

MATERIALS SAFETY DATA SHEET (MSDS) Ethanol (C ₂ H ₅ OH)	MSDS number	
	Version number	Version No: 2
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COMPANY DETAILS

Name: Vintech Pacific Ltd
Address: 60 the Esplanade, Kaiti, Gisborne 4010, New Zealand
Telephone: +64 6 863 0024
Fax: +64 6 863 0025

Section 1 Product Identification

IDENTITY Beverage Alcohol	
GHS Product Identifier: Ethanol	Chemical Name: Ethanol
Other mean of identification: Beverage alcohol; Alcohol; Ethanol	
Manufacturer's Name Vintech Pacific Ltd	Emergency Telephone Number 0800 764 766 NZ nation poisons centre

Section 2 Hazardous Ingredients

Status: This material is considered hazardous	Classification: FLAMMABLE LIQUIDS category 3.1
GHS label elements: Hazard Pictograms: 	Signal word: DANGER
Hazard Statements: Highly Flammable liquid and vapour. May form mixture with air	

Precautionary Statements:

General: Read label before use. Keep out of reach of children. If medical advice is needed, have product container or label at hand
Prevention: Wear protective gloves. Wear eye or face protection. Keep away from heat, sparks, open flame and hot surfaces- No smoking. Use explosion-proof electrical, ventilating, lighting and all material-handling equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Keep container tightly closed. Use and store only outdoors or in a well ventilated place.
Response: IF ON SKIN (or hair) : Take off immediately all contaminated clothing. Rinse skin with water or shower.
Storage: store in a well ventilated place. Keep cool
Disposal: dispose of contents and container in accordance with all local, regional, national and international regulations

Substance/mixture: Substance		Chemical name: Ethanol	
Other means of identification: ethyl alcohol; ALCOHOL; Ethyl alcohol (Ethanol)		CAS number/other identifiers CAS number: 64-17-5	
Vapour Density (AIR = 1)	1.59	Evaporation Rate (Butyl Acetate = 1) 4	1.4
Ingredient name: Ethanol	%; <50	CAS number: 64-17-15	

Section 4 First aid measure

Description of necessary first aid measures

<p>Eye Contact: Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention if irritation occurs.</p>	<p>Inhalation: Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention if adverse health effects persist or are severe. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt, or waistband</p>
<p>Skin Contact: Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Clean shoes thoroughly before reuse.</p>	<p>Ingestion: Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small</p>

	<p>quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention if adverse health effects persist or are severe. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt, or waistband.</p>
<p><u>Most important symptoms/effects. Acute and Delayed</u> <u>Potential acute health effects:</u> Eye contact: No known significant effects or critical hazards Inhalation: No known significant effects or critical hazards Skin contact: No known significant effects or critical hazards Frostbite: Try to warm up the frozen tissues and seek medical attention Ingestion: No known significant effects or critical hazards <u>Over-exposure signs/symptoms:</u> Eye Contact: No specific data Inhalation: No specific data Skin Contact: No specific data Ingestion: No specific data</p>	
<p><u>Indication of immediate medical attention and special treatment needed. If necessary</u> Notes to physician: Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled. Specific treatments: No specific treatment. Protection of first-aiders: No action shall be taken involving any personal risk without suitable training. It may be dangerous to the person providing aid to give mouth to mouth resuscitation. <u>See toxicological information (section 11)</u></p>	

Section 5 Fire Fighting Measures

<p>Suitable extinguishing media: Use dry chemical, CO2, water spray (fog) or foam.</p>	<p>Unsuitable extinguishing media: Do not use water jet.</p>
<p>Specific hazards arising from the chemical: Highly flammable liquid and vapour. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapour/gas is heavier than air and</p>	<p>Hazardous thermal decomposition products:</p>

<p>will spread along the ground. Vapours may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.</p>	<p>Decomposition products may include the following materials:</p> <p>Carbon dioxide Carbon monoxide</p>
<p>Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in a positive pressure mode.</p>	

Section 6 Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

<p>For non-emergency personnel: No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment</p>
<p>For emergency responders: If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For nonemergency personnel".</p>
<p>Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air)</p>
<p>Methods and materials for containment and cleaning up Small spill: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor Large spill: Stop leak if without risk. Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor.</p>

Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7 Handling and Storage

Precautions for Safe Handling

Protective measures: Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source. Use explosion-proof electrical (ventilating, lighting and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container

Advice on general occupational hygiene: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Conditions for safe storage including any incompatibilities: Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination.

