

SAFETY DATA SHEET

1. IDENTIFICATION

Product Name: ECOFIRE ETHANOL

Other Names: Ecofire Fuel, Ethanol, Bio Ethanol

Recommended Use: Cleaning, fire-fuel, bactericide, raw materials in other products

Supplier: TMK Packers Ltd

Address: 22 Trugood Drive, East Tamaki, Auckland 2013
PO Box 258 031, Botany, Auckland 2163

Telephone: (+64) 9 273 3753

Facsimile: Website: www.tmkpackers.co.nz

Emergency phone: 0800 273327 (TMK Packers Ltd 24 Hr)

National Poisons Centre: 0800 POISON [0800 764 766]



2. HAZARDS IDENTIFICATION

Hazardous Nature:

This product is classified as hazardous under GHS (7th revised edition) in accordance with the New Zealand Hazardous Substances (Hazard Classification) Notice 2020.

GHS Classifications:

flammable liquids Category 2, serious eye damage/eye irritation Category 2, reproductive toxicity Category 2, specific target organ toxicity – repeated exposure Category 2

GHS Pictograms:



Signal word: DANGER

Hazard Statements:

H225: Highly flammable liquid and vapour.
H319: Causes serious eye irritation.
H361: Suspected of damaging fertility or the unborn child.
H373: May cause damage to organs through prolonged or repeated exposure.

Prevention Statements:

P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P210: Keep away from heat, open flames, hot surfaces. No smoking.
P233: Keep container tightly closed.
P240: Ground/bond containers and receiving equipment.

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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/vapors/spray
P264: Wash hands thoroughly after handling.
P280: Wear protective gloves and eye protection.

Response Statements:

P314: Get medical advice/attention if you feel unwell.
P303 + P361 + P353: IF ON SKIN (or hair): Take off Immediately all contaminated clothing. Rinse SKIN with water.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing.
P308 + P313: IF exposed or concerned: Get medical advice/attention.
P337 + P313: If eye irritation persists: Get medical advice/attention.
P370 + P378: In case of fire: Use water fog or fine spray mist to extinguish.

Storage Statements:

P403 + P235: Store in a well-ventilated place. Keep cool.
P405: Store locked up.

Disposal Statements:

P501: Dispose of waste in accordance with Regional Authority or local council regulations.

3. COMPOSITION INFORMATION

Chemical Ingredient	CAS No.	Proportion (%)
Ethyl alcohol	67-17-5	> 99.9
Denatonium benzoate	3734-33-6	0.00156

4. FIRST AID MEASURES

For advice, contact the National Poisons Centre (0800 POISON; 0800 764 766) or a doctor. Have product container or label available.

Swallowed

If swallowed, do NOT induce vomiting. Rinse mouth and give a glass of water to drink if person is conscious. Get medical advice.

Skin Contact

If skin contact occurs, remove contaminated clothing and wash skin with soap and water. If irritation persists, get medical attention.

Eye Contact

Hold eyelids apart and flush the eye continuously with running water. Continue flushing for at least 15 minutes. Remove contact lenses if present and easy to do, after the first 5 minutes and continue rinsing. Get medical attention if irritation persists.

Inhalation

Move the victim to fresh air immediately. Keep warm and rest until recovered. Get medical attention if recovery is not rapid.

First Aid Facilities: Provide eye bath and hand washing facilities.



Advice to Doctor: Treat according to symptoms. Gastric lavage may be indicated if ingested. Do not wait from symptoms to develop.

5. FIRE FIGHTING MEASURES

Flashpoint: 13°C
Flammable limits: LFL: 3.5% UFL: 19.0%
Extinguishing media: Water fog or fine spray mist.
Fire & Explosion hazards:

Highly flammable liquid and vapour. The vapour forms explosive mixtures with air. Do not breathe smoke, gases or vapours generated in a fire. Decomposition products may be toxic.

Firefighting Equipment:

Full protective clothing and self-contained breathing apparatus (SCBA).

In event of fire:

- Alert Fire Bridge (111); advise location and nature of hazard.
- Keep bystanders away.
- Wear breathing apparatus and protective gloves.
- Shut off product that may 'fuel' a fire if safe to do so.
- Eliminate sources of ignition
- If safe, switch off electrical equipment until vapour hazard removed.
- Use fine water spray to control fire and cool adjacent area.
- Allow trained personnel to attend a fire in progress, providing fire-fighters with this Safety Data Sheet.
- Prevent product and extinguishing media from escaping to drains and waterways.

Hazards from combustion products: Carbon monoxide, carbon dioxide, hydrogen gas.

