

<u>SDs number</u>	<u>Product</u>	<u>Issued</u>	<u>Expires</u>
<u>1005</u>	<u>Acetaldehyde</u>	<u>16.9.2018</u>	<u>16.9.2023</u>

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
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Product	Acetaldehyde			Code	1005
CAS#	HSNO#	UN #	DG Class/es	Packing group #	
75-07-0	HSR001069	1089	3	I	

Recommended use: Laboratory Investigations

2. Hazards Identification

2.1 GHS Classification

- Flammable Liquids (Category A)
- Acute toxicity, Oral (Category D)
- Acute toxicity, Inhalation (Category E)
- Acute toxicity, Dermal (Category E)
- Skin irritation (Category B)
- Serious eye damage (Category A)
- Skin sensitisation (Category B)
- Carcinogenicity (Category B)
- Aquatic toxicity (Acute or Chronic) (Category D)

2.2 GHS Label elements, including precautionary statements



Pictogram

Signal word **Danger**

Hazard statement(s)

- H224 Extremely flammable liquid and vapour.
- H302 Harmful if swallowed.
- H313 May be harmful in contact with skin.
- H316 Causes mild skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H333 May be harmful if inhaled.

H351 Suspected of causing cancer.

H402 Harmful to aquatic life.

Precautionary statement(s)

Prevention

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

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.

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.

Response

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

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.

P330 Rinse mouth.

P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.

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 + 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

Lachrymator., Photosensitizer

Hazard Classification

Australia:

Classified as Hazardous according to criteria of National Occupational Health & Safety
Classified as Dangerous Goods according to the Australian Code for the Transport

New Zealand:

Classified as Hazardous according to the New Zealand Hazardous Substances (Minimum Degrees of Hazard) Regulations 1996.
Classified as Dangerous Goods for transport according to the New Zealand Standard NZS 5433:1999.

HSNO Classification:

3.1C - Substance that is a Flammable Liquid: Very High Hazard.

6.1D - Substance that is acutely toxic.

6.4A - Substance that is irritating to the eye.

6.6A - Substance that is a known or presumed human mutagen.

6.7B - Substance that is a suspected human carcinogen.

6.8B - Substance that is a suspected human reproductive or developmental toxicant.

6.9B - Substance that is harmful to human target organs or systems.

9.1D - Substance that is slightly harmful in the aquatic environment.

9.2D - Substance that is slightly harmful in the soil environment.

9.3C - Substance that is harmful to terrestrial vertebrates.

Part 3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients	Name	CAS	Proportion
	Acetaldehyde	75-07-0	100 %

Part 4. FIRST AID MEASURES

Inhalation	If inhaled, remove to fresh area. Keep at rest until recovered. If symptoms persist seek medical attention.
Ingestion	Do NOT induce vomiting. Wash out mouth and lips thoroughly with water. Seek medical attention.
Skin	Wash affected area thoroughly with copious amounts of running water. Remove contaminated clothing and wash before reuse or discard. If symptoms develop seek medical attention.
Eye	If in eyes, hold eyelids apart and flush the eyes continuously with running water. Continue flushing for several minutes until all contaminants are washed off completely. Seek medical attention.
First Aid Facilities	Eye wash and normal washroom facilities.
Advice to Doctor	Treat symptomatically

Part 5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media	Extinguish fire with foam, dry chemical powder or carbon dioxide.
Hazards from Combustion Products	Under fire conditions this product may emit toxic and/or irritating fumes and gases including carbon monoxide and carbon dioxide.
Specific Hazards	Extremely flammable liquid. Vapour can explode or catch fire under certain conditions on

contact with the atmosphere, oxygen and hydrogen peroxide. Vapour/air mixtures may ignite explosively. Corroded metals have catalysed auto-ignition of its vapour. This product should be stored and used in a well-ventilated area away from naked flames, sparks and other sources of ignition. Electrically link and ground metal containers for transfers of the product to prevent accumulation of static electricity. Keep the containers tightly closed. Vapours are heavier than air and may travel long distances to an ignition source and flash back. Heating can cause expansion or decomposition leading to violent rupture of containers. Runoff to sewer may create fire or explosion hazard.

