Safety Data Sheet
Industrial Methylated Spirit
Revision 5, 22/08/2024

1. IDENTIFICATION

Product Name	**Industrial Methylated Spirit**
Other Names	Ethyl alcohol; IMS-100; IMS-95
Uses	Solvent; Fuel; Cleaning & laundry.
Chemical Family	No Data Available
Chemical Formula	C2H6O
Chemical Name	Ethanol
Product Description	0.25% Methyl isobutyl ketone (MIBK) is added as a denaturant.

Contact Details of the Supplier of this Safety Data Sheet

Organisation	Location	Telephone
Aurora Cleaning Supplies	F1 / 5 Bungaleen Court Dandenong South VIC 3175	03 9768 2669

Emergency Contact Details

For emergencies only; DO NOT contact these companies for general product advice.

Organisation	Location	Telephone
Chemcall	Australia	1800-127406 +64-4-9179888
Chemcall	Malaysia	+64-4-9179888
Chemcall	New Zealand	0800-243622 +64-4-9179888
National Poisons Centre	New Zealand	0800-764766
CHEMTREC	USA & Canada	1-800-424-9300 CN723420 +1-703-527-3887

2. HAZARD IDENTIFICATION

Poisons Schedule (Aust) Not Scheduled

Globally Harmonised System

Hazard Classification		Hazardous according to the criteria of the Globally Harmonised System of Classification and Labelling of Chemicals (GHS)	
Hazard Categories		Flammable Liquids - Category 2 Serious Eye Damage/Irritation - Category 2A	
Pictograms			
Signal Word		Danger	
Hazard Statements		**H225**	Highly flammable liquid and vapour.
		H319	Causes serious eye irritation.
Precautionary Statements	Prevention	**P210**	Keep away from heat/sparks/open flames/hot surfaces. No smoking.
		P233	Keep container tightly closed.
		P280	Wear protective gloves/eye protection/face protection.
		P240	Ground and bond container and receiving equipment.
		P241	Use explosion-proof electrical/ventilating/lighting and all other equipment.
		P242	Use non-sparking tools.
		P243	Take action to prevent static discharges.
	Response	**P370 + P378**	In case of fire: Use carbon dioxide (CO2), dry chemical, alcohol resistant foam or water spray for extinction.
		P337 + P313	If eye irritation persists: Get medical advice/attention.
		P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
		P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
	Storage	**P403 + P235**	Store in a well-ventilated place. Keep cool.
	Disposal	**P501**	Dispose of contents/container in accordance with local / regional / national / international regulations.

National Transport Commission (Australia)

Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification		Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)	

Environmental Protection Authority (New Zealand)

Hazardous Substances and New Organisms Amendment Act 2015

HSNO Classifications	Physical Hazards	**3.1B**	Flammable liquid - high hazard
	Health Hazards	**6.4A**	Substances that are irritating to the eye

3. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients

Chemical Entity	Formula	CAS Number	Proportion
Ethanol	C2H6O	64-17-5	>=95 %

Methyl isobutyl ketone (MIBK)	C6H12O	108-10-1	0.25 %
Water	H2O	7732-18-5	Balance %

4. FIRST AID MEASURES

Description of necessary measures according to routes of exposure

Swallowed IF SWALLOWED: Rinse mouth, then give a glass of water to drink. Do not induce vomiting. Get immediate medical advice/attention. If vomiting occurs, give further water. Never give anything by mouth to an unconscious person.

Eye IF IN EYES: Immediately flush eyes with running water for several minutes, holding eyelids open and occasionally lifting the upper and lower lids. Remove contact lenses if present and easy to do. Continue rinsing for at least 15 minutes. If eye irritation persists, get medical advice/attention.

Skin IF ON SKIN (or hair): Remove and isolate contaminated clothing and shoes. Immediately flush skin and hair with running water for at least 15 minutes. In case of gross contamination, drench contaminated clothing and skin with plenty of water before removing clothes. If skin irritation occurs, get medical advice/attention. Wash contaminated clothing and shoes before reuse. In case of burns, immediately cool affected skin for as long as possible with cold water. Cover with a clean, dry dressing until medical help is available. If blistering occurs, do NOT break blisters. Do not remove clothing if adhering to skin. Treat for shock, if required.

Inhaled IF INHALED: Remove victim to fresh air and keep warm and at rest in a position comfortable for breathing. Remove contaminated clothing and loosen remaining clothing. If respiratory symptoms persist, get medical advice/attention. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.

