

SAFETY DATA SHEET

According to 1907/2006/EC, Article 31

Revision date: 30/07/2019

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

1.1 Product identifiers

Product name : **Diethyl ether**
Product Number : PSR39933
Brand : PureSynth Research Chemicals
Index-No. : 603-022-00-4
CAS-No. : 60-29-7

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

Identified uses : Laboratory chemicals

1.3 Details of the supplier of the safety data sheet

Company : PureSynth Research Chemicals Pvt. Ltd.
A-27, A.P.I.E, Hyderabad Telangana-500037

1.4 Emergency telephone number

Worldwide Helpline No. : +61 481109229

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Flammable liquids (Category 1), H224 Acute toxicity, Oral (Category 4), H302
Specific target organ toxicity - single exposure (Category 3), Central nervous system, H336 For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008

Pictogram



Signal word

Danger

Hazard statement(s)

H224

Extremely flammable liquid and vapor.

H302

Harmful if swallowed.

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.

P261

Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.

P264 Wash skin thoroughly after handling.
P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P403 + P235 Store in a well-ventilated place. Keep cool.

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, bio accumulative and toxic (PBT), or very persistent and very bio accumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Synonyms : Ether Ethyl ether
Formula : C₄H₁₀O
Molecular weight : 74,12 g/mol
CAS-No. : 60-29-7
Index-No. : 603-022-00-4

Component	Classification	Concentration
Diethyl ether		
	Flam. Liq. 1; Acute Tox. 4; STOT SE 3; H224, H302, H336 Concentration limits: >= 20 %: STOT SE 3, H336;	<= 100 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. 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

SECTION 5: Firefighting measures

5.1 Extinguishing media Suitable

extinguishing media

Dry powder Dry sand

Unsuitable extinguishing media

Do NOT use water jet.

5.2 Special hazards arising from the substance or mixture

Carbon oxides

5.3 Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

Use water spray to cool unopened containers.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas.

For personal protection see section 8.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Avoid inhalation of vapor or mist.

Keep away from sources of ignition - No smoking. Take measures to prevent the buildup of electrostatic charge.

For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Store in cool place.

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

Components with workplace control parameters

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eyeface protection

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

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's 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.

Body Protection

Complete suit protecting against chemicals, Flame retardant antistatic protective clothing. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full- face respirator with multi-purpose combination (US) or type AXBEK (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. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance	Form: liquid
b) Odor	sweet, ether-like
c) Odor Threshold	No data available
d) pH	No data available
e) Melting point/freezing point	Melting point/range: -116.2 °C
f) Initial boiling point and boiling range	34.5°C
g) Flash point	-40 °C
h) Evaporation rate	No data available
i) Flammability (solid, gas)	No data available
j) Upper/lower flammability or explosive limits	Upper explosion limit: 36 %(V) Lower explosion limit: 1,7 %(V)
k) Vapor pressure	587 hPa (20 °C)
l) Vapor density	No data available
m) Relative density	0.71 g/cm ³ (20 °C)
n) Water solubility	69 g/l

o)	Partition coefficient: n-octanol/water	No data available
p)	Auto-ignition temperature	180 °C
q)	Decomposition temperature	No data available
r)	Viscosity	No data available
s)	Explosive properties	No data available
t)	Oxidizing properties	No data available

9.2 Other safety information

Relative vapour density

SECTION 10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.
Contains the following stabiliser(s):
2,6-di-tert-Butyl-p-cresol (0,0005 %)

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

Oxidizing agents, Strong acids

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon oxides Other decomposition products - No data available
In the event of fire: see section

SECTION 11: Toxicological information

11.1 Information on toxicological effects Acute

toxicity

LD50 Oral - Rat - 1.215 mg/kg
(OECD Test Guideline 401) LDLo
Oral - Human - 260 mg/kg Remarks:
(RTECS)
LD50 Oral - Rat - 1.215 mg/kg
Remarks: (RTECS)
LC50 Inhalation - Mouse - 4 h - 33,226 mg/l
Dermal: No data available

Skin corrosion/irritation

Skin - Rabbit
Result: No skin irritation
(OECD Test Guideline 404)
Dermatitis

Serious eye damage/eye irritation

Eyes - Rabbit
Result: No eye irritation

(OECD Test Guideline 405)

Respiratory or skin sensitisation

Sensitisation test: - Mouse

Result: negative

(OECD Test Guideline 429)

Human experience

Result: negative

Remarks: (Lit.)

Germ cell mutagenicity

Mutagenicity (mammal cell test): chromosome aberration. Human lymphocytes

Result: negative

Mutagenicity (mammal cell test):

Mouse lymphoma test

Result: negative

Ames test

Salmonella typhimurium

Result: negative (IUCLID)

OECD Test Guideline 474

Mouse

Result: negative

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity

No data available

Specific target organ toxicity - single exposure

May cause drowsiness or dizziness. - Central nervous system

Acute oral toxicity - Risk of aspiration upon vomiting., Aspiration may cause pulmonary oedema and pneumonitis.

Specific target organ toxicity - repeated exposure

No data available

Aspiration hazard

No data available

Additional Information

RTECS: KI5775000

Inhalation may provoke the following symptoms:

Cough, chest pain, Difficulty in breathing, Dizziness, Drowsiness, Contact with eyes can cause:, Redness, Provokes tears., Blurred vision, Prolonged or repeated exposure to skin causes defatting and dermatitis.

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

Liver - Ingestion may provoke the following symptoms:, Irregularities - Based on Human Evidence

SECTION 12: Ecological information

12.1 Toxicity

Toxicity to fish

LC50 - Leuciscus idus (Golden orfe) - 2.840 mg/l - 48 h

	Remarks: (ECOTOX Database)
Toxicity to daphnia and other aquatic invertebrates	EC50 - Daphnia magna (Water flea) - 1.380 mg/l - 48 h Remarks: (IUCLID)
Toxicity to algae	static test EC50 - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h (OECD Test Guideline 201)
Toxicity to bacteria	static test EC50 - activated sludge - 21.000 mg/l - 3 h (OECD Test Guideline 209)
	static test NOEC - activated sludge - 42 mg/l - 3 h (OECD Test Guideline 209)

12.2 Persistence and degradability

Not readily biodegradable.

12.3 Bioaccumulative potential

No bioaccumulation is to be expected (log Pow ≤ 4).

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 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number		
ADR/RID: 1155	IMDG: 1155	IATA: 1155
		IATA: Diethyl ether
14.3 Transport hazard class(es)		
ADR/RID: 3	IMDG: 3	IATA: 3
14.4 Packaging group		
ADR/RID: I	IMDG: I	IATA: I
14.5 Environmental hazards		
ADR/RID: no	IMDG Marine pollutant: no	IATA: no
14.6 Special precautions for user		
No data available		

SECTION 15: Regulatory information

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

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

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

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. H224 Extremely flammable liquid and vapour.
H302	Harmful if swallowed.
H336	May cause drowsiness or dizziness.

Further information

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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.

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