

Date of Issue/re-issue: 14/01/2019

Expiry: 01/02/2024

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name **ECP Limited**
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Product	Di-isopropyl Ether				Code	2094
CAS#	HSNO#	UN #	DG Class/es	Packing group #	Tracking?	Handlers Certificate?
108-20-3	HSR001131	1159	3	II	No	No

Recommended use: Laboratory Investigations

2. Hazards identification

2.1 GHS Classification

Flammable Liquids (Category B)

Skin irritation (Category B)

Aquatic toxicity (Acute or Chronic) (Category D)

2.2 GHS Label elements, including precautionary statements



Pictogram Signal word **Danger**

Hazard statement(s)

H225 Highly flammable liquid and vapour.

H316 Causes mild skin irritation.

H402 Harmful to aquatic life.

Precautionary statement(s)

Prevention

P210 Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P233 Keep container tightly closed.

P240 Ground/bond container and receiving equipment.

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

P242 Use only non-sparking tools.

P243 Take precautionary measures against static discharge.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

P303 + P361 + P353 IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing.

Rinse skin with water/ shower.

P332 + P313 If skin irritation occurs: Get medical advice/attention.

P370 + P378 In case of fire: Use dry sand, dry chemical or alcohol-resistant foam for extinction.

Storage

P403 + P235 Store in a well-ventilated place. Keep cool.

Disposal

P501 Dispose of contents/container to an approved waste disposal plant.

2.3 Other hazards

May form explosive peroxides.

3. Composition/information on ingredients

Substance/Mixture: Substance

3.1 Substances

Hazardous components

Component	Classification	Concentration
Diisopropyl ether	3.1 B; 6.3 B; 9.1 D; H225, H316, H402 Concentration limits: >= 20 %: STOT SE 3, H336;	<=100%

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 Nausea, Headache, Vomiting, narcosis

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

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. Firefighting measures

5.1 Extinguishing media

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

5.2 Special hazards arising from the substance or mixture

No data available

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.

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.

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 an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal.

7. Handling and storage

7.1 Precautions for safe handling

Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge.

7.2 Conditions for safe storage, including any incompatibilities

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.

7.3 Specific end use(s)

No data available

8. Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits Table

Component	CAS No	Value	Control parameters	Basis
Diisopropyl ether	108-20-3	WES-TWA	250 ppm 1040 mg/m ³	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
		WES-STEL	310 ppm 1300 mg/m ³	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants

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

Eye/face protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards.

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.

Full contact

Material: butyl-rubber

Minimum layer thickness: 0.3 mm

Break through time: 480 min

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.2 mm

Break through time: 35 min

Body Protection

Impervious clothing. 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 or 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.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

a) Appearance

Form: clear, liquid

Colour: colourless

b) Odour

No data available

c) Odour Threshold

No data available

d) pH

No data available

e) Melting point/freezing point

Melting point/range: -85 °C - lit.

f) Initial boiling point and boiling range 68 - 69 °C - lit.

g) Flash point

-29 °C - closed cup

h) Evaporation rate

No data available

i) Flammability (solid, gas)

No data available

j) Upper/lower flammability or explosive limits

Upper explosion limit: 21 %(V)

Lower explosion limit: 1 %(V)

k) Vapour pressure

227 hPa at 25 °C 160 hPa at 20 °C

l) Vapour density

3.53 - (Air = 1.0)

m) Relative density

0.725 g/mL at 25 °C

n) Water solubility

3.11 g/l at 20.2 °C - soluble

o) Partition coefficient: n-octanol/water

log Pow: 2.4

p) Auto-ignition temperature

No data available

q) Decomposition temperature

No data available

r) Viscosity

No data available

10. Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Contains the following stabiliser(s): BHT (0.006 %)

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

Strong oxidizing agents

10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions

Carbon oxides

Other decomposition products

No data available

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 5,880 mg/kg

Remarks: (RTECS)

LD50 Dermal - Rabbit - > 2,000 mg/kg

Skin corrosion/irritation

Serious eye damage/eye irritation

Eyes - Rabbit - No eye irritation - OECD Test Guideline 405

Respiratory or skin sensitisation

Sensitisation test: - Mouse - Does not cause skin sensitisation. - OECD Test Guideline 429

Remarks: (External MSDS)

Germ cell mutagenicity

Genotoxicity in vitro - Ames test - Salmonella typhimurium – 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

Reproductive toxicity - Rat - Inhalation

Maternal Effects: Other effects.

Specific Developmental Abnormalities: Musculoskeletal system.

Specific target organ toxicity - single exposure

May cause drowsiness or dizziness.

Acute oral toxicity - nausea, vomiting, irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract. Risk of aspiration upon vomiting.

Acute inhalation toxicity - mucosal irritations, cough, shortness of breath.

Specific target organ toxicity - repeated exposure

Aspiration hazard

Potential health effects

Inhalation

May be harmful if inhaled. May cause respiratory tract irritation. Vapours may cause drowsiness and dizziness.

Ingestion

May be harmful if swallowed.

Skin

May be harmful if absorbed through skin. May cause skin irritation.

Eyes

May cause eye irritation.

Signs and Symptoms of Exposure

Nausea, headache, vomiting, narcosis.

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

Additional Information

RTECS: TZ5425000 Further information

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 fish flow-through test

LC50 - Pimephales promelas (fathead minnow) - > 100 mg/l - 96 h

Remarks: (External MSDS)

Toxicity to daphnia and other aquatic invertebrates

EC50 - Daphnia magna (Water flea) - 190 mg/l - 48 h

Method: OECD Test Guideline 202

Toxicity to algae

EC50 - Pseudokirchneriella subcapitata (green algae) - > 1,000 mg/l - 96 h

Method: OECD Test Guideline 201

Toxicity to bacteria static test

NOEC - activated sludge - 370 mg/l - 3 h

Method: OECD Test Guideline 209

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d

Result: 0 % - Not biodegradable

Method: OECD Test Guideline 301D

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

No data available

13. Disposal considerations

13.1 Waste treatment methods

Product

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

14. Transport Information Table

		ADR/RID – European packaging certification	IMDG International Maritime Dangerous Goods Code	IATA – DGR International Air Travel Association – Dangerous Goods Regulations
14.1	UN Number	1159	1159	1159
14.2	UN Proper Shipping name	DIISOPROPYL ETHER	DIISOPROPYL ETHER	Diisopropyl ether
14.3	Transport Hazard	3	3	3

	Class			
14.4	Packaging group	II	II	II
14.5	Environmental Hazards	No	No	No
14.6	Special precautions for user	No data available		

15. Regulatory information

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

HSNO Group Standard Approval: HSR002596 - Laboratory Chemicals and Reagent Kits Group
Standard 2006

Tracking Required: not required

Approved Handler Cert.: not required

16. Disclaimer

The information above is believed to be accurate and represents the best information currently available to us. However, the information is not a guarantee expressed or implied, with respect to such information, and we assume no liability resulting from its use. Anyone using the chemical described here should ensure that he or she has the appropriate training and has the expertise and any equipment required for safe handling. If clarification or further information is required, please contact ECP Ltd or refer to the official handler of dangerous goods within your own company. The user should also make their own investigations to determine the suitability of the product for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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