

SAFETY DATA SHEET

1. IDENTIFICATION

Product Name: *Zethanol*

Recommended Use: Ethanol Fuel. Strictly not for human consumption.

Supplier: TMK Packers Ltd
Address: 2/20 Trugood Drive, East Tamaki.
PO Box 258 031, Botany, Manukau 2163

Telephone: (+64) 9 273 3753
Facsimile: (+64) 9 273 3752
Website: www.tmkpackers.co.nz

Emergency phone: **National Poison Centre**
0800 POISON [0800 764 766]



2. HAZARDS IDENTIFICATION

Product is classified as hazardous according to Schedules 1 to 6 of the *Hazardous Substances (Minimum Degrees of Hazard) Regulations 2001* of the HSNO Act, 1996.

HSNO Classifications: 3.1B, 6.4A, 9.1D

Signal word: **DANGER**

Hazard Statements :

H225 Highly flammable liquid and vapour H402 Harmful to aquatic life
H320 Causes eye irritation

Precautions Statements :

P103 Read label before use P210 Keep away from heat, sparks, open flames and hot surfaces. No smoking.
P233 Keep container tightly closed P241 Use explosion-proof equipment
P240 Ground container and receiving equipment P242 Use non-sparking tools
P264 Wash hands thoroughly after handling P243 Take precautionary measures against static discharge
P273 Avoid release to the environment P280 Wear protective clothing, gloves and eye protection

3. COMPOSITION : Information on Ingredients

| Chemical Ingredient | CAS No. | Proportion (%) |
|-----------------------------------|-------------|----------------|
| Ethyl alcohol | 64-17-5 | >90 |
| Aliphatic hydrocarbon | 64742-47-8 | < 2 |
| Alcohols, other | Proprietary | <2 |
| Deanatonium benzoate (Denaturant) | 3734-33-6 | <0.01 |



4. FIRST AID MEASURES

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

Swallowed

If swallowed, do NOT induce vomiting. Rinse mouth. Where there is risk of vomiting, lean person forward or place on left side to avoid aspiration of product into lungs. Obtain immediate medical attention.

Skin Contact

If skin or hair contact occurs, remove contaminated clothing and flush skin and hair with running 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 at rest until recovered. Get medical attention if symptoms continue.

Begin artificial respiration if breathing has stopped. Get immediate medical attention.

First Aid facilities

Provide eye baths and safety showers close to areas where splashing may occur.

Medical Attention

Treat according to symptoms. Gastric lavage may be indicated if ingested. Any product aspirated during vomiting may produce lung injury.

5. FIRE FIGHTING MEASURES

Flashpoint: 13°C

Flammable limits: LFL : 3.3% UFL: 24.5%

Extinguishing media:

Dry chemical or alcohol foam or CO₂. Water spray or water fog for large fires only.

Fire & Explosion hazards:

Liquid and vapours are highly flammable. Expansion or decomposition of containers may lead to violent rupture of containers.

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.
- Wear breathing apparatus and protective gloves.
- Shut off product that may 'fuel' a fire if safe to do so.
- If safe, switch off electrical equipment until vapour hazard removed.
- 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:

Smoke, carbon dioxide, carbon monoxide.

Hazchem Code: 3Y

6. ACCIDENTAL RELEASE MEASURES

Emergency Procedures & Containment:

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

Minor spills

- Remove or eliminate all ignition sources.
- Clean up spills immediately.
- 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 labeled container suitable for flammables.
- 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.
- Stop leak if safe to do so.
- Contain spill with sand, earth or vermiculite.
- Prevent by any means available, spillage from entering drains, sewers, watercourses, or low-lying areas.
- Eliminate sources of ignition, naked lights. No smoking.
- Increase ventilation.
- Water spray or fog may be used to disperse/absorb vapour.
- Use only spark-proof tools, e.g. shovels, and explosion proof equipment, e.g. pumps.
- Collect recoverable product into labeled containers for recycling.
- Absorb remaining product with sand, earth or vermiculite.
- Collect solid residues and seal in labeled 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 label before use. This product is highly flammable. Do not open near open flame, sources of heat or ignition. No smoking. Keep container closed. Handle containers with care. Open slowly to control possible pressure release. Material will accumulate static discharge. Use grounding leads to avoid discharge (electrical spark) spark-free tools and equipment suitable for flammables. Do not use plastic buckets.

Use in well-ventilated area. Wash hands with soap and water after handling.

Conditions for safe storage:

Keep out of reach of children. Store in a cool, dry place away from direct sunlight. This product will fuel a fire in progress. Check containers periodically for leaks or distortion.

Incompatible materials:

Natural rubber, butyl rubber, EDPM, polystyrene.

8. EXPOSURE CONTROLS : PERSONAL PROTECTION

Health Exposure Standards:

Workplace Exposure Standards (WES) have been set by the Occupational Safety and Health Service, NZ Department of Labour for components in this product.

| | |
|---------------|------------------------------------|
| | WES-TWA |
| Ethyl alcohol | 1000 ppm (1880 mg/m ³) |

Biological limit values:

None established

Engineering Controls:

Ventilation:

Use in well-ventilated area. The use of local exhaust ventilation is recommended to control emissions near the source. Provide ventilation in confined spaces. Use explosion-proof ventilation equipment.

