

# MATERIAL SAFETY DATA SHEET

## SECTION 1 IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Product Name:** METHYLA TED SPIRITS  
**Other Name:** Industrial methylated spirits, Ethanol, Ethyl Alcohol  
**Product Code** 22.16  
**Recommended Use:** General Industrial Solvent  
**Supplier Name:** DAVANNA HOLDINGS PTY LTD  
**Supplier Address:** 45 ANDOVER ST, CARLTON NSW 2218  
**Supplier Telephone No.:** (02) 9588 7144  
**Fax No.:** (02) 9588 3955  
**Emergency No.:** (02) 9642 2577

## SECTION 2 HAZARDS INFORMATION

### Hazard Identification:

**Risk Phrases:** R11 Highly flammable,  
R66 Repeated exposure may cause skin dryness and cracking  
R20/22 Harmful by inhalation and if swallowed  
R36/38 Irritating to eyes and skin.

**Safety Phrases:** S7 Keep container tightly closed  
S16 Keep away from source of ignition- No Smoking  
S23 Do not breathe Vapour  
S29 Do not empty into drains  
S33 Take precautionary measures against static discharge  
S45 In case of accident or if you feel unwell seek immediate medical advice immediately  
S24/25 Avoid contact with skin and eyes  
S36/37/39 Wear suitable protective clothing/gloves and eye/face protection.

## SECTION 3 COMPOSITION/ INFORMATION ON INGREDIENTS

### Hazardous Chemicals

CHEMICAL NAME	CAS NO.	COMMON NAME	PROPORTION
ETHYL ALCOHOL	64-17-5	ETHANOL	96-100% by volume
DENATURANT	VARIOUS		<1% by volume

### Non-Hazardous Chemicals

CHEMICAL NAME	CAS NO.	COMMON NAME	PROPORTION
WATER	7732-18-5		0-6.2% by weight

## SECTION 4 FIRST AID MEASURES

### Procedures for First Aid measures:

If there are signs of drunkenness (intoxication or inebriation) than serious health effects may follow (depending on amount swallowed or inhaled) Immediate medical attention should be sought and the effected person transferred and accompanied to the care of a doctor or hospital. Treat unconsciousness by placing the person in the coma position. Apply artificial respiration if breathing stops.

**Ingestion:** See above. If minor amount has been accidentally swallowed, then if conscious, give large amounts of water. Do not allow further work until fitness for duties is established. Do not attempt to induce vomiting or give anything by mouth to an unconscious person. Seek medical attention.

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**Inhalation:** Remove promptly to fresh air. If there are signs of drunkenness (intoxication or inebriation) or respiratory irritation, dizziness, nausea or headache occurs, seek immediate medical attention. Treat unconsciousness by placing the person in a coma position. Apply artificial respiration if breathing stops.

**Skin:** Immediately remove contaminated clothing. Wash skin with water. Launder contaminated clothing before reuse.

**Eye:** Flush with running water for a minimum of 15 minutes. Seek immediate medical attention promptly if irritation persists or any loss of vision occurs.

**Medical Attention and Special Treatment** Treat as for excess consumption of alcoholic drink. Supportive, hospital or even intensive care may be required. Advice on emergency treatment of alcohol poisoning (ethyl alcohol, ethanol) is to be found in standard texts on Emergency Medicine.

**Aggravated Medical Conditions Caused by Exposure** Not Known to DAVANNA HOLDINGS PTY LTD

## SECTION 5 FIRE FIGHTING MEASURES

**Suitable Extinguishing Measures** Use water fog (or if unavailable fine water spray), dry chemical, carbon dioxide or alcohol stable foam.

**Hazards from Combustion Products** Highly flammable liquid. May form flammable mixtures with air. Burns with a colourless flame. The vapour is heavier than air and may travel along the ground; distant ignition and flashback is possible. Run off to sewers and drains may cause explosions. Isolate for at least 800 meters in all directions if tanks or tankers are involved. The use for 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. Avoid all ignition sources. Intrinsically safe equipment necessary in areas where this chemical is being used.

**Precaution for Fire Fighters and Special Protective Equipment** Highly flammable liquid. Use water to cool exposed containers. Heating can cause expansion or decomposition leading to violent rupture of containers. If safe to do so, remove containers from path of fire. Spills and leaks may be washed away with copious volumes of water, fog or spray. For major fires or where the atmosphere is either oxygen deficient or contains unacceptable levels of combustion products, fire fighters must wear self-contained breathing apparatus with face mask.

