

VETPAK SAFETY DATA SHEET

Section 1: Identification of the Substance or Mixture and of the Supplier

Product Name: Methylated Spirits Clear.

Other Names: Ethanol, Alcohol.

Recommended Use: Cosmetics, toiletries, aerosols, pharmaceutical processes, surgical procedures, printing inks for food packaging.

Company Details: Vetpak Ltd.

Address: 150 Rickit Road, Te Awamutu.

Telephone Number: (07) 870 2024

Emergency Telephone Number:

(07) 870 2024 8.00am to 5.00pm Monday to Friday except public holidays.

National Poisons Centre, Department of Preventative and Social Medicine, University of Otago, P O Box 913, Dunedin, New Zealand. Phone (0800) 764-766 24 hours.

New Zealand Fire Service – 111.

Date of Revision: 8th August 2008

Section 2: Hazards Identification

Dangerous Goods: Dangerous Goods Class 3, packing group II.

Hazardous Substance (HSNO):

3.1B (Highly Flammable Liquid and Vapour)

6.1E (May be Harmful if Swallowed)

6.4A (Causes Eye Irritation))

6.8B (Suspected of Damaging Fertility or the Unborn Child)

6.9A (Causes Damage to Organs)

9.1D (Harmful to Aquatic Life)

Section 3: Composition / Information on Ingredients:

INGREDIENTS:

Mixture	CAS Number	Proportion
Ethanol	64-17-5	98%
Methanol	67-56-1	2%

Section 4: First Aid Measures:

Description of necessary first Aid measures:

Swallowed: Do not induce vomiting unless directed to do by medical personnel. Never give anything by mouth to an unconscious person. Loosen tight clothing such as a collar, tie belt or waistband. If large quantities of this material are swallowed, call a physician immediately.

Skin: In case of contact immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Cold water may be used. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention if symptoms appear.



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Eye: Check for and remove any contact lenses. Immediately flush eyes with running water for at least 15 minutes keeping eyelids open. Cold water may be used. Get medical attention if symptoms occur.

Inhaled: If inhaled remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. Get medical attention if symptoms occur.

Workplace Facilities: Eyewashes and running water.

Notes for Medical Personnel: Support respiratory and cardiovascular function.

Section 5: Fire Fighting Measures

Type of Hazard: Highly flammable liquid.

Fire Hazard Properties: Severe fire hazard when exposed to Oxidisers. May form flammable vapour mixtures with air. Avoid all ignition sources. Can be considered a severe explosion hazard when exposed to heat, flame and / or oxidisers. Intrinsically safe equipment necessary in areas where chemical is being used. Nearby equipment must be earthed. Vapour may travel considerable distance to source of ignition and flash back. On combustion, may release toxic fumes of carbon monoxide (CO).

Extinguishing Media & Methods:

Small fire: Use Dry Chemical Powder.

Large Fire: Use foam, water spray or fog. Cool containing vessels with water jet in order to prevent pressure build-up, auto-ignition or explosion.

Water fog (or if not available fine water spray)

Recommended Protective Clothing: Be sure to use an approved certified respirator or equivalent

Section 6: Accidental Release Methods

Procedures to be covered: Shut off all possible sources of ignition. Clear area of all unprotected personnel. Wear protective equipment to prevent skin and eye contamination, and inhalation of vapours. Contain. Do not allow chemical to enter confined spaces such as sewers due to explosion risk.

Small spill or leak (230 litres or less): Dilute with water and mop up, or absorb with an inert dry material (soil, sand or other inert material).

Major spills (> 230 litres): Clear area of personnel and move upwind. Alert fire brigade; explain location and nature of hazard. Ethyl Alcohol may be violently or explosively reactive. Wear breathing apparatus and protective clothing. Prevent from any means available, spillage from entering drains or water-courses. Consider evacuation. No smoking, naked lights or ignition sources. Increase ventilation. Stop leaks if safe to do so. Water vapour or fog may be used to disperse vapour. Contain spill with sand, earth or vermiculite. Use only spark free shovels and explosion proof equipment. Collect recoverable product into labelled containers for recycling. Absorb remaining product with sand, earth or vermiculite. Collect solid residues and seal in labelled drums for disposal. Wash area and prevent runoff into drains. If contamination of sewers or waterways and or surrounding environment has occurred, notify local emergency services, local authorities, and the Regional Council.

Section 7: Handling and Storage



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Subsection 1: Handling:

Handling Practices: Avoid breathing vapours or spray mists. Use only with adequate ventilation. Keep container closed. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Use explosion proof electrical (ventilating, lighting and material handling) equipment.

Subsection 2: Storage:

Store Site Requirements: Store in a segregated and approved area. Keep container in a cool, well-ventilated area away from sunlight. Store away from oxidising agents, such as alkali metals, acids, acid chlorides, ammonia, and potassium tert-butoxide. In case of flexible tubing usage, check with manufacturer to find product compatibility. Keep container tightly closed and sealed until ready for use. Check regularly for leaks. Avoid all possible sources of ignition (spark or flame).