Advice to Doctor Treat symptomatically. Ensure that attending medical personnel are aware of identity and nature of product(s) involved, and take precautions to protect themselves. Keep victim calm and warm.

Medical Conditions Aggravated by Exposure Repeated exposure may cause skin dryness or cracking.

5. FIRE FIGHTING MEASURES

General Measures Evacuate area and contact emergency services. If safe to do so, move undamaged containers from fire area. Cool container with water spray until well after fire is out. Avoid getting water inside containers.

Flammability Conditions HIGHLY FLAMMABLE LIQUID: Low flashpoint - Will be easily ignited by heat, sparks or flames at ambient temperatures.

Extinguishing Media Use dry chemical, Carbon dioxide (CO2), alcohol-resistant foam or water spray for extinction - Do not use water jets. Alcohol resistant foam is the preferred firefighting medium but, if it is not available, fine water spray can be used. *Caution: Use of water spray when fighting fire may be inefficient.

Fire and Explosion Hazard Risk of violent reaction or explosion! Vapours will form explosive mixtures with air. Vapours will travel to source of ignition and flash back. Containers may explode when heated. Many liquids are lighter than water. Many vapours are heavier than air and will collect in low or confined areas. Vapours from runoff may create an explosion hazard. May irritate or burn skin and eyes. Vapours may cause dizziness or drowsiness.

Hazardous Products of Combustion Fire may produce irritating, toxic and/or corrosive gases, including Carbon oxides, Nitrogen oxides, Hydrocarbons.

Special Fire Fighting Instructions Contain runoff from fire control or dilution water - Runoff may pollute waterways.

Personal Protective Equipment Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

Flash Point 13 - 18 °C

Lower Explosion Limit 3.3 %

Upper Explosion Limit 19.0 %

Auto Ignition Temperature 392 °C

Hazchem Code •2YE

6. ACCIDENTAL RELEASE MEASURES

General Response Procedure Ensure adequate ventilation - Ventilate enclosed spaces before entering. ELIMINATE all ignition sources - All

	equipment used in handling the product must be earthed. Do not touch or walk through spilled material. Slippery when spilt. Avoid accidents, clean up immediately! Avoid breathing vapours and contact with eyes, skin and clothing.
Clean Up Procedures	Collect recoverable product (e.g. by vacuum truck) to a salvage tank for recovery or disposal. Absorb with dry earth, sand or other non-combustible material and transfer to containers for disposal (see SECTION 13). *Use clean, non-sparking tools to collect absorbed material.
Containment	Stop leak if safe to do so – Prevent entry into waterways, drains or confined areas. Dike far ahead of large spill for later disposal. A vapour-suppressing foam may be used to reduce vapours. Water spray may reduce vapour, but may not prevent ignition in closed spaces.
Decontamination	Do not flush residues with water - Retain as contaminated waste. Allow any residues to evaporate or use an appropriate absorbent material and dispose of safely.
Environmental Precautionary Measures	Spillages and decontamination runoff should be prevented from entering drains and watercourses. contamination of crops, sewers or waterways has occurred advise local emergency services.
Evacuation Criteria	Spill or leak area should be isolated immediately. Keep unauthorised personnel away. Keep upwind and to higher ground.
Personal Precautionary Measures	Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours (see SECTION 8).

7. HANDLING AND STORAGE

Handling	Safety showers and eyewash facilities should be provided within the immediate work area for emergency use. Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Handle and open containers with care. Avoid breathing vapours and contact with eyes, skin and clothing. Do not ingest. Wear protective gloves/eye protection/face protection (see SECTION 8). Highly flammable liquid & vapour: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking. Ground/bond container and receiving equipment. Use explosion-proof electrical/ventilating/lighting equipment. Use only non-sparking tools. Take precautionary measures against static discharge.
Storage	Store in a cool, dry and well-ventilated place, out of direct sunlight. Keep containers closed when not in use - check regularly for leaks. Keep container standing upright and protect from physical damage. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources - No smoking. Keep away from foodstuffs and incompatible materials (see SECTION 10).
Container	Keep in the original container. Ensure containers are properly labelled.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

