

Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 20.09.2007

Revision: 19.09.2007

1 Identification of substance:

- **Product details:**
- **Trade name:** **Acetone**
- **Application of the substance / the preparation** Solvents
- **Supplier/Manufacturer:**
Penpet Petrochemical Trading GmbH
Merkur-Park
Sieker Landstrasse 126
22143 Hamburg
Germany
Tel: +49 40 675 799 0
Fax: +49 40 675 799 99 / 88
- **Email competent person:** angelika.torges@kft.de
- **Information department:** See supplier/manufacturer
- **Emergency information:** National Poisons Information Centre Tel.: +44 (0)870 6006266

2 Hazards identification

- **Hazard description:**



Xi Irritant
F Highly flammable

- **Information pertaining to particular dangers for man and environment:**

Prolonged or repeated contact may have a drying effect on the skin and may cause irritation and/or dermatitis.

R 11 Highly flammable.

R 36 Irritating to eyes.

R 66 Repeated exposure may cause skin dryness or cracking.

R 67 Vapours may cause drowsiness and dizziness.

- **Classification system:**

The classification was made according to the latest editions of the EU-lists, and expanded using company data and specialized literature.

3 Composition/information on ingredients

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

4 First aid measures

- **General information:** Immediately remove any clothing soiled by the product.
- **After inhalation:**
Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.
In case of unconsciousness, place patients on their side in a stable position for transportation.
- **After skin contact:**
Immediately rinse with water.
If skin irritation continues, consult a doctor.
- **After eye contact:**
Rinse opened eye for several minutes under running water.

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- Seek medical treatment.
- **After swallowing:**
 Drink plenty of water, but never give anything to an unconscious person.
 Try not to vomit. Swallow activated carbon and sodium sulphate.
 Call for a doctor immediately.
- **Information for doctor:**
- **The following symptoms may occur:**
 Irritation of eyes and mucuous membrane.
 After swallowing:
 Gastric or intestinal disorders.
 After resorption:
 Headache
 Salivation
 Nausea
 Vomiting
 Dizziness
 Narcotic effect
 Coma
- **Treatment:**
 Symptomatic treatment
 Acid-base-balance should be controlled.
 In cases of irritation to the lungs, initial treatment with Dexametason metered aerosol.

5 Fire fighting measures

- **Suitable extinguishing agents:**
 CO2, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Direct jet water
- **Special hazards caused by the material, its products of combustion or resulting gases:**
 Dangerous decomposition product see chapter 10: stability and reactivity
- **Protective equipment:**
 Wear self-contained respiratory protective device.
 Wear fully protective suit.
- **Additional information:**
 Heating leads to pressure increase entailing danger of bursting and explosion. Immediately cool neighbouring packages and containers with sprayed water and, if possible, remove them out of the danger zone
 Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
 Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

- **Person-related safety precautions:**



Wear protective equipment. Keep unprotected persons away.

- Ensure adequate ventilation
- Do not smoke - keep ignition sources away
- Rubber and plastic clothing will be attacked under prolonged action.
- **Measures for environmental protection:**
 Prevent seepage into sewage system, workpits and cellars.
 Do not allow product to reach sewage system or any water course.
 Do not allow to penetrate the ground/soil.
 Dilute with plenty of water.
- **Measures for cleaning/collecting:**
 Ensure adequate ventilation.

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- Absorb with non-combustible material like sand, soil or diatomite.
- Send for recovery or disposal in suitable receptacles.
- Dispose contaminated material as waste according to item 13.
- **Additional information:** Keep ignition sources away. Do not smoke.

7 Handling and storage

- **Handling**
- **Information for safe handling:**
 - Ensure good ventilation/exhaustion at the workplace.
 - Prevent formation of aerosols.
 - Do not smoke. Keep ignition sources away.
 - Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
 - Carry out filling operations only at sites with extractors available.
 - Use solvent-proof equipment.
 - Avoid contact with eyes and skin.
 - Avoid inhalation of vapours.
- **Information about protection against explosions and fires:**



Keep ignition sources away - Do not smoke.

- Protect against electrostatic charges
- Emergency cooling must be available in case of nearby fire.
- Fumes can combine with air to form an explosive mixture.
- Flammable gas-air mixtures may be formed in empty receptacles.
- Work on containers and pipelines is permitted only after thorough purging and inerting.

- **Storage**
- **Requirements to be met by storerooms and receptacles:**
 - Store container tightly sealed at a cool and dry place with sufficient ventilation.
 - Pay attention to special rules for the storage of flammable liquids.
- **Information about storage in one common storage facility:**
 - Store away from foodstuffs.
 - Store away from feed.
 - Follow regulations for flammable liquids.
- **Further information about storage conditions:** None.
- **Storage class** 3A Flammable Liquids

8 Exposure controls and personal protection

- **Additional information about design of technical systems:**
 - Install appropriate mechanical ventilation.
 - Keep away from open flames and other ignition sources.
 - Protect against electrostatic charges.
 - **Components 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 |
- **Additional information:** The lists that were valid during the creation were used as basis.
 - **Personal protective equipment**
 - **General protective and hygienic measures:**
 - Keep away from foodstuffs, beverages and feed.
 - Do not eat or drink while working.
 - Immediately remove all soiled and contaminated clothing

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Wash hands before breaks and at the end of work.
 Do not inhale gases / fumes / aerosols.
 Avoid close or long term contact with the skin.
 Use skin protection cream for skin protection.

