

## Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 12.11.2007

Revision: 12.11.2007

### 1 Identification of substance:

**Product details:****Trade name:** Isopropanol**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:**

R 11 Highly flammable.

R 36 Irritating to eyes.

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:**

67-63-0 propan-2-ol

**Identification number(s):****EINECS Number:** 200-661-7**EU Number:** 603-117-00-0

### 4 First aid measures

**General information:**

Take affected persons out into the fresh air.

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:**

Wash with water and soap.

If skin irritation continues, consult a doctor.

**After eye contact:**

Rinse the eyes with open eyelids for 10 - 15 minutes with water. Then consult a doctor or better an eye specialist.

(Contd. on page 2)

— GB —

## Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 12.11.2007

Revision: 12.11.2007

Trade name: **Isopropanol**

(Contd. of page 1)

- **After swallowing:**  
Rinse out mouth and then drink plenty of water.  
Do not induce vomiting.  
If vomiting occurs spontaneously:  
Hold the head of the casualty low with the body in a prone position in order to avoid aspiration.  
Seek medical treatment.
- **Information for doctor:**
- **The following symptoms may occur:**  
Irritation of eyes and mucous membrane.  
Narcotic effect  
Daze  
Dizziness
- **Danger:**  
If swallowed or in case of vomiting, danger of entering the lungs.  
Danger of pneumonia.
- **Treatment:**  
Symptomatic treatment  
(decontamination, vital functions)

### 5 Fire fighting measures

- **Suitable extinguishing agents:**  
CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.  
Use fire fighting measures that suit the environment.
- **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.
- **Additional information:**  
Cool endangered receptacles with water spray.  
Move containers from area if it can be done without risk.  
Collect contaminated fire fighting water separately. It must not enter the sewage system.  
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

### 6 Accidental release measures

- **Person-related safety precautions:**



Wear protective equipment. Keep unprotected persons away.

- Use respiratory protective device against the effects of fumes/dust/aerosol.  
Ensure adequate ventilation
- **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.
- **Measures for cleaning/collecting:**  
Ensure adequate ventilation.  
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.

## Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 12.11.2007

Revision: 12.11.2007

**Trade name: Isopropanol**

(Contd. of page 2)

### 7 Handling and storage

- **Handling**

- **Information for safe handling:**

- Ensure good ventilation/exhaustion at the workplace.
- Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
- Keep away from heat and direct sunlight.
- Prevent formation of aerosols.
- Avoid inhalation of vapours.
- Avoid contact with eyes and skin.
- Do not smoke. Keep ignition sources away.

- **Information about protection against explosions and fires:**

- Fumes can combine with air to form an explosive mixture.



Keep ignition sources away - Do not smoke.

- Protect against electrostatic charges
- Flammable gas-air mixtures may be formed in empty receptacles.

- **Storage**

- **Requirements to be met by storerooms and receptacles:**

- Store container tightly sealed at a cool and dry place with sufficient ventilation.
- Do not use light alloy receptacles.

Unsuitable material:

Various plastics

Rubber

Provide solvent resistant, sealed floor.

- **Information about storage in one common storage facility:**

Store away from foodstuffs.

Store away from feed.

- **Further information about storage conditions:**

Store in cool, dry conditions in well sealed receptacles.

Protect from heat and direct sunlight.

Protect from humidity and water.

- **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:**

**67-63-0 propan-2-ol**

WEL (Great Britain) Short-term value: 1250 mg/m<sup>3</sup>, 500 ppm

Long-term value: 999 mg/m<sup>3</sup>, 400 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.

- **Personal protective equipment**

- **General protective and hygienic measures:**

- The usual precautionary measures should be adhered to when handling chemicals.
- Wash hands before breaks and at the end of work.
- Do not inhale gases / fumes / aerosols.
- Avoid contact with the eyes.
- Immediately remove all soiled and contaminated clothing
- Do not eat or drink while working.
- Provide eye bath.

(Contd. on page 4)

## Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 12.11.2007

Revision: 12.11.2007

**Trade name: Isopropanol**

(Contd. of page 3)

**· Breathing equipment:**

Not necessary if room is well-ventilated.  
 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 A

**· Protection of hands:**

Chemical resistant gloves  
 To avoid skin problems reduce the wearing of gloves to the required minimum.  
 The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
 After use of gloves apply skin-cleaning agents and skin cosmetics.

**· Material of gloves:**

Fluorocarbon rubber (FKM)

Butyl rubber, BR

Nitrile rubber, NBR

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.