General	COMPONENT: Ethanol (CAS No. 64-17-5): - Safe Work Australia Exposure Standard: TWA = 1,000 ppm (1,880 mg/m3). - New Zealand Workplace Exposure Standard [Next review 2022]: TWA = 1,000 ppm (1,880 mg/m3). - NIOSH REL/OSHA PEL: TWA = 1,000 ppm (1,900 mg/m3). - Immediately dangerous to life or health (IDLH) concentration: 3,300 ppm. COMPONENT: Methyl isobutyl ketone (CAS No. 108-10-1): - Safe Work Australia Exposure Standard: TWA = 50 ppm (205 mg/m3); STEL = 75 ppm (307 mg/m3). - New Zealand Workplace Exposure Standard [Next review 2023]: TWA = 50 ppm (205 mg/m3); STEL = 75 ppm (307 mg/m3). - NIOSH REL: TWA = 50 ppm (205 mg/m3); ST = 75 ppm (300 mg/m3). - OSHA PEL: TWA = 100 ppm (410 mg/m3). - Immediately dangerous to life or health (IDLH) concentration: 500 ppm.
Exposure Limits	No Data Available
Biological Limits	No information available.
Engineering Measures	Use in well-ventilated areas. In poorly ventilated areas, mechanical explosion proof extraction ventilation is recommended.
Personal Protection Equipment	- Respiratory protection: Wear respiratory protection in case of inadequate ventilation and where an inhalation risk exists. Recommended: Organic vapour (type A) respirator (refer to AS/NZS 1715 & 1716). - Eye/face protection: Wear appropriate eye protection to avoid eye contact. Recommended: Wear splash-proof goggles. - Hand protection: Wear protective gloves. Recommended: Nitrile or neoprene gloves. - Skin/body protection: Wear appropriate personal protective clothing to avoid skin contact. Recommended: When using large quantities or where heavy contamination is likely, wear coveralls.
Special Hazards Precaustions	Flammable/explosive vapours may accumulate in poorly ventilated areas. Vapour heavier than air - prevent concentration in hollows or sumps. Do NOT enter confined spaces where vapour may have collected.

Work Hygienic Practices	Do not eat, drink or smoke when using this product. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storing or re-using.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Appearance	Clear liquid
Odour	Characteristic/alcoholic
Colour	Colourless
pH	No Data Available
Vapour Pressure	44 mgHg (@ 20 °C)
Relative Vapour Density	1.59 Air = 1
Boiling Point	78 °C
Melting Point	No Data Available
Freezing Point	-117 °C
Solubility	Miscible with water
Specific Gravity	0.79 - 0.81
Flash Point	13 - 18 °C
Auto Ignition Temp	392 °C
Evaporation Rate	2.53 (n-Butyl acetate = 1)
Bulk Density	No Data Available
Corrosion Rate	No Data Available
Decomposition Temperature	No Data Available
Density	0.79 - 0.81 g/ml
Specific Heat	No Data Available
Molecular Weight	No Data Available
Net Propellant Weight	No Data Available
Octanol Water Coefficient	No Data Available
Particle Size	No Data Available
Partition Coefficient	No Data Available
Saturated Vapour Concentration	No Data Available
Vapour Temperature	15 °C
Viscosity	No Data Available
Volatile Percent	No Data Available
VOC Volume	No Data Available
Additional Characteristics	No information available.
Potential for Dust Explosion	Not applicable.
Fast or Intensely Burning Characteristics	Risk of violent reaction or explosion.
Flame Propagation or Burning Rate of Solid Materials	No information available.
Non-Flammables That Could Contribute Unusual Hazards to a Fire	No information available.
Properties That May Initiate or Contribute to Fire Intensity	HIGHLY FLAMMABLE LIQUID: Low flashpoint - Will be easily ignited by heat, sparks or flames at ambient temperatures.
Reactions That Release Gases or Vapours	Fire/decomposition may produce irritating, toxic and/or corrosive gases, including Carbon oxides, Hydrocarbons.
Release of Invisible Flammable Vapours and Gases	Vapours will form explosive mixtures with air.

10. STABILITY AND REACTIVITY

General Information	No information available.
Chemical Stability	Stable under normal conditions of use.
Conditions to Avoid	Keep away from heat and sources of ignition.
Materials to Avoid	Incompatible/reactive with oxidising agents, acids and strong alkalis.
Hazardous Decomposition Products	Fire/decomposition may produce irritating, toxic and/or corrosive gases, including Carbon oxides, Nitrogen oxides, Hydrocarbons.
Hazardous Polymerisation	No information available.