Hazchem Code 2YE

Precautions in connection with Fire Fire fighters should wear Self-Contained Breathing Apparatus (SCBA) and full protective clothing to prevent exposure to vapours, fumes or products of combustion. Water spray may be used to cool down heat-exposed containers. If safe to do so, remove containers from path of fire. Do not allow run-off from fire fighting to enter drains or water courses.

Part 6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures Remove all sources of ignition by at least 50 metres. Wear appropriate personal protective equipment and clothing to minimise exposure. Evacuate all unprotected personnel. If possible contain the spill. Place inert absorbent, non-combustible material onto spillage. Use clean non-sparking tools to collect the material and place into suitable labelled containers for the subsequent recycling or disposal. Dispose of waste according to the applicable local and national regulations. If contamination of sewers or waterways occurs inform the local water authorities and EPA in accordance with local regulations.

Part 7. HANDLING AND STORAGE

Precautions for Safe Handling Avoid contact with skin and eyes. Wear protective clothing, impervious gloves and safety glasses. Use only in well ventilated areas. Avoid breathing vapour or spray mist. Keep containers closed when not in use. Do not empty into drains. Maintain a high level of personal hygiene when using the product, that is, always wash hands after handling, and before eating, drinking, smoking or using the toilet facilities. If possible always use this material in a fire resistant chemical fume hood. Acetaldehyde container or bottle should never be opened, unless it is chilled as it is extremely volatile, with a boiling point of 21°C. An emergency respirator should be available.

Conditions for Safe Storage Store in a cool, dry, well-ventilated area away from sources of ignition, oxidising agents, foodstuffs, and clothing. Keep containers closed when not in use and securely sealed and protected against physical damage. Inspect regularly for deficiencies such as damage or leaks. 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 all applicable national and local regulations.

Part 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards Australian National Occupational Health And Safety Commission (NOHSC) Exposure Standards:

Substance TWA STEL Notices

ppm mg/m³ ppm mg/m³

Acetaldehyde 20 36 50 91 -

New Zealand Occupational Safety and Health Service (OSH) Workplace Exposure Standards:

Substance TWA STEL Notices

ppm mg/m³ ppm mg/m³

Acetaldehyde 20 36 50 91 -

TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight-hour working day, for a five-day week.

STEL (Short Term Exposure Limit): The average airborne concentration over a 15 minute period which should not be exceeded at any time during a normal eight-hour workday.

Engineering Controls Provide adequate ventilation to keep airborne levels below the exposure limits. Where vapours or mists are generated, a flameproof local exhaust ventilation system, drawing vapours/mists away from workers' breathing zone, is required.
If possible always use this material in a fire resistant chemical fume hood. Acetaldehyde should never be opened, unless the container is chilled as it is extremely volatile, with a boiling point of 21°C. An emergency respirator should be available.

Respiratory Protection If engineering controls are not effective in controlling airborne exposure then respiratory protective equipment should be used. Final choice of appropriate breathing protection is dependent on actual airborne concentrations, and the type of breathing protection required will vary according to individual circumstances. 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, or chemical goggles as appropriate should be used. 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 Wear gloves of impervious material such as laminated film or PVC. Final choice of appropriate gloves will vary according to individual circumstances i.e. methods of handling or according to risk assessments undertaken. Reference should be made to AS/NZS 2161.1: Occupational protective gloves - Selection, use and maintenance.

Body Protection Suitable protective workwear, e.g. cotton overalls buttoned at neck and wrist. Industrial clothing should conform to the specifications detailed in AS/NZS 2919: Industrial clothing.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance Colourless liquid with a pungent fruity odour.

Melting Point -123.5°C

Boiling Point 20.8°C

Solubility in Water Soluble

Solubility in Organic Solvents Soluble with most organic solvents.

Specific Gravity 0.783

Vapour Pressure	740 mmHg at 20°C
Vapour Density (Air=1)	1.52 (Air=1)
Evaporation Rate	>1 (n-Butyl acetate=1)
Flash Point	-27°C
Flammability	Extremely flammable liquid.
Auto-Ignition Temperature	175°C
Flammable Limits - Lower	4.0%
Flammable Limits - Upper	60%