Hazchem Code: 2YE

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures & Containment:

Refer to "Fire Fighting Measures", "First Aid Measures" and "Stability and Reactivity".

Minor spills

- Clean up spills immediately.
- Remove all ignition sources.
- Avoid breathing vapours and contact with skin and eyes.
- Wear personal protective equipment.
- Contain and absorb small quantities with vermiculite or other absorbent material.
- Collect residues and waste material in a labelled container.
- Seal container and dispose of safely.

Major spills

- Clear area of personnel and move upwind.
- Alert Fire Bridge (111); advise location and nature of hazard.
- Wear breathing apparatus plus protective gloves.
- Eliminate ignition sources, naked lights. No smoking.
- Stop leak if safe to do so.
- Water spray or water fog may be used to disperse or absorb vapour.
- Contain spill with sand, earth or vermiculite.
- Use spark-free shovels and explosion proof equipment.



- Prevent by any means available, spillage from entering drains, sewers, watercourses, or low-lying areas.
- Increase ventilation.
- Collect recoverable product into labeled contains for recycling.
- Absorb remaining product with sand, earth or vermiculite.
- Collect solid residues and seal in labelled drums for disposal.
- Wash area and prevent run off into drains.
- If contamination of drains or waterways occurs, advise Emergency Services and Local or Regional authority.

7. HANDLING AND STORAGE

Precautions for safe handling:

Read product label before use. Highly flammable liquid and vapour. Use in well-ventilated area. Avoid smoking, naked lights or ignition sources. Avoid generation of static electricity. Use only spark-free tools. Open container slowly to control possible pressure release. Wear personal protective equipment and clothing including gloves and wash hands with soap and water after handling.

Conditions for safe storage:

Store locked up in original packaging in a cool, dry well-ventilated place out of reach of children. Check containers periodically for leaks or distortion.

Incompatible materials: None specified.

8. EXPOSURE CONTROLS: PERSONAL PROTECTION

Health Exposure Standards:

Workplace Exposure Standards (WES) have been set for components in this product.

	WES-TWA	WES-STEL
Ethyl alcohol	1000 ppm (1880 mg/m ³)	-
Methanol SKIN, BIO	200 ppm (262 mg/m ³)	250 ppm (328 mg/m ³)

Biological limit values: Methanol in urine (end of shift) 15 mg/L

Engineering Controls:

Ventilation: Avoid breathing vapours. Use product outdoors or in well-ventilated area. Use explosion-proof equipment. Wear a SAA approved respirator when using in confined area or where over-exposure risk exists.

Personal Protective Equipment:

Respiratory Protection: Where concentrations in air may exceed the limits described in the Exposure Standards, it is recommended to use a half-face filter mask suitable for organic gases and vapours (boiling point >65 °C) to protect from overexposure by inhalation. A type "A" filter material is considered suitable for this product.

Eye Protection: Protect eyes from splashes. Always use safety glasses with side shields, or wear goggles.

Skin/ Body Protection:

Wear gloves, e.g. PVC, nitrile. Wear safety footwear or safety gumboots, e.g. rubber, and clothing with long sleeves and long trousers or coveralls.

9. PHYSICAL AND CHEMICAL PROPERTIES

Property	Unit of measurement	Typical value
Appearance	-	Clear colourless liquid

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Odour	-	Alcohol
Flash Point	0C	13
Specific gravity @ 20 ^o C	g/ml	0.79
Vapour Pressure @ 20 ^o C	mmHg	44
Vapour Density @ 20 ^o C	kPa	1.59
Explosive Limits in Air	%	3.5 – 19.0
Viscosity	cSt	Not available
Volatiles	%vol/vol	100
Alkalinity/acidity (as pH)	-	Not applicable
Solubility in Water	% w/w	Soluble

The values listed are indicative of this product's physical and chemical properties.

10. STABILITY AND REACTIVITY

Chemical Stability: Stable at room temperature and pressure.

Conditions to avoid: Sources of heat, ignition, open flames.

Hazardous decomposition products: No decomposition products except on burning.
 See "Fire Fighting Measures" and "Hazardous Reactions".

Hazardous reactions: None specified

11. TOXICOLOGICAL INFORMATION

Acute Effects

Ingestion

The ingestion of large quantities will cause adverse central nervous system effects. Symptoms include excitation, euphoria, headache, dizziness, drowsiness, blurred vision, fatigue, tremors, convulsions, loss of consciousness, coma, respiratory arrest and death. Severe intoxication may cause hypoglycaemia and hypothermia. Other possible effects are decreased blood pressure, vomiting and blood discharges.

Eye Contact

This product as liquid or vapour, may be irritating to the eyes resulting in tearing and redness.