Personal Protective Equipment:

Respiratory Protection: Where concentrations in air may exceed the limits described in the Workplace Exposure Standards, it is recommended to use a half-face filter mask to protect from overexposure by inhalation. A type "A" filter material is considered suitable for this product.

Eye Protection: Protect eyes from splashes; wear safety glasses with side shields.

Skin/ Body Protection:

If using product in large quantities in commercial or industrial situations, wear chemical resistant gloves, e.g. PVC, nitrile rubber, also safety footwear or safety gumboots, e.g. rubber. Always wear long sleeves and long trousers or coveralls; PVC apron.



9. PHYSICAL AND CHEMICAL PROPERTIES

| Property | Unit of measurement | Typical value |
|----------------------------|---------------------|-------------------------|
| Appearance | - | Clear colourless liquid |
| Odour | - | Alcohol |
| Flash Point | °C | 13 |
| Auto-ignition temperature | °C | 363 |
| Specific gravity @ 20°C | g/ml | 0.79 |
| Vapour Pressure @ 20°C | mm Hg | Not available |
| Vapour Density @ 20°C | kPa | Not available |
| Explosive Limits in Air | % | Not available |
| Viscosity | cSt | Not available |
| Volatiles | %vol/vol | Not available |
| Alkalinity/acidity (as pH) | - | Not applicable |
| Solubility in Water | % w/w | Completely miscible |

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 and ignition, open flames.

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

Hazardous reactions: Strong oxidizing agents, peroxides, acid chlorides, acid anhydrides, alkali metals, ammonia.

Hazardous polymerization: Not known to occur.

11. TOXICOLOGICAL INFORMATION

Acute Effects

Ingestion

May be harmful if swallowed. Aspiration into the lungs by ingestion or vomiting may result in chemical pneumonitis or pulmonary oedema. Symptoms of over-exposure are nausea, vomiting and inebriation. Product contains denatonium benzoate, a bittering agent, so ingestion is unlikely.

Eye Contact

May be irritating to eyes causing short term discomfort if not rinsed out immediately. Will not permanently damage eye tissue.

Skin Contact

May be mildly irritating to skin. Prolonged or repeated exposure will increase risk of dryness and cracking of skin.



Inhalation

Vapour may be irritating to nose and throat. Exposure to high concentrations over an extended time will result in headaches, dizziness, drowsiness, nausea and inebriation.

Chronic Effects

Mild central nervous system depressant. Chronic exposure (by ingestion) may lead to liver damage.

Other Health Effects Information:

No additional information available.

Toxicological Information:

Not available.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Aquatic toxicity: Product is classified as being harmful to aquatic life. Ethyl alcohol has biocidal effect at high concentrations.

Ecotoxicity Information:

| | | | |
|---------------|----------------------|--------------------------|----------|
| Ethyl alcohol | <i>Daphnia magna</i> | LC ₅₀ (48 hr) | 9.3 mg/L |
|---------------|----------------------|--------------------------|----------|

Persistence/degradability: No information available to indicate product is persistent or bioaccumulative.

Mobility: This product is highly volatile and will rapidly dissipate.

Other information: None

Environmental Exposure Standards:

| | |
|-----------------|---------|
| EEL (WATER): | Not set |
| EEL (SOIL) | Not set |
| EEL (SEDIMENTS) | Not set |

13. DISPOSAL CONSIDERATIONS

Disposal Methods:

Care should be taken to ensure compliance with national, regional and local authority regulations. Packaging may still contain vapours that are flammable. Ensure that empty packaging is allowed to dry. If not recycled, puncture and crush before disposal to landfill.

Do not use container for storage of other products.



14. TRANSPORT INFORMATION

UN Number: 1987
Shipping name: ETHANOL SOLUTION (ethyl alcohol solution)
Class: 3
Packing group: II
Hazchem code: 3Y

Dangerous Goods Segregation

This product is classified as Dangerous Goods Class 3, packing group II.
Please consult NZS 5433:2012 Transport of Dangerous Goods on Land for information.

15. REGULATORY INFORMATION

Country/ Region: New Zealand

Inventory: NZCIL

Status: Listed

EPA New Zealand Approval Code:

Solvents (Flammable) Group Standard 2006; HSR002650

Refer www.epa.govt.nz for information on Controls.

16. OTHER INFORMATION

Date of Issue: 26th July, 2012

Reasons for Issue: New product

Replaces: Not applicable

Abbreviations:

CAS No Chemical Abstracts Number
EPA Environmental Protection Authority
HSNO Hazardous Substances and New Organisms
NZCI New Zealand Chemical Inventory
STEL Short Term Exposure Limit
TWA Time Weighted Average
WES Workplace Exposure Standard

References:

Supplier Material Safety Data Sheets

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