**Hazchem Code** 2[Y] E

## SECTION 6 ACCIDENTAL RELEASE MEASURES

**Emergency Procedures:** In the event of a spillage eliminate all sources of ignition and take measures to prevent static discharge-no smoking. Prevent run-off into drains and waterways. Clear area of all personnel not involved in the cleanup.

**Methods and Materials for Containment and Clean Up Procedures:** Stop and contain the spill for salvage or absorb in inert absorbent material (e.g. soil, sand, vermiculite) for disposal by an approved method. All personnel involved in the containment and disposal procedures to wear protective equipment as described in section 8 to prevent skin and eye contamination and inhalation of vapours. Use water spray to disperse vapour. Wash the cleaned up area with copious volumes of water to remove any trace amounts of product. Ethanol mixes completely with water. Spills can be converted to non-flammable mixtures by dilution with water. Ventilate area well and ensure the atmosphere is safe before personnel return to the work area. If contamination of sewers or waterways has occurred, advise the local emergency services.

## SECTION 7 HANDLING AND STORAGE

**Personal Hygiene** Protective clothing should be worn (section 8) to prevent skin contact Always wash hands before smoking, eating, drinking or using toilet. Wash contaminated clothing and protective equipment before storing or re-using.

**Smoking** Smoking MUST be prohibited in ALL areas where ethanol is used. Highly flammable liquid/fumes.

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**Precautions for Safe Handling:** Use in well ventilated areas away from all ignition sources. Intrinsically safe equipment must only be used in area where this chemical is being used. The use of compressed air for filling, discharging, mixing or handling is prohibited due the vapour hazard. Containers must be earthed to avoid generation of static charges when agitating or transferring product.

**Conditions for Safe Storage:** Store in tightly closed containers in cool, dry, isolated and well ventilated areas away from heat, sources of ignition and incompatibles. Store away from oxidising agents. Keep containers closed at all times- check regularly for leaks. Do not eat, drink or smoke in areas of storage. Observe State Regulations concerning the storage and handling of Dangerous Goods. Store with all precautions required for handling flammable liquids. The requirement of Australian Standard AS 1940 should be observed in addition to AS 1020, AS 1076, AS 2380 and AS 3000

## SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

**National Exposure Standards:** National Occupational Health & Safety Commission NOHSC Worksafe Australia occupational exposure standards.

Ethanol            TWA-1000 ppm (1880mg/m<sup>3</sup>)  
                         STEL-None Allocated  
                         Carcinogen Category-None Allocated  
                         Notices- None Allocated

Exposure standard (TWA) is the Time-Weighted Average airborne concentration over an eight-hour working day, for a five day working week over an entire working life. According to current knowledge this concentration should neither impair the health nor cause undue discomfort to, nearly all workers.

These exposure standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

**Biological Limit Values:**        Not Known to DAVANNA HOLDINGS PTY LTD

**Engineering Controls:**        Not Known to DAVANNA HOLDINGS PTY LTD

**Ventilation**        Local exhaust ventilation and/or mechanical (general) exhaust is recommended where vapours are likely to be generated. All such equipment must be intrinsically safe.

### **Personal Protective Equipment:**

**Eye Protection**    Avoid eye contact by wearing chemical goggles with side shields or face shield (AS/NZS 1336) whenever exposed to vapour or mist or if there is a risk of splashing liquid into eyes. Safety showers with eye-wash should be provided in all areas where product is handled.

**Skin Protection**    Avoid contact with use of approved chemical resistant gloves & apron-PVC or Neoprene (AS-2161).

**Respiratory Protection**    None should be needed in under normal circumstances. In high vapour concentrations or in suspected oxygen deficient atmospheres, such as empty vessels or confined spaces, use air supplied hood. In other instances where ethanol concentrations are likely to exceed 500 ppm, and approved organic vapour respirator (AS/NZS 1715 and 1716) must be worn.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

**Appearance:**                    Clear colourless liquid  
**Odour:**                            Characteristic alcohol odour. Ethanol odour is detectable at 80-100 ppm.  
**PH:**                                 Not Available  
**Vapour Pressure:**            44 mm Hg @ 20 degrees Celsius  
**Vapour Density:**             1.59 (air=1)