Part. **10. STABILITY AND REACTIVITY**

Chemical Stability	Acetaldehyde is highly reactive and unstable. Can be oxidized or reduced readily. All reactions can be violent. Forms acetic acid while liberating heat in the presence of air and moisture. May form unstable peroxides, which may spontaneously explode and burst containers.
Conditions to Avoid	Avoid contact with hot surfaces, open flame, sparks and other ignition sources.
Incompatible Materials	Strong oxidizers, bases, amines, air, acids, reducing agents.
Hazardous Decomposition Products	Thermal decomposition may result in the release of toxic and/or irritating fumes and gases including carbon monoxide and carbon dioxide.
Hazardous Reactions	Acetaldehyde reacts vigorously or dangerously with many organic classes of compounds including acid anhydrides, alcohols, halogens, ketones, phenols, amines. It polymerises exothermically with acetic acid. Its reactions with ammonia, hydrogen cyanide and sulphide are also dangerous.
Hazardous Polymerization	Can occur. Uncontrolled polymerisation can cause rapid evolution of heat and increased pressure, which can result in violent rupture of storage vessels or containers. May occur in the presence of polymerisation accelerators. Trace amounts of base can also initiate polymerisation.

Part 11. TOXICOLOGICAL INFORMATION

Toxicology Information	For Acetaldehyde: LD50 (Oral, rat): 661 mg/kg LD50 (Dermal, Rabbit): 3,540 mg/kg LC50 (Inhalation, Rat): 13,300 ppm/4h
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Inhalation	Irritating to respiratory system. Inhalation of vapours may irritate the respiratory system and cause CNS depression, drowsiness and dizziness.
Ingestion	Harmful if swallowed. Ingestion of this product may irritate the gastric tract, causing nausea and vomiting.
Skin	May irritate the skin. May cause redness and defatting. Repeated exposure may cause skin dryness and cracking.
Eye	Irritating to eyes. On eye contact this product will cause tearing, stinging and blurred vision.
Chronic Effects	Prolonged or repeated skin contact may cause defatting leading to dermatitis. Prolonged inhalation may cause central nervous system depression with symptoms including dizziness, drowsiness, nausea and headaches. Can be expected to give symptoms resembling chronic alcoholism with delirium, hallucinations and loss of intellect. Acetaldehyde is classified as a Category 3 Carcinogen according to National Occupational Health And Safety Commission (NOHSC). It is classified as '6.7B - Substance that is a suspected human carcinogen' by HSNO New Zealand.

Part 12. ECOLOGICAL INFORMATION

Ecotoxicity	Not available
Persistence / Degradability	Not available
Mobility	Not available
Bioaccumulative Potential	Not available
Environment Protection	Do not allow product to enter drains, waterways or sewers.

Part 13. DISPOSAL CONSIDERATIONS

Disposal Considerations	The disposal of the spilled or waste material must be done in accordance with applicable local and national regulations.
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Part 14. TRANSPORT INFORMATION

Transport Information	<p>Australia:</p> <p>This material is classified as a Class 3 (Flammable Liquid) Dangerous Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail. Dangerous goods of Class 3 (Flammable Liquid) are incompatible in a placard load with any of the following:</p> <ul style="list-style-type: none"> - Class 1, Explosive - Class 2.1, Flammable Gas, if both the Class 3 and Class 2.1 dangerous goods are in bulk - Class 2.3, Toxic Gas - Class 4.2, Spontaneously Combustible Substance - Class 5.1, Oxidising Agent - Class 5.2, Organic Peroxide
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- Class 6.1, Toxic and Class 6.2 Infectious Substances, if the Class 3 dangerous goods are nitromethane

- Class 7, Radioactive Substance

New Zealand:

This material is classified as a Class 3 - Flammable Liquid 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 or

- Class 7, Radioactive materials unless specifically exempted.

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

U.N. Number 1089

Proper Shipping Name ACETALDEHYDE

DG Class 3

Hazchem Code 2YE

Packaging Method 3.8.3RT1

Packing Group I

EPG Number 3A1

IERG Number 18

Part 15. REGULATORY INFORMATION

Regulatory Information

Australia:

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

Not classified as a Scheduled Poison according to the Standard for the Uniform Scheduling of Drugs and Poisons (SUSDP).

Poisons Schedule

Not Scheduled

National and or International Regulatory

New Zealand:

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

Information	ERMA Approval Code: HSR001069; Acetaldehyde
Hazard Category	Harmful,Irritant,Extremely Flammable
AICS (Australia)	All constituents of this material are listed on the Australian Inventory of Chemical Substances (AICS).

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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