Packaging: Aluminium is not a suitable container for package.

Section 8: Exposure Controls / Personal Protection

Subsection 1: Workplace Exposure Guidelines.

Workplace Exposure Standards: Threshold Limit Value – Time weighted Average (TLV – TWA) 1000ppm 1880mg/m³ (As published by New Zealand Occupational Safety and Health Service – OSH)
Odour Threshold 350ppm.

Subsection 2: Engineering Controls: Ensure ventilation is adequate to maintain air concentrations below Exposure Standards. Use with local exhaust ventilation or while wearing organic vapour respirator. Vapour heavier than air – prevent concentrations in hollows or sumps. DO NOT enter confined spaces where vapour may have collected. Keep containers closed when not in use. Earth all containers to reduce the possibility of sparks from static electricity.

Subsection 3: Personal Protective Equipment (PPE): Wear appropriate clothing to prevent repeated or prolonged skin contact. Gloves made of butyl rubber, Nitrile plus PVC, or PVC. Where eye exposure is reasonably probable always wear approved chemical safety goggles or Safety Glasses with side shields. It would be advisable not to use contact lenses when working with this chemical as soft lenses may absorb irritants, and all lenses will concentrate vapours on the surface of the eye. If inhalation risk exists wear organic vapour respirator meeting the requirements of AS/NZS 1715 and AS/NZS1716.

Section 9: Physical and Chemical Properties

Appearance: Clear, colourless liquid with characteristic odour.

Boiling Point: The lowest known value is 64.7°C (148.5°F) (Methanol). Weighted average 77.99°C (172.4°F)

Melting / Freezing Point: May start to solidify at -97.8°C (-144°F) based on data for Methanol. Weighted average -113.77°C (-172.8°F).

Critical Temperature: The lowest known value is 240°C (464°F) (Methanol).

Vapour Pressure: The highest known value is 13kPa (97.7mm Hg) (at 20°C) (Methanol). Weighted average 5.85kPa (43.88 mm Hg) (At 20°C).

Vapour Density: The highest known value is 1.6 (Air = 1) (Ethanol). Weighted Average 1.59 (Air = 1).

Specific Gravity: 0.791 (Water = 1)

Flash Point: 13°C closed cup (Methanol).

Volatility: 100% Ethanol and Methanol.

Odour Threshold: The lowest known value is 160ppm (Methanol). Weighted Average 179.6ppm.

Evaporation Rate: 1.16 compared to Butyl Acetate.

Flammability Limits: Lowest Flammable Level (LFL) 3.3% v/v. Upper Flammable Level; (UFL) 19.0%



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v/v. (Ethanol).

Solubility: Easily soluble in cold water, hot water, methanol, diethyl ether.

Section 10: Stability and Reactivity

Stability of the Substance: The product is stable. It is hygroscopic.

Conditions to avoid: Sparks, open flames, heat and other sources of ignition.

Material to avoid: Reactive with oxidising agents, alkali metals, acids, acid chlorides, ammonia, and potassium tert-butoxide. Aluminium containers should be avoided as aluminium alcoholates may be formed under certain conditions.

Hazardous Decomposition Products: Not applicable because product is stable.

Hazardous Polymerization: Will not occur.

Section 11: Toxicological Information

Data and interpretation: No adverse health effects expected if the product is handled in accordance with this Safety Data Sheet and the product label. Symptoms that may arise if the product is mishandled and over exposure occurs are:

Acute Effects:

Swallowed: Swallowing can result in nausea, vomiting, dizziness, fatigue, headache and central nervous system depression. If the victim is uncoordinated there is a greater likelihood of vomit entering the lungs and causing subsequent complications.

Skin: Contact with skin will result in mild irritation. Will have a degreasing action on the skin. Repeated or prolonged skin contact may lead to irritant contact dermatitis.

Eye: Is an eye irritant. HSNO classification, 6.4A – Eye Irritant.

Inhaled: Vapour may be an irritant to the mucous membranes and respiratory tract. Inhalation of vapour can result in headaches, dizziness, fatigue and possible nausea. Inhalation of high concentrations can produce central nervous system depression, which can contribute to loss of coordination, impaired judgement and, if exposure is prolonged, unconsciousness.

Long Term Effects: Evidence from animal tests and studies on exposed humans indicate that repeated or prolonged exposure to this chemical could result in liver damage.