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<b>Boiling Point/Range:</b>	78 degrees Celsius
<b>Freezing Point:</b>	Not Known To DAVANNA HOLDINGS PTY LTD
<b>Melting Point:</b>	-117 degrees Celsius
<b>Solubility:</b>	Complete solubility in Water
<b>Specific Gravity:</b>	0.79-0.81 (Water=1)
<b>Specific Density:</b>	Not Known To DAVANNA HOLDINGS PTY LTD

## SECTION 10 STABILITY AND REACTIVITY

<b><u>Chemical Stability:</u></b>	Not Known To DAVANNA HOLDINGS PTY LTD
<b><u>Conditions to Avoid:</u></b>	Heat, Sparks, flame and build-up of static electricity.
<b><u>Incompatible Materials:</u></b>	Will react with strong oxidising agents.
<b><u>Hazardous Decomposition Products:</u></b>	Burning can produce carbon monoxide and/or carbon dioxide.
<b><u>Hazardous Reactions:</u></b>	Not to be stored with explosive (Class 1), flammable gases in bulk (Class 2.1), poisonous gases (Class 2.3), spontaneously combustible substances (Class 4.2), oxidizing agents (Class 5.1), organic peroxides (Class 5.2), radioactive substances (Class 7). Exemptions may apply.

## SECTION 11 TOXICOLOGICAL INFORMATION

### **Health Effects from Likely Routes of Exposure**

**Ingestion:** Accidental swallowing is unlikely in the industrial setting. Swallowing ethanol can cause drunkenness or harmful central nervous system effects. The deliberate ingestion of ethanol is a known occupational risk, and as little as 50-100ml intake in a shift in a 70kg worker may cause inebriation to the point where safety is impaired. Effects of a small intake may include excitation, euphoria, headache, dizziness, drowsiness, blurred vision and fatigue. Drinking a large amount may lead to severe acute intoxication, tremors, convulsions, loss of consciousness, coma, respiratory arrest and death. Aspiration into lungs may cause pneumonitis.

**Inhalation:** Vapour is moderately irritating to mucous membranes and respiratory tract. Inhalation of the vapour may result in drunkenness, (see effects of swallowing above) or headache, nausea, in-coordination, narcosis (sleepiness) and vomiting. Early signs or symptoms may occur at airborne levels of 1000-5000 ppm. Ongoing or repeated exposures at High concentrations may cause central nervous symptoms similar to "swallowed" above. Deliberate inhalation is a known occupational risk.

**Skin:** Contact with skin may result in slight irritation and redness. Prolonged or repeated contact and heavy skin contamination may cause skin drying and cracking and/or dermatitis with redness itching and swelling. This may lead to possible secondary infection.

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

**Chronic:** Long term exposure by swallowing or repeated inhalation, may cause degenerative changes in the liver, kidneys, gastrointestinal tract and heart muscle.

**Note:** The Denaturants used in this product may be one or more of the following; diethyl, phthalate, tertiary butyl alcohol (t-butanol), denatonium benzoate, methyl isobutyl ketone (MIBK), fluorescein or sucrose octa acetate. The denaturants never exceed 1.0% of the final product and at this low concentration will not alter the safety of the product. Nasal and eye irritation usually occur at concentrations well below the exposure standard for ethanol.

**Special Toxic Effects:** In work areas where exposures in excess of the occupational exposure limits occur, than the following may apply: Persons with pre-existing liver impairment, skin and respiratory disorders may be at an increased risk. Ethanol may cause adverse reproductive effects. Absorption of some drugs may be affected causing adverse health effects. Ingestion of pregnant women may cause serious effects in their new born babies called "foetal alcohol syndrome". The

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national occupational health and safety commission in Australia does not classify alcohol as a carcinogen. IARC has evaluated ethanol as a carcinogenic risk from occupational exposures. There is extensive toxicological and epidemiological information on the health effects of ingesting alcoholic drinks containing ethanol. Any occupational exposures will add to the overall exposures from ingestion of alcoholic drinks any health effects that result from such exposure.

**Acute effects:** Inhalation at levels at or exceeding the Occupational Exposure limits or any deliberate ingestion is known to lead to health effects which may be evident in themselves, or lead to impaired functioning and consequent safety risks in the industrial setting.

