

1. Identification of the substance/preparation and of the company/undertaking

Identification of the product

Diethyl ether

Manufacturer/supplier identification

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2. Hazards identification

Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]

Flammable liquids (Category 1)

Acute toxicity, Oral (Category 4)

Acute toxicity, Inhalation (Category 5)

Serious eye damage (Category 2)

Specific target organ toxicity, single exposure (Category 3)

Label elements

Pictogram



Signal word Danger

Hazard statement(s)

H224 Extremely flammable liquid and vapour.

H302 Harmful if swallowed.

H333 May be harmful if inhaled

H336 May cause drowsiness or dizziness.

H319 Causes serious eye irritation

Precautionary statement(s)

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

P240 Ground/bond container and receiving equipment.

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 Statements

none

3. Composition/information on ingredients

Synonyms

Diethyl ether

CAS-No.: 60-29-7

M: 74.12 g/mol

Molecular formula: (CH₃CH₂)₂O

4. First aid measures

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

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

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

5. Fire-fighting measures

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Advice for firefighters

Wear self-contained breathing apparatus for firefighting if necessary.

6. Accidental release measures

Personal precautions

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.

Environmental precautions

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

Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

7. Handling and storage

Precautions for safe handling

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

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

Conditions for safe storage

Store in cool place. 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.

8. Exposure controls/personal protection

Appropriate engineering controls

General industrial hygiene practice.

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).

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.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

9. Physical and chemical properties

Form: liquid

Colour: Colorless clear

Odour: not available

pH value: not available

Melting point: -116.3 °C.

Boiling point: 34.6 °C

Ignition temperature: 170 °C

Flash point: -39.99 °C

Autoignition temperature: not available

Explosion limits

lower: 1.8 %(V)

upper: 48 %(V)

Density : 0.71g/cm³

Bulk density: not available

Solubility in

water (20 °C) : not available

diluted acids (20 °C) : not available

Thermal decomposition: not available

10. Stability and reactivity

Chemical stability

Stable under recommended storage conditions.

Conditions to avoid

Heat, flames and sparks.

Materials to avoid

Oxidizing agents, Strong Acids

Hazardous decomposition products

Other decomposition products - no data available

11. Toxicological information

Acute toxicity

LD50 Oral - Rat - 1215 mg/kg
LC50 Inhalation - Rat – 30 min – 31000 ppm
LD50 Dermal - Rabbit -> 14.2 g/kg

Skin corrosion/irritation

Skin - Rabbit
Result: No irritation

Serious eye damage/eye irritation

Eyes - Rabbit
Result: No irritation

Respiratory or skin sensitization

no data available

Germ cell mutagenicity

no data available

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.

Specific target organ toxicity - single exposure

Inhalation, Oral - May cause drowsiness or dizziness.

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

12. Ecological information

Toxicity

Toxicity to fish LC50 - Pimephales promelas (fathead minnow) - 2560 mg/l - 96 h
Toxicity to daphnia and EC50 - Daphnia magna (Water flea) - 165 mg/l - 24 h
other aquatic
invertebrates
Toxicity to algae NOEC - Desmodesmus subspicatus (green algae) - > 100 mg/l - 72 h

Persistence and degradability

Not readily biodegradable.

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

no data available

Other adverse effects

no data available

13. Disposal considerations

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

14. Transport information

GHTECH Material Safety Data Sheet

ADR/RID

UN-Number: 1155 Class: 3 Packing group: I
Proper shipping name: DIETHYL ETHER

IMDG

UN-Number: 1155 Class: 3 Packing group: I
Proper shipping name: DIETHYL ETHER
Marine pollutant: no

IATA

UN-Number: 1155 Class: 3 Packing group: I
Proper shipping name: DIETHYL ETHER

15. Regulatory information

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

16. Other information

General update.

Regional representation:

This information is given on the authorised Safety Data Sheet for your country.