

Safety Data Sheet

according to Regulation (EC) No 1907/2006 (REACH)
Classifications according to Regulation (EC) No 1272/2008.
Printdate 25 Aug 2023

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product name:

Diisopropylether

1.1. Catalog No.:

686456

1.2. Relevant identified uses of the substance or mixture

Identified: Laboratory chemical
uses: R&D

1.3. Uses advised against:

HPC Standards GmbH
Am Wieseneck 7

04451 Cunnersdorf
Deutschland

Tel. +49 34291 3372-36
Fax. +49 34291 3372-39
contact@hpc-standards.com

1.4. Emergency telephone number

HPC Standards Tel. +49 34291 3372-36
This number is only available during office hours.

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008
Flammable liquids (Category 2), H225
Specific target organ toxicity - single exposure (Category 3), Respiratory system, H336
For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2. Label elements

2.2.1. Pictogram



2.2.2.

Signal Word Danger
Hazard statement(s)
H225 Highly flammable liquid and vapor.
H336 May cause drowsiness or dizziness.

Precautionary statement(s)

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.

Signal Word Danger

Hazard statement(s) none

Precautionary

statement(s)

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.

May form explosive peroxides.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Isopropyl ether

Formula : C₆H₁₄O

Molecular weight : 102,17 g/mol

CAS-No. : 108-20-3

EC-No. : 203-560-6

Index-No. : 603-045-00-X

Component

Diisopropyl ether

CAS-No.

EC-No.

Index-No.

108-20-3

203-560-6

603-045-00-X

Classification

Flam. Liq. 2; STOT SE 3;

H225, H336

Concentration limits:

>= 20 %: STOT SE 3,

H336;

Concentration

<= 100 %

3.1.1. Formula

C₆H₁₄O

3.1.2. Molecular Weight (g/mol)

102.18

3.1.3. CAS-No.

108-20-3

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 labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. FIRE-FIGHTING 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 hazards 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.

6. ACCIDENTAL RELEASE MEASURES

- 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 Environmental precautions
 Do not let product enter drains. Risk of explosion.
- 6.3 Methods and materials for containment and 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.

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
 Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition.
 Test for peroxide formation periodically and before distillation.
 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

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 effect | 850 mg/m3 |
| Consumer DNEL, longterm | dermal | Systemic effect | |
| Consumer DNEL, longterm | inhalation | Systemic effect | 151 mg/m3 |
| Consumer DNEL, longterm | oral | Systemic effects | |
- Predicted No Effect Concentration (PNEC)
 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

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching gloves outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Full contact

Material: butyl-rubber

Minimum layer thickness: 0,3 mm

Break through time: 480 min

Material tested: Butoject®

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0,2 mm

Break through time: 35 min

Material tested: Dermatrill® P

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the EC approved gloves. This recommendation is advisory only and must be evaluated by an industrial hygienist and safety officer familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

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.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Physical state clear, liquid

b) Color colorless

c) Odor No data available

d) Melting

point/freezing point

Melting point/range: -85 °C - lit.

e) Initial boiling point

and boiling range

68 - 69 °C - lit.

f) Flammability (solid,

gas)

No data available

g) Upper/lower

flammability or

explosive limits

Upper explosion limit: 21 %(V)

Lower explosion limit: 1 %(V)

h) Flash point -29 °C - closed cup

i) Autoignition

temperature

No data available

j) Decomposition

temperature

No data available

k) pH No data available

l) Viscosity Viscosity, kinematic: No data available
Viscosity, dynamic: 0,33 mPa.s at 20 °C 0,24 mPa.s at 40 °C
m) Water solubility 3,11 g/l at 20,2 °C - soluble
n) Partition coefficient:
n-octanol/water
log Pow: 2,4 at 20 °C - Bioaccumulation is not expected.
o) Vapor pressure 227 hPa at 25 °C
160 hPa at 20 °C
p) Density 0,725 g/mL at 25 °C - lit.
Relative density No data available
q) Relative vapor
density
No data available
r) Particle
characteristics
No data available
s) Explosive properties No data available
t) Oxidizing properties none
9.2 Other safety information
Relative vapor
density
3,53 - (Air = 1.0)

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

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.
RTECS: TZ5425000
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.

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 Bioaccumulative 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:

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.

12.7 Other adverse effects

No data available

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.

14. TRANSPORT INFORMATION

14.1 UN number

ADR/RID: 1159 IMDG: 1159 IATA: 1159

14.2 UN proper shipping name

ADR/RID: DIISOPROPYL ETHER

IMDG: DIISOPROPYL ETHER

IATA: Diisopropyl ether

14.3 Transport hazard class(es)

ADR/RID: 3 IMDG: 3 IATA: 3

14.4 Packaging group

ADR/RID: II IMDG: II IATA: II

14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

14.6 Special precautions for user

Tunnel restriction code : (D/E)

Further information : No data available

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

: FLAMMABLE LIQUIDS

major-accident hazards involving dangerous substances.

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

16. OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. For lab use only!