**· Not suitable are gloves made of the following materials:**

Natural rubber, NR

PVC gloves

**· Eye protection:** Tightly sealed goggles.

**· Body protection:**

Protective work 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**

<b>Form:</b>	Fluid
<b>Colour:</b>	Clear
<b>Odour:</b>	Alcohol-like

**· Change in condition:**

<b>Melting point/Melting range:</b>	-89.5°C
<b>Boiling point/Boiling range:</b>	82°C

<b>· Flash point:</b>	13°C
-----------------------	------

<b>· Ignition temperature:</b>	425°C
--------------------------------	-------

<b>· Danger of explosion:</b>	Product is not explosive. However, formation of explosive air/vapour mixtures are possible.
-------------------------------	---

**· Explosion limits:**

<b>Lower:</b>	2 Vol %
<b>Upper:</b>	12 Vol %

<b>· Vapour pressure at 20°C:</b>	43 mbar
-----------------------------------	---------

<b>· Density at 20°C:</b>	0.785 g/cm <sup>3</sup>
---------------------------	-------------------------

<b>· Solubility in / Miscibility with Water at 20°C:</b>	1.000 g/l
--	-----------

 (Contd. on page 5)  
 GB

## Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 12.11.2007

Revision: 12.11.2007

**Trade name: Isopropanol**

(Contd. of page 4)

- **pH-value (- g/l) :** neutral
- **Segregation coefficient (n-octanol/water):** 0.05 log POW
- **Viscosity:**  
dynamic at 20°C: 2.43 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:**  
Aluminium  
Alkali metals  
Alkaline-earth metals  
Oxidants
- **Dangerous reactions:**  
Exothermic reaction with above-mentioned substances.  
Forms explosive gas mixture with air
- **Dangerous products of decomposition:** No dangerous decomposition products known
- **Additional information:** Hygroscopic

### 11 Toxicological information

- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**  
**67-63-0 propan-2-ol**  
Oral LD50 4570 mg/kg (rat)  
Dermal LD50 13400 mg/kg (rab)  
Inhalative LC50/4 h 30 mg/l (rat)
- **Primary irritant effect:**
- **on the skin:**  
Mild irritation of the skin is possible for persons with a sensitive skin.  
Defatting effect on the skin.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Other information (about experimental toxicology):**  
Ames-test: no mutagenic effects  
Mutagenicity (mammalian cell test): micronucleus negative  
Teratogenic effects may be possible (animal experiment).
- **Carcinogenic effects:** No cancer inducing effects in animal tests.
- **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.
- **Behaviour in environmental systems:**
- **Mobility and bioaccumulation potential:** Bioaccumulation is not to be expected (log P o/w < 1)
- **Ecotoxicological effects:**
- **Aquatic toxicity:**

#### 67-63-0 propan-2-ol

- EC<sub>50</sub>/48h > 9714 mg/l (daphnia magna)
- EC<sub>50</sub>/72h > 1450 mg/l (algae)
- LC<sub>50</sub>/96h 10400 mg/l (Pimephales promelas)

(Contd. on page 6)

## Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 12.11.2007

Revision: 12.11.2007

**Trade name: Isopropanol**

(Contd. of page 5)

**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.  
 Danger to drinking water is possible if large quantities leak into the ground or into water course.

### 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:** 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:** 1219
- **Packaging group:** II
- **Label:** 3
- **Description of goods:** 1219 ISOPROPANOL (ISOPROPYL ALCOHOL)
- **Remarks:** Limited quantity: 3 l inner packaging, 30 kg gross packaging unit  
 ADR chapter 1.10 (security) has to be observed!

**Maritime transport IMDG:**


- **IMDG Class:** 3
- **UN Number:** 1219
- **Label:** 3
- **Packaging group:** II
- **EMS Number:** F-E,S-D
- **Proper shipping name:** ISOPROPANOL (ISOPROPYL ALCOHOL)

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


- **ICAO/IATA Class:** 3

(Contd. on page 7)

## Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date: 12.11.2007

Revision: 12.11.2007

**Trade name: Isopropanol**

(Contd. of page 6)

- **UN/ID Number:** 1219
- **Label:** 3
- **Packaging group:** II
- **Proper shipping name:** ISOPROPANOL (ISOPROPYL ALCOHOL)
- **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.  
 67 Vapours may cause drowsiness and dizziness.

- **Safety phrases:**

7 Keep container tightly closed.  
 16 Keep away from sources of ignition - No smoking.  
 24/25 Avoid contact with skin and eyes.  
 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.

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

### 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:**

KFT-Chemieservice Marienstr. 3 D-64347 Griesheim  
 Postfach 1451 D-64345 Griesheim  
 Tel.: +49-6155-823241 Fax: +49-6155-823246

- **Contact:** Angelika Torges

- **Sources:**

RTECS database  
 ESIS (European existing Substances Information System)