



Safety Data Sheet

Section 1 - Identification.....2

Section 2: Hazard Identification.....2

Section 3: Composition/information on ingredients..... 4

Section 4: First aid measures..... 4

Section 5: Firefighting measurers..... 5

Section 6: Accidental release measurers..... 6

Section 7: Handling and storage..... 6

Section 8: Exposure controls – Personal protection.....7

Section 9: Physical and chemical properties..... 9

Section 10: Stability and reactivity.....10

Section 11: Toxicological information.....11

Section 12: Ecological information..... 13

Section 13: Disposal considerations..... 15

Section 14: Transportation information..... 15

Section 15: Regulatory information..... 16

Section 16: Other information.....17

Section 1 - Identification

1.1 Product Identifier

Product Name : Diisopropyl Ether

CAS No. : 108-20-3

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Reagent for analysis, Chemical production

1.3 Details of the supplier of the safety data sheet

Company : 9920 Pacific Heights Blvd
Suit 150
San Diego
California -92121

1.4 Emergency Telephone number

Emergency phone : +1 (858) 245-0283

Section 2: Hazard Identification

2.1 Classification of the substance or the mixture

Flammable liquids	Category 2	H315:Specific target organ toxicity
single exposure	Category 3	H336:Respiratory system

2.2 Label elements

Label according Regulation (EC) 1272/2008

Pictogram



Signal Word:
DANGER

Hazard statements

H225 Highly flammable liquid and vapor.

H336 May cause drowsiness or dizziness.

Precautionary statements

Prevention

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P240 Ground and bond container and receiving equipment.

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

P242 Use non-sparking tools.

P243 Take action to prevent static discharges.

Supplemental Hazard information (EU)

EUH019 May form explosive peroxides.

EUH066 Repeated exposure may cause skin dryness or cracking.

Reduced Labelling (<= 125 ml)

Pictogram



Signal Word:
DANGER

Hazard Statements none

Precautionary Statements none

Supplemental Hazard information (EU)

EUH019 May form explosive peroxides.

EUH066 Repeated exposure may cause skin dryness or cracking.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Section 3: Composition/information on ingredients

3.1 Substance

Formula	: C ₆ H ₁₄ O
Molecular weight	: 102.18 g/mol
CAS-No.	: 108-20-3
Index-No.	: 603-045-00-X
EC-No.	: 203-560-6

Section 4: First aid measures

4.1 Description of first aid measures

General advice

Show this material safety data sheet to the doctor in attendance.

If inhaled

After inhalation: fresh air. Call in physician.

In case of skin contact

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/ shower.

In case of eye contact

After eye contact: rinse out with plenty of water. Remove contact lenses.

If swallowed

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labeling (see section 2.2) and/or in section 11.

4.3 Indications of any immediate medical attention and special treatment needed

No data available

Section 5: Firefighting measures

5.1 Extinguishing Media

Suitable extinguishing media

Carbon dioxide (CO₂) Foam Dry powder

Unsuitable extinguishing media

For this substance/mixture no limitations of extinguishing agents are given.

5.2 Special hazard arising from the substance or mixture

Carbon oxides

Combustible.

Pay attention to flashback.

Vapors are heavier than air and may spread along floors.

Development of hazardous combustion gases or vapours possible in the event of fire.

Forms explosive mixtures with air at ambient temperatures.

5.3 Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.

5.4 Further information

Remove container from danger zone and cool with water. Prevent fire extinguishing water from contaminating surface water or the ground water system.

Section 6: Accidental release measurers

6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Do not breathe vapors, aerosols. Avoid substance contact. Ensure adequate ventilation. Keep away from heat and sources of ignition. Evacuate the danger area, observe emergency procedures, consult an expert. For personal protection see section 8.

6.2 Environment precautions

Do not let product enter drains. Risk of explosion.

6.3 Methods and materials for containment and cleaning up

Methods for cleaning up : Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up with liquid-absorbent material (e.g. Chemizorb®). Dispose of properly. Clean up affected area.

