

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

Printing date 12.10.2010

Revision: 12.10.2010

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

- **Product details**
- **Molecular formula:** C₃ H₆ O
- **Trade name:** propanone
- **Article number:** CH0014
- **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

Carlo Erba Reactifs - SDS
Chaussée du Vexin
Parc d'Affaires des Portes - BP616
27106 VAL DE REUIL Cedex
Téléphone: +02 32 09 20 00
Télécopie: +02 32 09 20 20

- **Further information obtainable from:**
Q.A / Normative
email ITALY: MSDS_CER@carloerbareagenti.com
email FRANCE: MSDS_CER-SDS@carloerbareactifs.com
- **Information in case of emergency:**
CENTRO ANTIVELENI OSPEDALE CA GRANDA - NIGUARDA (MI)
tel: 0039 02 66 10 10 29
numéro d'appel d'urgence ORFILA: 01 45 42 59 59

2 Hazards identification

- **Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Xi; Irritant

R36: Irritating to eyes.



F; Highly flammable

R11: Highly flammable.

R66-67: Repeated exposure may cause skin dryness or cracking. Vapours may cause drowsiness and dizziness.

- **Information concerning particular hazards for human and environment:**

At long or repeated contact with skin it may cause dermatitis due to the degreasing effect of the solvent.
Has a narcotizing effect.

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· **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.

· **Label elements**

· **Labelling according to Regulation (EC) No 1272/2008**

· **Hazard pictograms**



GHS02 GHS07

· **Signal word** *Danger*

· **Hazard-determining components of labelling:** *Void*

· **Hazard statements**

H225 Highly flammable liquid and vapour.

H319+EUH066 Causes serious eye irritation. Repeated exposure may cause skin dryness or cracking.

H336 May cause drowsiness or dizziness.

· **Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P241 Use explosion-proof electrical/ventilating/lighting/equipment.

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.

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **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.

Observe the general safety regulations when handling chemicals.

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



Xi Irritant

F Highly flammable

· **Risk phrases:**

11 Highly flammable.

36 Irritating to eyes.

66 Repeated exposure may cause skin dryness or cracking.

67 Vapours may cause drowsiness and dizziness.

· **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.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

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3 Composition/information on ingredients

- **Chemical characterization:**
- **CAS No. Description**
67-64-1 Acetone
- **Identification number(s)**
- **EINECS Number:** 200-662-2
- **Index number:** 606-001-00-8

4 First aid measures

- **After inhalation:** Supply fresh air.
- **After skin contact:** If skin irritation continues, consult a doctor.
- **After eye contact:**
Seek immediate medical advice.
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:**
Never give anything by mouth to an unconscious person.
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 Firefighting 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:**
Wear self contained breathing apparatus for fire fighting if necessary.
Do not inhale the fumes.
Not applicable
- **Additional information** Keep receptacles cool with water spray.

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.
- **Measures for environmental protection:**
Dilute with plenty of water after collecting the liquid.
Do not allow product to reach sewage system or any water course.
Prevent seepage into sewage system, workpits and cellars.
- **Measures for cleaning/collecting:**
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.

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- **Additional information:**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Handling:**
- **Information for safe handling:**
Do not breathe vapor.
Avoid prolonged or repeated exposure.
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:**

67-64-1 Acetone

WEL (Great Britain)	Short-term value: 3620 mg/m ³ , 1500 ppm Long-term value: 1210 mg/m ³ , 500 ppm
IOELV (European Union)	Long-term value: 1210 mg/m ³ , 500 ppm
PEL (USA)	Long-term value: 2400 mg/m ³ , 1000 ppm
REL (USA)	Long-term value: 590 mg/m ³ , 250 ppm
TLV (USA)	Short-term value: 1782 mg/m ³ , 750 ppm Long-term value: 1188 mg/m ³ , 500 ppm
	BEI

- **Additional information:** The lists valid during the making were used as basis.
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Do not inhale fumes / aerosols.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Avoid contact with the eyes.
- **Respiratory protection:**
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator.
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.
Rubber gloves
- **Material of gloves**
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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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.

· **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** 58.01 g

· **Appearance:**

Form: Fluid

Colour: Colourless

· **Odour:** Characteristic

· **Change in condition**

Melting point/Melting range: -94.7°C

Boiling point/Boiling range: 55.8-56.6°C

· **Flash point:** < -18°C

· **Ignition temperature:** 465°C

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

· **Explosion limits:**

Lower: 2.6 Vol %

Upper: 13 Vol %

· **Vapour pressure at 20°C:** 233 hPa

· **Density at 20°C:** 0.79 g/cm³

· **Solubility in / Miscibility with**

water: Fully miscible.

· **organic solvents:** Soluble in many organic solvents.

· **Viscosity:**

Dynamic at 25°C: 32 mPas

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

· **Dangerous reactions** Can react violently with oxygen rich (oxidizing) material. Danger of Explosion.

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

11 Toxicological information

· **Acute toxicity:**

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

Oral	LD50	5800 mg/kg (rat)
Dermal	LD50	20000 mg/kg (rbt)

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Inhalative	LC50/4 h	150 mg/L (rat) 70000 ppm
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- **Primary irritant effect:**
- **on the skin:** May cause skin irritation.
- **on the eye:** Classified as having irritating properties.
- **Ingestion:** It can be harmful if swallowed.
- **Inhalation:** May be harmful if inhaled.
- **Sensitization:** No sensitizing effects known.
- **Other information (about experimental toxicology):** No more relevant data available.
- **Additional toxicological information:**
Inhalation of concentrated vapours as well as oral intake will lead to anaesthesia-like conditions and headache, dizziness, etc.

12 Ecological information

- **Information about elimination (persistence and degradability):**
- **Method**
- **Ecological information** The product is easily biodegradable.
- **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.
Packagings that may not be cleansed are to be disposed of in the same manner as the product.
Wash with solvents to be incinerated.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

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14 Transport information

· Land transport ADR/RID (cross-border)



- **ADR/RID class:** 3 (F1) Flammable liquids.
- **Danger code (Kemler):** 33
- **UN-Number:** 1090
- **Packaging group:** II
- **Hazard label** 3
- **Description of goods:** 1090 ACETONE
- **Excepted quantities (EQ):** E2
- **Limited quantities (LQ)** LQ4
- **Transport category** 2
- **Tunnel restriction code** D/E

· Maritime transport IMDG:



- **IMDG Class:** 3
- **UN Number:** 1090
- **Label** 3
- **Packaging group:** II
- **EMS Number:** F-E,S-D
- **Marine pollutant:** No
- **Proper shipping name:** ACETONE

· Air transport ICAO-TI and IATA-DGR:



- **ICAO/IATA Class:** 3
- **UN/ID Number:** 1090
- **Label** 3
- **Packaging group:** II
- **Proper shipping name:** ACETONE

· **UN "Model Regulation":** UN1090, ACETONE, 3, II

15 Regulatory information

- **Chemical safety assessment** A Chemical Safety Assessment has not been carried out.
- **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

FRANCE:

email: MSDS_CER-SDS@carloerbareactifs.com

Phone: +02 32 09 20 00

· **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