Product Name: **DENATURED ETHANOL**

(Special Methylated F2, F4, F5 & F6 - Industrial Methylated Spirit)

STATEMENT OF HAZARDOUS NATURE: Hazardous according to criteria of Worksafe Australia

PRODUCT IDENTIFICATION

Product Name: Ethanol
Chemical Name: Ethyl Alcohol
Other Name/s: Methylated spirits
Denatured alcohol

UN No: 1170 Hazchem: 2SE
Poison Schedule: None allocated D.G. Class: 3.1
Sub risk: None allocated

USE: General industrial solvent.

INGREDIENTS:	**CAS No**	**PROPORTION**
Chemical entity		
Ethyl alcohol (Ethanol)	64-17-5	95.8 - 99.8%
Water	7732-18-5	4.2 - 0.2%
Denaturant (refer pg2)		< 1.0%

PHYSICAL DESCRIPTION / PROPERTIES:

Appearance: Clear colourless liquid, characteristic odour, burning taste.
Boiling Range: 78.3℃
Melting Range**:** -117.3℃
Vapour Pressure: 58.1 mbar : 20℃
Specific Gravity: (H_2O=1) : 0.7904
Flash Point: 13℃ (Abel closed cup)
Auto ignition temperature: 392℃
Percent Volatile by Volume: 100%
Evaporation rate (n-butyl acetate=100) : 253
Flammability Limits in air
% by volume (20℃) upper : 19.0%
% by volume (20℃) lower : 3.5%
Molecular weight: 46.08 N/A: - Not applicable.

HEALTH HAZARD INFORMATION

Health Effects:

Ethanol is generally regarded as one of the safest industrial solvents. Although it possesses narcotic properties, vapour concentrations sufficient to produce this effect are rarely, if ever, reached in industry. Ethanol in low dosages is rapidly oxidised in the body to carbon dioxide and water, and does not cause permanent, cumulative, damage to the central nervous systems, including the optic nerve. The use of ethanol is controlled by the Bureau of Customs and for almost all industrial applications, it is required to be denatured (Methylated) by the addition of approved substances. Such denaturing renders the ethanol unfit for drinking purposes. The denaturants may be one or more of the following: diethyl phthalate, tertiary butyl alcohol, brucine sulphate, denatonium benzoate, methyl isobutyl detone or fluorescein. The denaturants never exceed 1.0% of the final product and at this low concentration will not alter the safety of the product.

Acute Effects:

Swallowed:

May cause headaches, dizziness, dullness, gastric disorders and symptoms of central nervous system depression.

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Material Safety Data Sheet

Lepanto Group

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Acute Effects Cont.:

Eyes:
Vapours may irritate the eyes. Liquid and mists may severely irritate or damage the eyes.

Skin
Moderately irritating to the skin. Brief contact may cause redness.
Repeated or prolonged contact may lead to dermatitis.

Inhaled:
Moderately irritating to respiratory tract and mucous membranes.
Inhalation of the vapour may result in headache, nausea and vomiting.
High concentrations may cause unconsciousness.

Note:
Nasal and eye irritation usually occur at concentrations in air well below the Exposure Standard.

FIRST AID:

Swallowed:
Give plenty of water to drink. Induce vomiting in conscious person by giving syrup of Ipecac.
Seek medical advice if necessary.

Eyes:
Immediately irrigate with water for 10 minutes. Seek medical advice promptly.

Skin:
Wash with water. Remove contaminated clothing and wash before re-use.

Poisons Information Centre: Phone: Australia 13 1126 New Zealand 03 m4747000.

Inhaled:
Remove to fresh air, rest patient and seek medical advice if necessary.
Give artificial respiration if breathing stops.

Advice to Doctor:
Treat symptomatically as for strong alkalis. Consult Poisons Information Centre.

PRECAUTIONS FOR USE

Exposure Limits:
The exposure standard recommended by Work-safe Australia is TWA - 1000ppm (1900mg/m3)

Ventilation:
Local exhaust and or mechanical (general) exhaust is recommended, provided these are fitted with flame and explosion proof electrical fittings.

Respiratory protection:
None should be needed under normal circumstances. In high vapour concentration such as empty vessels or confined spaces,use air supplied hood.

Protective gloves:
PVC or Neoprene.

Eye Protection:
Chemical safety goggles.

Other protective equipment:
Approved barrier creams may prove useful in preventing dermatitis.

Flammability:
All electrical equipment/lighting used in proximity to ethanol storage/or electrical process equipment used in any process using ethanol should be selected and installed in accordance with local wiring rules and the following Australian Standards:
AS 3000 “SAA Wiring Rules”
AS 2380 “Electrical Equipment for Explosives Gas Atmospheres - Explosion Protection Techniques”.
AS 1076 Parts 1-13 “Selection, Installation and Maintenance of Electrical Apparatus and Association Equipment for use in Explosive Atmospheres”.
AS 1020 SAA Static Electricity Code

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SAFETY HANDLING INFORMATION

Storage & Transport:

Store with all the precautions required for handling a flammable liquid. Observe state regulations concerning the storage and handling of Dangerous goods. Also Standards Association of Australia; AS 1940-1988 (including amendments 1 & 2) Flammable and Combustible Liquids code should be observed.

Avoid prolonged or repeated skin contact.

Avoid eye contact.

Avoid breathing vapour.

Spills :

Eliminate all sources of ignition.

Contain spill for salvage or absorb in inert absorbent material.

Wash with copious volumes of water; ethanol mixes completely with water.

Ventilate area well.

Waste disposal:

Incinerate under controlled conditions if permitted by local authorities.

Fire / Explosion Hazard:

Extinguishing Media :

Use water, dry chemical, carbon dioxide (CO_2), BCF or alcohol stable foam.

Special Fire Fighting Procedures : Use water to cool exposed containers.

Spills and leaks may be washed with copious volumes of water, fog or spray.

Unusual Fire and Explosion Hazards : Burns with a colourless flame.

The vapour is heavier than air and may travel along the ground; distant ignition possible.

The use of compressed air for filling, discharging, mixing or handling is prohibited due to the vapour hazard.

All vessels must be earthed to avoid generation of static charges when agitating or transferring solvents.

Containers previously holding ethanol products must be degassed before entry or subjected to sources of ignition, refer As 1940 - Clause 8.5, Construction and Maintenance Works.

Hazards Decomposition Products: Burning can produce carbon dioxide and/or carbon monoxide.

Whilst the information contained in this document is based on data which, to the best of our knowledge, was accurate and reliable at the time of preparation, no responsibility can be accepted by us for errors and omissions. The provision of this information should not be construed as a recommendation to use any of our products in violation of any patent rights or in breach of any statute or regulation. Users are advised to make their own determination as to the suitability of this information in relation to their particular purposes and specific circumstances. Since the information contained in this document may be applied under conditions beyond our control, no responsibility can be accepted by us for any loss or damage caused by any person acting or refraining from action as a result of this information.

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