

MSDS 1680 Date of Issue/re-issue: **18.12.2017**

User declaration:- I have read and understood this Safety Data Sheet

Name:- _____ Signature _____ Date _____

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Company Name



Address: 39 Woodside Ave, Northcote, Auckland , New Zealand

Emergency Tel: NZ 0800154666 | Tel +64 9 480 4386 | FAX +64 9 480 4385

Product	n-Butylamine			Code	1680
CAS#	HSNO#	UN #	DG Class/es	Packing group #	
109-73-9	HSR001090	1125	3	II	

Recommended use: Laboratory Investigations

2. Hazards Identification

2.1 GHS Classification

- Flammable Liquids (Category B)
- Acute toxicity, Oral (Category D)
- Acute toxicity, Inhalation (Category B)
- Acute toxicity, Dermal (Category C)
- Skin corrosion (Category A)
- Serious eye damage (Category A)
- 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.
- H302 Harmful if swallowed.
- H311 Toxic in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H330 Fatal 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.

P260 Do not breathe 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.

P273 Avoid release to the environment.

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

P284 Wear respiratory protection.

Response

P301 + P312 IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.

P301 + P330 + P331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

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 or doctor/ physician.

P320 Specific treatment is urgent (see supplemental first aid instructions on this label).

P361 Remove/ Take off immediately all contaminated clothing.

P363 Wash contaminated clothing before reuse.

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

Storage

P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

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

Hazard Classification

Australia:

Classified as Hazardous according to criteria of National Occupational Health & Safety Commission (NOHSC), Australia.

Classified as Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

New Zealand:

Classified as Hazardous according to the New Zealand Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001.

Classified as Dangerous Goods for transport, according to the New Zealand Standard NZS 5433:1999 Transport of Dangerous Goods on Land.

HSNO Classification:

3.1B - Flammable Liquid: High Hazard.

6.1B - Substance that is acutely toxic.

8.1A - Substance that is corrosive to metals.

8.2A - Substance that is corrosive to dermal tissue.

8.3A - Substance that is corrosive to ocular tissue.
9.1D - Substance that is slightly harmful to the aquatic environment or is otherwise designed for biocidal action.
9.3B - Substance that is ecotoxic to terrestrial vertebrates.
3.1B -.6.1B -.8.1A -.8.2A -.8.3A -.9.1D.9.3B -

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Name	CAS	Proportion
	N-Butylamine	109-73-9	100 %

4. FIRST AID MEASURES

Inhalation	If inhaled, remove from contaminated area. Apply artificial respiration if not breathing. Seek immediate medical attention.
Ingestion	If swallowed, do NOT induce vomiting. Wash out mouth with water. Seek immediate medical attention.
Skin	Wash affected area thoroughly with soap and water. Remove contaminated clothing and wash before reuse or discard. Seek immediate medical attention.
Eye	If contact with the eye(s) occurs, wash with copious amounts of water holding eyelid(s) open. Take care not to rinse contaminated water into the non-affected eye. Seek immediate medical attention.
First Aid Facilities	Eye wash station, safety shower and normal washroom facilities.
Advice to Doctor	Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media	Dry chemical; 'alcohol' foam; carbon dioxide; polymer foam; large amounts of water.
Hazards from Combustion Products	Under fire conditions this product may emit toxic and/or irritating fumes including carbon monoxide and carbon dioxide.
Specific Hazards	This product is highly flammable. Keep storage tanks, pipelines, fire-exposed surfaces etc cool with water spray. Shut off any leak if safe to do so and remove sources of re-ignition. Vapour/air mixtures may ignite explosively. Flashback along the vapour trail may occur. Runoff to sewer may create fire or explosion hazard.
Hazchem Code	2WE
Precautions in	Fire-fighters should wear full protective clothing and self contained breathing apparatus

connection with Fire (SCBA) operated in positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures Wear appropriate personal protective equipment and clothing to minimise exposure. Extinguish or remove all sources of ignition and stop leak if safe to do so. Increase ventilation. Evacuate all unnecessary personnel. If possible contain the spill. Place inert absorbent material onto spillage. Use clean non-sparking tools to collect the material and place into a suitable labelled container. Do not dilute material but contain. Dispose of waste according to federal, Environmental Protection Authority and state regulations. If the spillage enters the waterways contact the Environmental Protection Authority, or your local Waste Management Authority.

7. HANDLING AND STORAGE

Precautions for Safe Handling Open containers cautiously as contents may be under pressure. Use only in a well ventilated area. DO NOT store or use in confined spaces. Do not enter these areas without respiratory protection or until the atmosphere has been checked. Keep tank covered and containers sealed when not in use. Build up of mists or vapours in the atmosphere must be prevented. Avoid inhalation of vapour and mists. Do not use near welding or other ignition sources and avoid sparks. Do NOT pressurise, cut, heat or weld containers as they may contain hazardous residues. Do not smoke. When dealing with large quantities, repeated or prolonged exposure without protection should be prevented in order to lessen the possibility of disorders. It is essential that all who come into contact with this material maintain high standards of personal hygiene i.e. Washing hands prior to eating, drinking, smoking or using toilet facilities.