• **Breathing equipment:**

In case of unintentional release of the substance, exceeding the occupational exposure limit value:



In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

Short term filter device:

Filter AX. (colour coding brown; DIN EN 141)

Filter are only to be used in the condition as delivered. Repeated use is only allowed within one shift (max. 8 hours) considering the particular operating time.

AX-Filter must not be used for mixtures of low boiling substances and other organic compounds.

• **Protection of hands:**

Wear chemically resistant protective gloves (tested according to DIN EN 374)

Check the permeability prior to each renewed use of the glove.

After use of gloves apply skin-cleaning agents and skin cosmetics.

• **Material of gloves:**

Butyl rubber, BR

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:**

Butyl 0,5 mm: > = 240 minutes (In case of permanent contact do not use gloves more than 4 hours)

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

• **Eye protection:** Safety glasses

• **Body protection:**

Flame retarding protective clothing

Solvent resistant protective clothing

Selection of protective clothing is subject to the specific kind of work and the corresponding risk potential.

9 Physical and chemical properties:

• **General Information**

Form:	Liquid
Colour:	Colourless
Odour:	Characteristic odour, sweetish

• **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:** 535°C

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

• **Explosion limits:**

Lower:	2.6 Vol %
Upper:	13.0 Vol %

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

• **Density at 20°C:** 0.79 g/cm³

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- **Solubility in / Miscibility with Water:** Miscible in all proportions.
- **Segregation coefficient (n-octanol/water):** - 0.24 log POW
- **Viscosity:**
- dynamic at 25°C: 32 mPas

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used and stored according to specifications.
To avoid thermal decomposition do not overheat.
- **Materials to be avoided:**
Strong oxidants
Flourine
Chromyl chloride
Nitric acid
Reducing agents
Halogenated hydrocarbons
Alkali metals
Bromine
Alcaline hydroxide
Halogen compounds
Hydrogen peroxide
- **Dangerous reactions:**
Forms explosive gas mixture with air
Reactions with above-mentioned substances
- **Dangerous products of decomposition:**
In the case of fire or at high temperatures the formation of the following decomposition products is possible.
Ketene
Irritant gases/vapours
- **Additional information:** light sensitive, air sensitive

11 Toxicological information

- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**
Oral LD50 5800 mg/kg (rat)
Dermal LD50 20000 mg/kg (rabbit)
- **Primary irritant effect:**
- **on the skin:**
Continuing or repeated contact with the skin may cause skin disease.
Acetone is slightly skin-irritating (Rabbit: Dose 3.95 mg, open Draize test). On long skin contact, secondary damage occurs as a result of fat removal.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Other information (about experimental toxicology):**
Ames-test: no mutagenic effects
Mutagenicity (mammalian cell test): chromosomes aberration negative
- **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):**
- **Other information:** The product is readily biodegradable.

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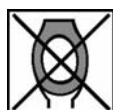
- **Behaviour in environmental systems:**
- **Mobility and bioaccumulation potential:** Log POW < 0 - not lipophilic, no bioaccumulation.
- **Ecotoxicological effects:**
- **Aquatic toxicity:**

LC50/48h 12600 mg/L (DM)
7500 mg/L (go)

LC50/96h 6500 mg/L (rainbow trout)

- **General notes:**

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



Do not allow product to reach ground water, water course or sewage system.

13 Disposal considerations

- **Product:**
- **Recommendation:**



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

Must be specially treated adhering to official regulations.

- **European waste catalogue:**

07 01 04 other organic solvents, washing liquids and mother liquors

- **Uncleaned packagings:**

- **Recommendation:**

Packaging can be reused or recycled after cleaning.

Packagings that cannot be cleansed are to be disposed of in the same manner as the product.

Disposal must be made according to official regulations.

- **Recommended cleansing agent:** Water, if necessary with cleansing agents.

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
- **Label:** 3
- **Description of goods:** 1090 ACETONE
- **Remarks:** ADR chapter 1.10 (security) has to be observed!
Limited quantity: 3 l inner packaging, 30 kg gross packaging unit

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· Maritime transport IMDG:


- **IMDG Class:** 3
- **UN Number:** 1090
- **Label:** 3
- **Packaging group:** II
- **EMS Number:** F-E,S-D
- **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
- **Remarks:** Packing Instructions:
 For Limited Quantities: Y305 (Max Net Qty/Pkg: 1 l)
 Passenger and Cargo Aircraft: 305 (Max Net Qty/Pkg: 5 l)
 Cargo Aircraft only: 307 (Max Net Qty/Pkg: 60 l)

15 Regulations

· Markings according to EC guidelines:

The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials "EC-labelling"

· 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:

- 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.

· National regulations

· **Information about limitation of use:** Restrictions on juvenile employment must be observed.

· Technical guidance (air):
· Class Share in %

· **NK 100.0**

· **Water hazard 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.

· Reasons for amendments:

EC-directive: 2001/58/EC
Reform of ADR structure
General revision

· Department issuing MSDS:

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· Contact: Angelika Torges**· * Data compared to the previous version altered.**

Changes have been made to chapters marked with a *, as compared to the previous version.