Section 8 Exposure controls/personal protection Control parameters Occupational exposure limits

Ingredient name	National Exposure Standards
Ethanol	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

	<p>New Zealand Department of Labour. However, the exposure standards for the ingredients are stated below:</p> <p>Australian National Occupational Health And Safety Commission (NOHSC) Exposure Standards: Substance TWA STEL ppm mg/m³ ppm mg/m³ Notices Ethanol 1000 1880 - - -</p> <p>New Zealand Occupational Safety and Health Service (OSH) Workplace Exposure Standards: Substance TWA STEL ppm mg/m³ ppm mg/m³ Notices Ethanol 1000 1880 - - -</p> <p>TWA - the Time-Weighted Average airborne concentration over an eight-hour working day, for a five-day working 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.</p>
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Engineering Controls

Provide sufficient ventilation to keep airborne levels below the exposure limits. 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 and AS/NZS 2430.3.1:1997 : Classification of hazardous areas - Examples of area classification - General, 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. 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 or chemical goggles should be worn. Final choice of appropriate eye/face protection will vary according to individual circumstances. Eye protection devices should conform to Australian/New Zealand Standard AS/NZS 1337 - Eye Protectors for Industrial Applications.

Hand Protection

Wear laminated film, nitrile or other suitable gloves conforming to AS/NZS 2161: Occupational protective gloves.

Body Protection

Suitable work wear should be worn to protect personal clothing, e.g. 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.

Section 9 Physical and chemical properties

Appearance

Clear, colourless liquid

Odour

Characteristic alcohol odour.

Melting Point -117°C to -10°C (24-100% ethanol)

Boiling Point 78°-87°C (24-100% ethanol)

Solubility in Water

Completely Soluble

Specific Gravity

0.79-0.97 (24-100% ethanol)

pH Value

Not available

Vapour Pressure

44 mmHg at 20°C (ethanol)

Vapour Density

(Air=1) 1.59 (Air=1) (ethanol)

Evaporation Rate

2.53 (n-Butyl acetate=1) (ethanol)

Volatile Component

100%

Flash Point

13°-34°C (Abel Closed Cup)

Flammability

Highly flammable

Auto-Ignition Temperature
392°C (ethanol)

Flammable Limits - Lower
3.5% (ethanol)

Flammable Limits - Upper
19.0% (ethanol)

Section 10 Stability and Reactivity

Chemical Stability

Stable under normal conditions of storage and handling.

Conditions to Avoid

Heat, direct sunlight, open flames or other sources of ignition.

Incompatible Materials

Strong oxidising agents.

Hazardous Decomposition Products

Thermal decomposition may result in the release of toxic and/or irritating fumes including carbon monoxide and carbon dioxide.

Hazardous Polymerization

Will not occur.

Section 11 Toxicological information

Toxicology Information

Acute toxicity data for ethanol:

LD50 (Oral, Rat) (: 7060 mg/kg

LC50 (Inhalation, Rat): 38 mg/L/10h

Inhalation

Cause irritation to the respiratory tract and mucous membranes. Inhalation of the vapour may result in headache, nausea, incoordination, narcosis and vomiting. High concentrations may cause central nervous system symptoms similar to those given under ingestion below.

Ingestion

Swallowing can cause drunkenness or harmful central nervous system effects. Effects of a small intake may include excitation, euphoria, headache, dizziness, drowsiness, blurred vision and fatigue. Severe acute intoxication may cause hypoglycaemia, hypothermia and extensor rigidity. Other effects may include decreased blood pressure, vomiting blood and blood changes. Aspiration into the lungs may cause pneumonitis.

Skin

Can cause redness, itching and irritation.

Eye

Can be irritating to eyes. On eye contact this product can cause tearing, stinging, blurred vision, and redness.

Chronic Effects

Prolonged or repeated skin contact may cause defatting leading to dermatitis. Long term exposure by swallowing or repeated inhalation may cause degenerative changes in the liver, kidney, gastrointestinal tract and heart muscle.

12. ECOLOGICAL INFORMATION

Avoid loss into natural waterways. Highly Mobile. Empty container. 14. Transport Information Ethanol is expected to have very high mobility in soil (SRC)

13. DISPOSAL CONSIDERATIONS

Disposal Considerations

Dispose of waste according to applicable local and national 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. Advise flammable nature.

Section 14 TRANSPORT INFORMATION

UN no: 1170
Shipping name: Ethanol solution
Dangerous Goods Class: 3
Packing Group: III
Special Precautions for Users: Do not store with DG classes: 1, 2.1, 2.3, 4.2, 5, 7, food or food containers.
Hazchem Code: 3[Y]

Section 15 NZ Regulatory Information

ERMA Approval Code: HSR 001144
NB: assessed as a combination of Ethanol, >25% - <50% in a non-hazardous diluent

HSNO Classifications: 3.1b Flammable Liquid (High Hazard)
6.3A Toxic Substance - Skin Irritant (High Hazard)
6.4A Toxic Substance - Eye Irritant (High Hazard)
6.5B Toxic Substance - Sensitizer (Contact)
6.9B Toxic Substance - Toxic to target organs or systems (Suspected)