Conditions for Safe Storage Store in a cool, dry, well-ventilated area away from sources of ignition, oxidising agents, foodstuffs, and clothing and out of direct sunlight. Keep containers closed when not in use and securely sealed and protected against physical damage. Inspect regularly for deficiencies such as damage or leaks. Always keep in containers made of the same material as the supply container. Have appropriate fire extinguishers available in and near the storage area. Take precautions against static electricity discharges. Use proper grounding procedures. For information on the design of the storeroom, reference should be made to Australian Standard AS1940 - The storage and handling of flammable and combustible liquids. Reference should also be made to AS 3780-1994: The storage and handling of corrosive substances.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards No exposure standards have been established for this material by the Australian National Occupational Health & Safety Commission (NOHSC) or the Occupational Safety and Health Service (OSH) of the New Zealand Department of Labour.

Biological Limit Values No Biological limit available.

Engineering Controls Provide sufficient ventilation to keep airborne levels below the exposure limit. Where vapours or mists are generated, particularly in enclosed areas, and natural ventilation is inadequate, a flameproof exhaust ventilation system is required. Refer to AS 1940 - The

storage and handling of flammable and combustible liquids for further information concerning ventilation requirements.

Respiratory Protection	If engineering controls are not effective in controlling airborne exposure then respiratory protective equipment should be used suitable for protecting against airborne contaminants. Type of breathing protection required will vary according to individual circumstances. Expert advice may be required to make this decision. Reference should be made to Australian Standards AS/NZS 1715, Selection, Use and maintenance of Respiratory Protective Devices; and AS/NZS 1716, Respiratory Protective Devices.
Eye Protection	Safety glasses with side shields, goggles or full-face shield as appropriate recommended. Final choice of appropriate eye/face protection will vary according to individual circumstances i.e. methods of handling or engineering controls and according to risk assessments undertaken. Eye protection should conform with Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.
Hand Protection	Impervious gloves recommended. Final choice of appropriate gloves will vary according to individual. Reference should be made to AS/NZS 2161 Occupational protective gloves- Selection, use and maintenance.
Body Protection	Suitable work wear should be worn to protect personal clothing, eg cotton overalls buttoned at neck and wrist. When large quantities are handled the use of plastic aprons and rubber boots is recommended. Industrial clothing should conform to the specifications detailed in AS/NZS 2919: Industrial clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Colourless liquid.
Odour	Ammonia-like or fishy odour.
Melting Point	-49 to -50.5°C
Boiling Point	78°C
Solubility in Water	Completely soluble.
Solubility in Organic Solvents	Soluble in organic solvents including ethanol, acetone, ether, benzene.
Specific Gravity	0.74 at 20°C (water = 1)
pH Value	11.8 (0.1M solution) (calc.)
Vapour Pressure	68-82 mmHg (20°C)
Vapour Density (Air=1)	2.52 (air = 1)
Evaporation Rate	7.3 (butyl acetate = 1)

Odour Threshold	1.8 ppm (geometric mean of all reported literature values); values as low as 0.08 ppm (method not specified) and as high as 125 ppm (method not specified) have been reported.
Flash Point	-14°C (closed cup)
Auto-Ignition Temperature	312°C
Flammable Limits - Lower	1.7% by volume
Flammable Limits - Upper	9.8% by volume
Molecular Weight	73.16
Other Information	CONVERSION FACTOR 1 ppm = 2.99 mg/m ³ ; 1 mg/m ³ = 0.33 ppm at 25°C CRITICAL TEMPERATURE 251°C BASICITY: pK _b = 3.39

10. STABILITY AND REACTIVITY

Chemical Stability	Stable under normal conditions.
Conditions to Avoid	Heat, direct sunlight, open flames or other sources of ignition.
Incompatible Materials	Oxidising agents, acids, alcohols, glycol ethers, monomers may react violently. Risk of fire and explosion.
Hazardous Decomposition Products	Thermal decomposition and combustion produce noxious fumes containing oxides of carbon.
Hazardous Polymerization	Will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicology Information	LD50 (oral, rat): 372 mg/kg body weight; 500 mg/kg body weight LD50 (dermal, guinea pig): 423 mg/kg body weight; 365 mg/kg body weight LD50 (dermal, rabbit): 850 mg/kg body weight
Inhalation	Harmful and corrosive by inhalation. Vapours or mists generated will cause severe irritation with possible burns to the mucous membrane and upper airways. Symptoms may include coughing, breathing difficulties, lesions of the nasal septum, severe pain and may lead to permanent tissue scarring, pulmonary oedema, pneumonitis and emphysema. Inhalation of mists at elevated temperatures will increase these symptoms.
Ingestion	Harmful and corrosive if swallowed. Will cause severe irritation and chemical burns to the mouth, oesophagus and stomach. Symptoms may include nausea, vomiting, perforation

with severe abdominal pain and bleeding, breathing difficulties, shock, convulsions, collapse and possibly lead to death.

