environmental Chem. Data and Information Network)

IUCLID (International Uniform Chemical Information Database)

NIOSH - Registry of Toxic Effects of Chemical Substances

Roth - Wassergefährdende Stoffe

Verschuieren - Handbook of Environmental Data on Organic Chemicals

ChemDAT - Safety Data Sheets from E.Merck on CD-ROM

Merian - Metals and their compounds in the environment

· **Sources**

DIR. 67/548/EC, in the latest valid version.

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006, REACH.

Regulation (EC) N° 1272/2008 of the European Parliament and of the Council of 16 December 2008, CLP, in the latest valid version.

Globally Harmonized System, GHS

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