11. TOXICOLOGICAL INFORMATION

General Information

- Acute toxicity: Low acute toxicity. Ingestion may result in gastrointestinal irritation, nausea, vomiting, abdominal pain, diarrhoea, headache, dizziness and drowsiness with large doses. Toxic effects may result from skin absorption.
- Skin corrosion/irritation: Prolonged contact may result in drying and defatting of the skin, rash and dermatitis.
- Eye damage/irritation: Causes serious eye irritation. Exposure may result in lacrimation, irritation, pain and redness.
- Respiratory/skin sensitisation: Ethanol does not induce skin sensitisation in animals [NICNAS].
- Germ cell mutagenicity: Ethanol has no mutagenic or genotoxic potential [NICNAS].
- Carcinogenicity: While exposure Ethanol through consuming alcoholic beverages is associated with an increased risk of carcinogenicity, these risks are not considered relevant at doses relating to occupational exposure [NICNAS].
- Reproductive toxicity: While exposure Ethanol through consuming alcoholic beverages is associated with an increased risk of reproductive and developmental toxicity, these risks are not considered relevant at doses relating to occupational exposure [NICNAS].
- STOT (single exposure): Inhalation may cause irritation to the respiratory system, nose and throat irritation, coughing and headache. Over exposure may result in nausea, dizziness and drowsiness.
- STOT (repeated exposure): Ethanol is not considered to cause serious damage to health from repeated oral exposure, except from exposure to high doses; and is likely to be of low toxicity following repeated inhalation exposure [NICNAS]. Chronic ingestion may result in cirrhosis of the liver. Overexposure may cause central nervous system depression.
- Aspiration toxicity: No information available.

Acute

Ingestion

Acute toxicity (Oral):
COMPONENT: Ethanol (CAS No. 64-17-5):
- LD50, Rat: >2,000 mg/kg bw [NICNAS].

Other

Acute toxicity (Dermal):
COMPONENT: Ethanol (CAS No. 64-17-5):
- LD50, Rat: >2,000 mg/kg bw [NICNAS].

Inhalation

Acute toxicity (Inhalation):
COMPONENT: Ethanol (CAS No. 64-17-5):
- LC50, Rat: 124.7 mg/L (4 h) [NICNAS].

Carcinogen Category None

12. ECOLOGICAL INFORMATION

Ecotoxicity

Acute aquatic hazard: This material has been classified as non-hazardous.
- Acute toxicity estimate (based on ingredients): >100 mg/L
Long-term aquatic hazard: This material has been classified as non-hazardous.
- Non-rapidly or rapidly degradable substance for which there are adequate chronic toxicity data available OR in the absence of chronic toxicity data, Acute toxicity estimate (based on ingredients): >100 mg/L, where the substance is not rapidly degradable and/or BCF < 500 and/or log Kow < 4.

Persistence/Degradability	No information available.
Mobility	No information available.
Environmental Fate	Avoid contaminating waterways.
Bioaccumulation Potential	No information available.
Environmental Impact	No Data Available

13. DISPOSAL CONSIDERATIONS

General Information	If possible, material and its container should be recycled. If material or container cannot be recycled, dispose of in accordance with local/regional/national regulations.
Special Precautions for Land Fill	Persons conducting disposal, recycling or reclamation activities should ensure that appropriate personal protection equipment is used (see SECTION 8).

14. TRANSPORT INFORMATION

Land Transport (Australia)
ADG Code

Proper Shipping Name	ETHANOL (ETHYL ALCOHOL)
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
EPG	14 Liquids - Highly Flammable
UN Number	1170
Hazchem	•2YE
Pack Group	II
Special Provision	No Data Available

Land Transport (Malaysia)
ADR Code

Proper Shipping Name	ETHANOL (ETHYL ALCOHOL)
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
EPG	14 Liquids - Highly Flammable
UN Number	1170
Hazchem	2YE
Pack Group	II
Special Provision	No Data Available

Land Transport (New Zealand)
NZS5433

Proper Shipping Name	ETHANOL (ETHYL ALCOHOL)
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
EPG	14 Liquids - Highly Flammable
UN Number	1170
Hazchem	2YE
Pack Group	II
Special Provision	No Data Available

Land Transport (United States of America)
US DOT

Proper Shipping Name	ETHANOL (ETHYL ALCOHOL)

Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
ERG	127 Flammable Liquids (Polar / Water-Miscible)
UN Number	1170
Hazchem	2YE
Pack Group	II
Special Provision	No Data Available

Sea Transport
IMDG Code

Proper Shipping Name	ETHANOL (ETHYL ALCOHOL)
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
UN Number	1170
Hazchem	2YE
Pack Group	II
Special Provision	No Data Available
EMS	F-E, S-D
Marine Pollutant	No