6.4 Reference to other sections

For disposal see section 13.

Section 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling

Work under hood. Do not inhale substance/mixture. Avoid generation of vapours/aerosols.

Advice on protection against fire and explosion

Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharge.

Hygiene measures

Change contaminated clothing. Preventive skin protection recommended. Wash hands after working with substance.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Protected from light. Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.

Recommended storage temperature see product label.

Storage class

Storage class (TRGS 510): 3: Flammable liquids

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

Section 8: Exposure controls – Personal protection

8.1 Control parameters

Ingredients with workplace control parameters

Derived No Effect Level (DNEL)

Application Area	Routes of exposure	Health effect	Value
Worker DNEL, longterm	dermal	Systemic effects	
Worker DNEL, longterm	inhalation	Systemic effects	850 mg/m ³
Consumer DNEL, longterm	dermal	Systemic effects	
Consumer DNEL, longterm	inhalation	Systemic effects	151 mg/m ³
Consumer DNEL, longterm	oral	Systemic effects	

Predicted No Effect Concentration (PNEC) according to Regulation (EC) No. 1907/2006

Compartment	Value
Fresh water	0.19 mg/l
Sea water	0.019 mg/l

Fresh water sediment	2.79 mg/kg
Sea sediment	0.28 mg/kg
Soil	0.47 mg/kg
Sewage treatment plant	37 mg/l

8.2 Exposure Controls

Personal protective equipment

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses

Skin protection

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Full contact

Material: butyl-rubber

Minimum layer thickness: 0,7 mm

Break through time: 480 min

Material tested: Butoject® (KCL 898)

This recommendation applies only to the product stated in the safety data sheet, supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,4 mm

Break through time: 240 min

Material tested: Camatril® (KCL 730 / Aldrich Z677442, Size M)

Body Protection

Flame retardant antistatic protective clothing.

Respiratory protection

Recommended Filter type: Filter A (acc. to DIN 3181) for vapours of organic Compounds The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Control of environmental exposure

Do not let product enter drains. Risk of explosion.

Section 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	: liquid
Color	: Colourless
Odor	: Not data available
Melting point/freezing point	: Melting point/range: -85 °C
Initial boiling point and boiling range	: 68.5 °C at 1.013,25 hPa
Flammability (solid, gas)	: Not data available
Upper/lower flammability or explosive limits	: Upper explosion limit: 21 %(V) Lower explosion limit: 1 %(V)
Flash point	: -29 °C - closed cup
Autoignition temperature	: Not data available
Decomposition temperature	: Not data available
pH	: No data available
Viscosity	: Viscosity, kinematic: No data available Viscosity, dynamic: 0,33 mPa.s at 20 °C 0,24 mPa.s at 40 °C

Water solubility	: 3,11 g/l at 20,2 °C - soluble
Partition coefficient n-octanol/water	: log Pow: 2,4 at 20 °C - Bioaccumulation is not expected.
Vapor pressure	: 227 hPa at 25 °C 160 hPa at 20 °C
Relative density	: No data available
Density	: 0,72 g/cm ³ at 20 °C
Relative vapour density	: No data available
Particle characteristics	: No data available
Explosive properties	: No data available
Oxidizing properties	: none

9.2 Other information

Relative vapor density	: 3,53 - (Air = 1.0)
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Section 10: Stability and reactivity

10.1 Reactivity

Formation of peroxides possible.
Vapors may form explosive mixture with air.

10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .
Contains the following stabilizer(s):
butyl hydroxytoluene (BHT) (0,001 %)

10.3 Possibility of hazardous reactions

Exothermic reaction with:
Risk of explosion with:
Aldehydes

Amines
mineral acids
Oxidizing agents
Zinc

10.4 Conditions to avoid

May form explosive peroxides.
Warming.
Moisture.