## **Human/Animal Data:**

A blood alcohol level in excess of 0.05g\100ml is regarded as likely to impair functioning for tasks such as operating machinery.

LD50/oral/rat: 7060 mg/kg (literature data)

LC50/inhalation/rat: 38mg/l/10 h (literature data)

**Long Term Effects:** Exposure to ethanol in the work setting add to any intake from alcoholic drinks and any health effects caused by the total intake of alcohol.

**Carcinogenicity Studies:** Not Known to DAVANNA HOLDINGS PTY LTD

**Compounding Effects:** Not Known to DAVANNA HOLDINGS PTY LTD

## **SECTION 12 ECOLOGICAL INFORMATION**

### **Eco-toxicity:**

Toxicity to fish (acute): LC0/Golden ide/:>1000mg/l/48 h

Toxicity to daphnia: Ec50/daphnia magna/:>1000 mg/l/24 h

### **Persistence and Degradability:**

Degree of elimination: 94%

Evaluation: biodegradable

### **Mobility in Soil:**

No data Available

### **Environmental Fate (exposure)**

### **Bioaccumulative Potential:**

### **Other Adverse Environmental Effects:**

## **SECTION 13 DISPOSAL CONSIDERATIONS**

### **Disposal Methods**

Product must be contained and not disposed to sewerage systems, drains or waterways. Advise flammable nature. Empty containers must be decontaminated by rinsing with water. Empty containers contain residue (liquid and/or vapour) and are dangerous. Do not pressure cut, weld, braze, solder, drill, grind or expose such containers to heat, flame, sparks, static electricity, or other sources of ignition.

**Special Precautions for Landfill or Incineration** Suitable for incineration by approved agent under controlled conditions if permitted by local authorities, otherwise disposal must be in accordance with local waste authority requirements.

## **SECTION 14 TRANSPORT INFORMATION**

### **Transport Requirements**

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Road and Rail Transport (Australian Dangerous Goods Code)

Marine Transport (International Maritime Dangerous Goods Code)

Air Transport (International Air Transport Association Dangerous Goods Regulations)

<b>Marine Pollutant</b>	No
<b>UN Number</b>	1170
<b>Proper Shipping Name</b>	Ethanol
<b>Class</b>	3 Flammable liquid
<b>Subsidiary Risk(s)</b>	None allocated
<b>Packaging Group</b>	II
<b>Hazchem Code</b>	2[Y] E
<b>Special Precautions for User</b>	<i>Incompatibilities</i> Not to be stored with explosive (Class 1), flammable gases in bulk (Class 2.1), poisonous gases (Class 2.3), spontaneously combustible substances (Class 4.2), oxidizing agents (Class 5.1), organic peroxides (Class 5.2), radioactive substances (Class 7). Exemptions may apply

## SECTION 15 REGULATORY INFORMATION

**Classification** Hazardous according to criteria of NOHSC.  
Dangerous Goods according to criteria of the Australian Dangerous Goods Code.

**Poisons Schedule** S5 (IMS only- When packed in volumes <5 litres)  
Scheduled Poisons must be stored, maintained and used in accordance with the relevant regulations.

## SECTION 16 OTHER INFORMATION

This MSDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since DAVANNA HOLDINGS PTY LTD cannot anticipate or Control the conditions under which the product may be used, each user must, to prior usage, assess and control the risks arising from its use.

### ADDITIONAL INFORMATION

AS 1020	The control of undesirable static electricity.
AS 1076	Code of Practice for selection, installation and maintenance of electrical apparatus and associated equipment for use in explosive atmospheres (other than mining applications) - Parts 1-13.
AS/NZS 1336	Recommended Practices for Occupational Eye Protection.
AS/NZS 1715	Selection, Use and Maintenance of Respiratory Protective Devices.
AS/NZS 1716	Respiratory Protective Devices.
AS 1940	The storage and handling of Flammable and Combustible Material.
AS 2161	Industrial Safety Gloves and Mittens (excluding electrical and medical gloves)
AS 2380	Electrical equipment for explosive atmospheres-Explosion Protection Techniques (parts 1-9)
AS 3000	Electrical Installations known as the Australian/ New Zealand Wiring Rules.