Skin Contact

This product can be irritating to the skin. Prolonged or repeated exposure may result in redness, itching, swelling. A small proportion of the population may develop an allergic reaction.

Inhalation

Vapours may be moderately irritating to respiratory tract and mucous membranes. Inhalation may cause symptoms of headache, nausea and vomiting. High concentrations may lead to adverse central nervous system effects.

Chronic Effects: Ethyl alcohol may cause adverse reproductive effects (foetal toxicity).

Methyl alcohol a low concentration component in the product is identified as suspected of damaging fertility or the unborn child. Chronic intoxication from ingestion of the product, or repeated inhalation, may cause degenerative changes in liver, kidneys, hair, gastrointestinal tract and heart muscle.

Other Health Effects Information: Methanol is only slowly eliminated from body so should be regarded as a cumulative poison which cannot be made non-harmful. Principal routes of exposure are by inhalation of vapour and skin contact/absorption. Persons with pre-existing liver, skin and respiratory disorders may be at an increased risk from exposure. Ingestion of alcohol by pregnant women is associated with foetal alcohol syndrome in babies.

Toxicological Information:

Methanol Oral, LD₅₀, mouse 870 mg/kg



12. ECOLOGICAL INFORMATION

Ecotoxicity:

Aquatic toxicity: This product has not been classified as being toxic to aquatic life.

Persistence/degradability:

Not expected to be persistent or bioaccumulative.
Product is highly volatile and will evaporate to air if released into water.

Mobility:

Product is soluble in water.

Other information:

Not available.

Environmental Exposure Standards: Not set.

13. DISPOSAL CONSIDERATIONS

Disposal Methods:

Empty packaging should be taken for recycling, recovery or disposal through a suitably qualified or licensed contractor. Care should be taken to ensure compliance with national, regional and local authority regulations. Packaging may still contain flammable vapours. Dry container before disposal or triple rinse with water.

14. TRANSPORT INFORMATION

UN Number: 1170
Shipping name: ETHANOL SOLUTION
Class: 3
Packing group: II
Hazchem code: 2YE

Dangerous Goods Segregation

This product is classified as a Dangerous Good Class 3.
Please consult NZS 5433:2020 Transport of Dangerous Goods on Land for information.



15. REGULATORY INFORMATION

Country/ Region: New Zealand
Inventory: NZIoC
Status: Listed

EPA New Zealand Approval Code: HSR002553; Denatured Ethanol Group Standard 2020
HSNO Controls: Refer www.epa.govt.nz for information on Controls and any variations to Controls.

16. OTHER INFORMATION

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Reasons for Issue: Update GHS classifications.
Replaces: 23rd October 2024

Abbreviations:

ACGIH	American Conference of Governmental Industrial Hygienists
AS/NZS	Standards Australia & Standards New Zealand
BCF	Bioconcentration Factor
BEI	Biological Exposure Index
CAS	Chemical Abstracts Service
CCID	Chemical Classification and Information Database
EC50	Effective Concentration, 50 per cent
EPA	Environmental Protection Authority
GHS	Globally Harmonized System of Classification and Labelling of Chemicals
GHS 7	Globally Harmonised System of Classification and Labelling of Chemicals, 7th revised edition, 2017, published by the United Nations
HSNO	Hazardous Substances and New Organisms Act 1996
HSWA	Health and Safety at Work Act 2015
IARC	International Agency for Research on Cancer
IC50	Half Maximal Inhibitory Concentration
LC50	Lethal Concentration, 50 per cent
LD50	Lethal Dose, 50 per cent
LEL	Lower Explosive Limit
LOAEL	Lowest-observed-adverse-effect level N/R: Not Regulated
NOAEL	No-observed-adverse-effect-level
NOEC	No Observed Effect Concentration
NZIoC	New Zealand Inventory of Chemicals
NZS 5433	New Zealand Standard Transport of Dangerous Goods on Land
OECD	Organisation for Economic Co-operation and Development
STEL	Short-Term-Exposure Limit
TLV	Threshold Limit Value
TWA	Time-Weighted Average
UEL	Upper Explosive Limit
WES	Workplace Exposure Limit

References:

Supplier Safety Data Sheet
EPA website: www.epa.govt.nz

The information sourced for the preparation of this document was correct and complete at the time of writing to the best of the writer's knowledge. The document represents the commitment to the company's responsibilities surrounding the supply of this product, undertaken in good faith. This document should be taken as a safety guide for the product and its recommended uses but is in no way an absolute authority. Please consult the relevant legislation and regulations governing the use and storage of this type of product. For further information, please contact TMK Packers Ltd.

END OF SAFETY DATA SHEET