Air Transport
IATA DGR

Proper Shipping Name	ETHANOL (ETHYL ALCOHOL)
Class	3 Flammable Liquids
Subsidiary Risk(s)	No Data Available
UN Number	1170
Hazchem	2YE
Pack Group	II
Special Provision	No Data Available

National Transport Commission (Australia)
Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

Dangerous Goods Classification	Dangerous Goods according to the criteria of the Australian Code for the Transport of Dangerous Goods by Road & Rail (ADG Code)

15. REGULATORY INFORMATION

General Information	METHYLATED SPIRIT(S) (being ethanol denatured with MIBK, etc) is listed in Schedule 5 of the SUSMP, except when packed in containers having a capacity of more than 5 litres.
Poisons Schedule (Aust)	Not Scheduled

Environmental Protection Authority (New Zealand)
Hazardous Substances and New Organisms Amendment Act 2015

Approval Code	HSR001144

National/Regional Inventories

Australia (AIIC)	Listed
Canada (DSL)	Listed
Canada (NDSL)	Not Listed
China (IECSC)	Listed
Europe (EINECS)	200-578-6 203-550-1
Europe (REACh)	01-2119457610-43- 01-2119473980-30-
Japan (ENCS/METI)	2-202 2-542 (PACs)
Korea (KECI)	KE-13217 KE-24725
Malaysia (EHS Register)	Listed
New Zealand (NZIoC)	Listed
Philippines (PICCS)	Listed
Switzerland (Giftliste 1)	Not Determined
Switzerland (Inventory of Notified Substances)	Not Determined
Taiwan (NCSR)	Listed
USA (TSCA)	Listed

16. OTHER INFORMATION

Related Product Codes	MESPIR3030, MESPIR3060, MESPIR3070, MESPIR3110, MESPIR3120, MESPIR3130, MESPIR3150, MESPIR3160, MESPIR3170, MESPIR3230, MESPIR4000, MESPIR4001, MESPIR4100, MESPIR4200, MESPIR4201, MESPIR4300, MESPIR4500, MESPIR4505, MESPIR4600, MESPIR4700, MESPIR4800, MESPIR4801, MESPIR6500, MESPIR7000
Revision	5
Revision Date	22/08/2024
Key/Legend	**<** Less Than **>** Greater Than **AICS** Australian Inventory of Chemical Substances **atm** Atmosphere **CAS** Chemical Abstracts Service (Registry Number) **cm²** Square Centimetres **CO2** Carbon Dioxide **COD** Chemical Oxygen Demand **deg C (°C)** Degrees Celcius **EPA (New Zealand)** Environmental Protection Authority of New Zealand **deg F (°F)** Degrees Farenheit **g** Grams **g/cm³** Grams per Cubic Centimetre **g/l** Grams per Litre **HSNO** Hazardous Substance and New Organism **IDLH** Immediately Dangerous to Life and Health **immiscible** Liquids are insoluable in each other. **inHg** Inch of Mercury **inH2O** Inch of Water **K** Kelvin **kg** Kilogram

kg/m³ Kilograms per Cubic Metre
lb Pound
LC50 LC stands for lethal concentration. LC50 is the concentration of a material in air which causes the death of 50% (one half) of a group of test animals. The material is inhaled over a set period of time, usually 1 or 4 hours.
LD50 LD stands for Lethal Dose. LD50 is the amount of a material, given all at once, which causes the death of 50% (one half) of a group of test animals.
ltr or **L** Litre
m³ Cubic Metre
mbar Millibar
mg Milligram
mg/24H Milligrams per 24 Hours
mg/kg Milligrams per Kilogram
mg/m³ Milligrams per Cubic Metre
Misc or **Miscible** Liquids form one homogeneous liquid phase regardless of the amount of either component present.
mm Millimetre
mmH2O Millimetres of Water
mPa.s Millipascals per Second
N/A Not Applicable
NIOSH National Institute for Occupational Safety and Health
NOHSC National Occupational Heath and Safety Commission
OECD Organisation for Economic Co-operation and Development
Oz Ounce
PEL Permissible Exposure Limit
Pa Pascal
ppb Parts per Billion
ppm Parts per Million
ppm/2h Parts per Million per 2 Hours
ppm/6h Parts per Million per 6 Hours
psi Pounds per Square Inch
R Rankine
RCP Reciprocal Calculation Procedure
STEL Short Term Exposure Limit
TLV Threshold Limit Value
tne Tonne
TWA Time Weighted Average
ug/24H Micrograms per 24 Hours
UN United Nations
wt Weight