Acute Toxicity:

Acute oral toxicity (LD50); 7060 mg/kg (Rat) (Ethanol)

Acute toxicity of the vapour (LC50); 66,000ppm 4 hours (Rat) (Ethanol)

Acute oral toxicity (LD 50); 5628 mg/kg (Rat) (Methanol)

Acute dermal toxicity (LD50); 15,800 mg/kg (Rabbit) (Methanol)

Acute toxicity of the vapour (LC50); 64,000ppm 4 hours (Rat) (Methanol)

Chronic Toxicity:

Carcinogenic Effects: There is no clear evidence that ethanol is carcinogenic to laboratory animals. It is however a tumour promoter.

Mutagenic Effects: Ethanol itself is not mutagenic, but its metabolite acetaldehyde is mutagenic.

Developmental Effects: Oral exposure to ethanol produces malformations and developmental toxicity in rats and mice at maternally toxic doses. Ethanol is equally foetotoxic in experimental animals by inhalation or oral exposure.

Section 12: Ecological Information



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Potential Environmental Considerations: Ethanol is harmful to aquatic life. Ethanol has a low potential for bioaccumulation and is substantially biodegradable in water.

Ecotoxicity in water:

(LC50) 13,000mg/l 96 hours (Trout)

(LC50) 15,300 mg/L 96 hours (Fathead Minnow)

(LC50) 250ppm 8 hours (Goldfish) (Ethanol)

HSNO Classification 9.1D – harmful to aquatic life.

Products of Degradation: Formaldehyde and Acetic Acid. The products of degradation are more toxic than ethanol.

Environmental risk phrases:

Avoid contamination of waterways.

Section 13: Disposal Considerations

Disposal Information: Can be disposed of in Sewerage treatment facility provided it is first diluted with sufficient water to bring the mixture below the flammable threshold (less than 3% ethanol by volume) i.e. to raise the flashpoint above 93°C. This requirement is included to ensure that flammable substances do not collect in pockets of sewerage collection system with resultant fires or vapour explosions. Large volumes may be suitable for re-distillation by solvent contractors.

Container Disposal: Empty containers may contain hazardous residues. Labels should not be removed from containers until they have been appropriately cleaned. Do not cut, puncture or weld on or near to the containers.

Containers should be cleaned by approved methods and then re-used or disposed of by landfill. After cleaning, all existing labels should be removed. Do not incinerate closed containers.

Section 14: Transport Information

UN-No: UN1170

Dangerous Goods Class: 2(Y)E

Packing Group: II

Proper Shipping Name: Ethanol (Ethyl Alcohol).

Segregation: Not to be loaded with explosives (Class 1), Flammable gasses (Class 2.1). If both are in bulk, toxic gasses (Class 2.3), spontaneously combustible substances (Class 4.2), oxidising agents (Class 5.1), organic peroxides (Class 5.2) or radioactive substances (Class 7), however exemptions may apply.

Ethanol is classified as Dangerous Goods and must comply with the Land Transport Rule: Dangerous Goods 2005, and NZS 5433: 1999 Transport of Dangerous Goods on Land.

Marine: Classified as Dangerous Goods by International Marine Dangerous Goods Code (IMDG Code) for transport by sea.

Air Transport: Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA). Dangerous Goods Regulations for transport by air.

Section 15: Regulatory Information

HSNO Classifications:

3.1B (Highly Flammable Liquid and Vapour)

6.1E (May be Harmful if Swallowed)

6.4A (Causes Eye Irritation))



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6.8B (Suspected of Damaging Fertility or the Unborn Child)

6.9A (Causes Damage to Organs)

9.1D (Harmful to Aquatic Life)

HSNO Controls:

Trigger quantities for this substance by itself in a place:

- **Approved Handler Test Certificate:**
 - 250 litres (when in containers > 5L)
 - 500 litres (when in containers ≤ 5L)
- **Hazardous Substance Location:**
 - 50 Litres
- **Location Test Certificate:**
 - 50 litres (open container)
 - 100 litres (closed container > 5L)
 - 250 litres (closed container ≤ 5L)
- **Notify a Transport Depot:** Not required for a place.
- **Hazardous Atmosphere Zone:**
 - 1 litre (open continuously)
 - 5 litres (open occasionally)
 - 25 litres (decanting)
 - 100 litres (closed containers)
- **Signage:** 250 litres
- **Emergency Plan:** 1000 litres
- **Tracking:** Not applicable

HSNO Approved Codes of Practice:

- Signage for premises storing hazardous substances and dangerous goods (NZCIC).

Section 16: Other Information

Additional Information: National Poisons Centre, Department of Preventative and Social Medicine, University of Otago, P O Box 913, Dunedin, New Zealand. Phone (0800) 764-766 24 hours.

1. The above information has been compiled on the basis of good faith, and our experience from the available technical knowledge and data for this product.
 2. Where health or safety data given discloses a risk to the user or environment, it is the responsibility of the Purchaser to pass on that information to employees or those who may be using the product, ensuring that adequate safety procedures are used.
 3. No responsibility can be accepted for the wrongful or misinterpretation of this data.
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