10.5 Incompatible materials

various plastics

10.6 Hazardous decomposition products

Peroxides
In the event of fire: see section 5

Section 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male and female - 4.600 mg/kg
(OECD Test Guideline 401)

Symptoms: Nausea, Vomiting, Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract., Risk of aspiration upon vomiting.

Symptoms: mucosal irritations, Cough, Shortness of breath

Dermal: No data available

Skin corrosion/irritation

Skin - Rabbit

Result: No skin irritation - 4 h
(OECD Test Guideline 404)

Skin - In vitro study

Result: No skin irritation - 1 h

Remarks: (ECHA)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: No eye irritation

(OECD Test Guideline 405)

Respiratory or skin sensitization

Local lymph node assay (LLNA) - Mouse

Result: negative

(OECD Test Guideline 429)

Germ cell mutagenicity

Test Type: Ames test

Test system: Escherichia coli/Salmonella typhimurium

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Test Type: Mutagenicity (mammal cell test): chromosome aberration.

Test system: rat hepatocytes

Metabolic activation: without metabolic activation

Method: OECD Test Guideline 473

Result: negative

Test Type: gene mutation test

Test system: Saccharomyces cerevisiae

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 480

Result: negative

Test Type: In vitro mammalian cell gene mutation test

Test system: mouse lymphoma cells

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 476

Result: negative

Carcinogenicity

No data available

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

May cause drowsiness or dizziness.

Remarks: Classified according to Regulation (EU) 1272/2008, Annex VI (Table 3.1/3.2)

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

11.2 Additional Information

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Nausea, Headache, Vomiting, narcosis

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

After absorption of large quantities:

Headache

narcosis

agitation

Unconsciousness

respiratory arrest

drop in blood pressure

Handle in accordance with good industrial hygiene and safety practice.

Section 12: Ecological information

12.1 Toxicity

Toxicity to daphnia and other aquatic invertebrates	: static test EC50 - Daphnia magna (Water flea) - 190 mg/l - 48 h (OECD Test Guideline 202)
Toxicity to bacteria	: static test EC50 - activated sludge - 2.249 mg/l - 3 h (OECD Test Guideline 209)

12.2 Persistence and degradability

Biodegradability	: aerobic - Exposure time 28 d Result: 0 % - Not biodegradable (OECD Test Guideline 301D)
Theoretical oxygen demand	: 2.833 mg/g Remarks: (Lit.)
Ratio BOD/ThBOD	: 19 %

12.3 Bioaccumulated potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Endocrine disrupting properties

Product:

The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

12.7 Other adverse effects

No data available

Section 13: Disposal considerations

13.1 Waste treatment methods

Product

See www.retrologistik.com for processes regarding the return of chemicals and containers, or contact us there if you have further questions.

Section 14: Transportation information

14.1 UN Number or ID number

ADR	1159
IMDG	1159
IATA	1159

14.2 UN proper shipping name

ADR	DIISOPROPYL ETHER
IMDG	DIISOPROPYL ETHER
IATA	DIISOPROPYL ETHER

14.3 Transport hazard class(es)

ADR	3
IMDG	3
IATA	3

14.4 Packaging group

ADR	II
IMDG	II
IATA	II

14.5 Environmental hazards

ADR no

IMDG no

IATA no

14.6 Special precautions for user

Tunnel restriction code (D/E)

Further information No data available

Section 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006.

National legislation

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous Substances. : FLAMMABLE LIQUIDS

Other regulations

Take note of Dir 94/33/EC on the protection of young people at work.

15.2 Chemical safety assessment

A Chemical Safety Assessment has been carried out for this substance.

Section 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

EUH019	May form explosive peroxides.
EUH066	Repeated exposure may cause skin dryness or cracking.
H225	Highly flammable liquid and vapor.
H336	Highly flammable liquid and vapor.

Further information

The information and recommendations in this SDS are to the best of our knowledge, information and belief accurate at the time of publication. Although utmost care is been taken in composition of this text, Highpuris LLC cannot be held responsible for any damage resulting from any possible error in this publication.