



Safety Data Sheet

Date of Issue: 01.10.2020

Date of Expiry: 01.10.2025

1: IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name : **ECP Limited**
Address : PO Box 34125, Birkenhead, Auckland 0746
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Product	Diethylamine			Code	21801
CAS#	HSNO#	UN #	DG Class/es	Packing group #	
109-89-7	HSR001127	1154	3 (8)	II	

Recommended use : Laboratory Investigations

2: Hazards identification

2.1 GHS Classification

Flammable Liquids (Category B), H225
Acute toxicity, Oral (Category D), H302
Acute toxicity, Inhalation (Category D), H332
Acute toxicity, Dermal (Category C), H311
Skin irritation (Category A), H315
Serious eye damage (Category A), H318
Respiratory sensitisation (Category A), H334
Skin sensitisation (Category B), H317
Aquatic toxicity (Acute or Chronic) (Category D), H402

2.2 GHS Label elements, including precautionary statements

Pictogram



Signal word : **Danger**

Hazard statement(s)

H225 Highly flammable liquid and vapour.
H302 Harmful if swallowed.
H311 Toxic in contact with skin.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
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.
- P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
- P264 Wash skin thoroughly after handling.
- P270 Do not eat, drink or smoke when using this product.
- P271 Use only outdoors or in a well-ventilated area.
- P272 Contaminated work clothing should not be allowed out of the workplace.
- P273 Avoid release to the environment.
- P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
- P285 In case of inadequate ventilation wear respiratory protection.

Response

- P301 + P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
- P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
- P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P310 Immediately call a POISON CENTER/doctor.
- P322 Specific measures (see supplemental first aid instructions on this label).
- P330 Rinse mouth.
- P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.
- P362 Take off contaminated clothing and wash before reuse.
- 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.
- P405 Store locked up.

Disposal

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

2.3 Other hazards - none

3: Composition/information on ingredients

Substance / Mixture : Substance

3.1 Substances

Formula : C4H11N
 Molecular weight : 73.14 g/mol
 CAS-No. : 109-89-7
 EC-No. : 203-716-3
 Index-No. : 612-003-00-X

Hazardous components

Component	Classification	Concentration
Diethylamine		<= 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

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. 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.

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: 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

Carbon oxides, Nitrogen oxides (NO_x)

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

Wear respiratory protection. 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. Discharge into the environment must be avoided.

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 according to local regulations (see section 13).

6.4 Reference to other sections

For disposal see section 13.

7: Handling and storage

7.1 Precautions for safe handling

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

Flash back possible over considerable distance. Container explosion may occur under fire conditions. Keep away from sources of ignition - No smoking. Take measures to prevent the build-up of electrostatic charge.
For precautions see section 2.2.

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)

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

8: Exposure controls/personal protection

8.1 Control parameters

Occupational Exposure Limits Table

Component	CAS No.	Value	Control parameters	Basis
Diethylamine	109-89-7	WES-STEL	25 ppm 75 mg/m ³	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
	Remarks	Skin absorption		
		WES-TWA	10 ppm 30 mg/m ³	New Zealand. Workplace Exposure Standards for Atmospheric Contaminants
		Skin absorption		

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.

Body Protection

Complete suit protecting against chemicals. 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 particle respirator type 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.

Control of environmental exposure

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Molecular mass	: 73.14 g/mol
Colour	: Clear Colourless.
Odour	: fishy ammoniacal.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: 16.9
Melting point	: -50 °C
Freezing point	: No data available
Boiling point	: 55 - 58
Flash point	: -28 °C
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Flammable Highly flammable liquid and vapour
Vapour pressure	: 195 mm Hg at 20°C
Relative vapour density at 20 °C	: 2.5
Relative density	: No data available
Density	: 0.71 g/cm ³
Solubility	: Water: Miscible in water
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: 0.018 - 0.101 vol %

9.2. Other information

No additional information available

10: Stability and reactivity

10.1 Reactivity

No data available

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available

10.4 Conditions to avoid

Heat, flames and sparks.

10.5 Incompatible materials

Aldehydes, Alcohols, Dicyanofurazan, Ketones, phenols, Acids, Halogenated hydrocarbon, Oxidizing agents, Epoxides

10.6 Hazardous decomposition products

Other decomposition products - No data available

Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NO_x)

In the event of fire: see section 5

11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - male - 540 mg/kg
(OECD Test Guideline 401)
LC50 Inhalation - Rat - female - 4 h - 17.11 mg/l
(OECD Test Guideline 403)
LD50 Dermal - Rabbit - male - 582 mg/kg
Remarks: (IUCLID) (ECHA)

Skin corrosion/irritation

Skin - Rabbit
Result: Causes severe burns.
(OECD Test Guideline 404)
(Regulation (EC) No 1272/2008, Annex VI)

Serious eye damage/eye irritation

Eyes - Rabbit
Result: Causes burns. - 7 Days
(Regulation (EC) No. 440/2008, Annex, B.5)

Respiratory or skin sensitisation

No data available

Germ cell mutagenicity

Ames test
Salmonella typhimurium
Result: negative
(ECHA)
In vitro mammalian cell gene mutation test
mouse lymphoma cells
Result: negative
Mouse - male and female
Result: negative
(ECHA)

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 respiratory irritation.
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

Additional Information

RTECS: HZ8750000
Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., burning sensation, Cough, wheezing, laryngitis, Shortness of breath,

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

12: Ecological information

12.1 Toxicity

Toxicity to fish

semi-static test LC50 - *Oryzias latipes* - 27 mg/l - 96 h
(OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates

semi-static test LC50 - *Ceriodaphnia dubia* (water flea) - 4.6 mg/l - 48 h
(US-EPA)

Toxicity to algae

static test EC50 - *Pseudokirchneriella subcapitata* - 54 mg/l - 72 h
(OECD Test Guideline 201)

Toxicity to bacteria

static test EC10 - activated sludge - > 1,000 mg/l - 30 min
(ISO 8192)

Remarks: (External MSDS)

12.2 Persistence and degradability

Biodegradability aerobic - Exposure time 28 d

Result: 68 - 70 % - Readily biodegradable.
(OECD Test Guideline 301C)

Theoretical oxygen demand

3,620 mg/g

Remarks: (IUCLID)

12.3 Bioaccumulative potential

No data available

12.4 Mobility in soil

No data available

12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

12.6 Other adverse effects

Toxic to aquatic life.

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	IATA – DGR International Air Travel Association – Dangerous Goods
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			Code	Regulations
14.1	UN Number	1154	1154	1154
14.2	UN Proper Shipping name	DIETHYLAMINE	DIETHYLAMINE	Diethylamine
14.3	Transport Hazard Class	3 (8)	3 (8)	3 (8)
14.4	Packaging group	II	II	II
14.5	Environmental Hazards	No	No	No
14.6	Special precautions for user	None		
14.7	Incompatible Materials	Aldehydes, Alcohols, Dicyanofurazan, Ketones, phenols, Acids, Halogenated hydrocarbon, Oxidizing agents, Epoxides		

15: Regulatory information

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

National regulatory information

HSNO Approval Code: HSR001127

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

Group Standard 2006

Tracking Required: not required

Approved Handler Cert.: not required

Notification status

AICS : On the inventory, or in compliance with the inventory

DSL : All components of this product are on the Canadian DSL

ENCS : On the inventory, or in compliance with the inventory

ISHL : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

NZIoC : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

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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