Skin	Harmful and corrosive in contact with the skin. Will cause severe irritation and possible burns to the skin, which can result in redness, itchiness, pain and swelling. Repeated or prolonged contact may also lead to dermatitis.
Eye	Will cause severe irritation to the eyes, which can result in redness, stinging, pain, loss of colour vision (blue vision), corneal oedema, lachrymation and possibly irreversible eye damage i.e. corneal burns.
Chronic Effects	Prolonged or repeated skin contact may cause defatting leading to dermatitis.

12. ECOLOGICAL INFORMATION

Ecotoxicity	Not available.
Persistence / Degradability	Not available.
Mobility	Not available.
Environment Protection	Avoid contaminating waterways.

13. DISPOSAL CONSIDERATIONS

Disposal Considerations	Dispose of waste according to federal, EPA and state regulations. Labels should not be removed from containers until they have been cleaned. Do not cut, puncture or weld on or near containers. Empty containers may contain hazardous residues. Contaminated containers must not be treated as household waste. Containers should be cleaned by appropriate methods and then re-used or disposed of by landfill or incineration as appropriate. Do not incinerate closed containers.
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14. TRANSPORT INFORMATION

Transport Information Australia:

This material is classified as Class 3 Flammable Liquid and subsidiary Class 8 Corrosive Substance according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

These substances are incompatible in a placard load with any of the following:

- Class 1, Explosives
- Class 2.1, Flammable Gases, if both the Class 3 and Class 2.1 dangerous goods are in bulk
- Class 2.3, Toxic Gases
- Class 4.2 Spontaneously Combustible Substances
- Class 4.3, Dangerous When Wet Substances
- Class 5.1, Oxidising Agents
- Class 5.2 - Organic Peroxides
- Class 6, Toxic Substances (where the Toxic substances are cyanides and the corrosives are acids or if the Class 3 dangerous goods are nitromethane),

- Class 7, Radioactive Substances

And are incompatible with food and food packaging in any quantity.

Note 1: Cyanides must be segregated from Class 8 acids.

Note 2: Concentrated acids must be segregated from concentrated alkalis (Packing Group 1 & 2).

New Zealand

This material is classified as Class 3 - Flammable Liquids and subsidiary Class 8 - Corrosives according to NZS 5433:1999 Transport of Dangerous Goods on Land.

Must not be loaded in the same freight container or on the same vehicle with:

- Class 1, Explosives
- Class 2.1, Flammable gases
- Class 2.3, Toxic gases
- Class 4.2, Spontaneously combustible substances
- Class 5.1, Oxidising substances
- Class 5.2, Organic peroxides
- Class 7, Radioactive materials unless specifically exempted

And are incompatible with food and food packaging in any quantity.

Note 1: Cyanides (Class 6.1) must not be loaded in the same freight container or on the same vehicle with acids (Class 8).

Note 2: Strong acids must not be loaded in the same freight container or on the same vehicle with strong alkalis. Packing Group I and II acids and alkalis should be considered as strong.

Must not be loaded with in the same freight container; and on the same vehicle must be separated horizontally by at least 3 metres unless all but one are packed in separate freight containers with:

- Class 4.3, Dangerous when wet substances

Goods of packing group II or III may be loaded in the same freight container or on the same vehicle if transported in segregation devices with:

- Class 4.2, Spontaneously combustible substances
- Class 4.3, Dangerous when wet substances
- Class 5.1, Oxidising substances
- Class 5.2, Organic peroxides

And are incompatible with food and food packaging in any quantity.

U.N. Number	1125
Proper Shipping Name	n-BUTYLAMINE
DG Class	3
Sub.Risk	8
Hazchem Code	2WE
Packaging Method	3.8.3RT1
Packing Group	II
EPG Number	3A4
IERG Number	19

15. REGULATORY INFORMATION

Regulatory Information	Australia: Classified as hazardous according to criteria of National Occupational Health & Safety Commission (NOHSC). Poison Schedule: Not Scheduled
Poisons Schedule	Not Scheduled
National and or International Regulatory Information	New Zealand: Classified as Hazardous according to the New Zealand Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001. ERMA Approval Code: HSR001090
Hazard Category	Harmful,Corrosive,Highly Flammable
AICS (Australia)	All components in this product are listed on AICS (Australian Inventory of Chemical Substances).

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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