HURST SCIENTIFIC

Safety Data Sheet
Methanol

SECTION 1: Identification

GHS Product identifier

Product name	Methanol
Product number	METH-2.5L, 5L, 10L, 20L
Brand	Hurstchem

Other means of identification

Methyl Alcohol, Methyl Hydroxide, Wood Alcohol.

Recommended use of the chemical and restrictions on use

Laboratory Solvent

Supplier's details

Name	Hurst Scientific
Address	2/36 Hensbrook Loop 6112 Forrestdale WA Australia
Telephone	1300 778 068
email	sales@hurstscientific.com.au

Emergency phone number

Australian Poisons Information Centre 131 126
Australian Emergency Services 000

SECTION 2: Hazard identification

General hazard statement

Classified as a **Hazardous** substance according to the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and Safe Work Australia criteria.
Classified as a **Dangerous goods** according to the ADG Code for the Transport of Dangerous Goods by Road and Rail (7th Edition).

Classification of the substance or mixture

GHS classification in accordance with: UN GHS revision 7

- Flammable liquids, Cat. 2
- Acute toxicity, oral, Cat. 3
- Acute toxicity, inhalation, Cat. 3
- Acute toxicity, dermal, Cat. 3
- Specific target organ toxicity following single exposure, Cat. 1

GHS label elements, including precautionary statements

Pictograms

1. Exclamation mark; 2. Flame; 3. Skull and crossbones; 4. Health hazard

Signal word	**Danger**

Hazard statement(s)

H225	Highly flammable liquid and vapor
H301	Toxic if swallowed
H311	Toxic in contact with skin
H331	Toxic if inhaled
H370	Causes damage to organs [organs, route]

Precautionary statement(s)

P102	Keep out of reach of children.
P103	Read label before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof [electrical/ventilating/lighting/...] equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P260	Do not breathe dust/fume/gas/mist/vapors/spray.
P264	Wash … thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P310	IF SWALLOWED: Immediately call a POISON CENTER/doctor/...
P330	Rinse mouth.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P308+P311	IF exposed or concerned: Call a POISON CENTER/doctor/...
P405	Store locked up.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P501	Dispose of contents/container to …

SECTION 3: Composition/information on ingredients

Mixtures

1. Methanol

Concentration	100 %
CAS no.	67-56-1

SECTION 4: First-aid measures

Description of necessary first-aid measures

If inhaled	Evacuate to fresh air immediately. Allow patient to assume most comfortable position and keep warm. Keep at rest until fully recovered. If unconscious place in recovery position, provide artificial respiration if breathing ceases. Seek medical attention.
In case of skin contact	Remove contaminated clothing and wash affected area with soap and water

	thoroughly. If irritation develops, seek medical attention. Launder contaminated clothing before re-using.
In case of eye contact	Flush eyes with copious amounts of water for at least 15 minutes. Seek medical attention.
If swallowed	DO NOT induce vomiting. Seek medical attention. Do not give anything by mouth to an unconscious person. If person vomits place person on their side in the recovery position.

Personal protective equipment for first-aid responders
Eye wash station, safety shower and First Aid kit.

Indication of immediate medical attention and special treatment needed, if necessary
Treat symptomatically.

SECTION 5: Fire-fighting measures

Suitable extinguishing media
Alcohol resistant foam is the preferred firefighting medium. Use water fog to cool intact containers and nearby storage areas. Dry agent, carbon dioxide, foam or water fog.
Hazards for combustion products Toxic gases may evolve.

Specific hazards arising from the chemical
Highly flammable liquid. Contain spill. May form flammable mixtures with air. Burns with colourless flame. The vapour is heavier than air and may travel along the ground; distant ignition and flashback are possible.

Special protective actions for fire-fighters
Wear SCBA (Self-Contained Breathing Apparatus) and full protective equipment or chemical splash suit.

Further information
Hazchem code 2WE

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures
In the event of a spill eliminate all sources of ignition and take measures to prevent static discharge. Use water spray to disperse vapour. Clear area of all personnel not directly involved in the clean-up. Ventilate area well and ensure the atmosphere is safe before personnel return to the work area.
Stop and contain spill for salvage or absorb in inert absorbent material (sand, soil, vermiculite) for disposal by an approved method. Prevent run-off into drains and waterways.

Environmental precautions
If contamination of sewers or waterways has occurred, advise the local emergency services.

Methods and materials for containment and cleaning up
Absorb with vermiculite or similar and place into a suitably labelled container. Dispose of waste according to local authority guidelines. Wash the affected area with a large volume of water. Spills can be converted to non-flammable mixtures by dilution with water. Do not contaminate drains or waterways.

SECTION 7: Handling and storage

Precautions for safe handling
Use only in an adequately ventilated area away from all sources of ignition. Avoid breathing in mists or vapours. Wear appropriate protective clothing to avoid any exposure and practice good personal hygiene.

Conditions for safe storage, including any incompatibilities
Store in tightly closed containers in a cool, dry, isolated and well-ventilated area away from heat, sources of ignition and incompatibles. Keep containers closed at all times – check regularly for damage or leaks. Ground and bond storage containers. Store away from incompatible materials as listed in section 10.

SECTION 8: Exposure controls/personal protection

Control parameters

CAS: 67-56-1
Methanol
AU/SWA (Australia): 250 ppm; 328 mg/m3 STEL inhalation; 200 ppm; 262 mg/m3 TWA inhalation

Appropriate engineering controls
Local exhaust ventilation and/or mechanical (general) exhaust is recommended where vapours are likely to be generated. Keep containers closed when not in use.

Individual protection measures, such as personal protective equipment (PPE)

Eye/face 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 in the eyes. Safety showers with eye-wash should be provided.

Skin protection
Avoid skin contact by the use of approved chemical resistant gloves and aprons - PVC or Neoprene (AS 2161).

SECTION 9: Physical and chemical properties

Basic physical and chemical properties

Physical state	Liquid
Appearance	Colourless liquid.
Color	Clear
Odor	Alcohol
Melting point/freezing point	-97.8°C
Boiling point or initial boiling point and boiling range	64.5^{o}C
Lower and upper explosion limit/flammability limit	2.6-12.8%
Flash point	11^{o}C (closed cup)
pH	Not Available
Solubility	Soluble
Vapor pressure	12.3kPa @ 25^{o}C
Density and/or relative density	0.79
Relative vapor density	1.1 (Air = 1)

SECTION 10: Stability and reactivity

Reactivity
Hygroscopic. Highly flammable.

Chemical stability
Stable under recommended conditions for use and storage.

Possibility of hazardous reactions
Polymerisation will not occur.

Conditions to avoid
High temperatures and sources of ignition.

Incompatible materials
Incompatible with oxidising agents (eg. hypochlorites).

Hazardous decomposition products
Toxic gases may evolve.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity
Eye contact Vapour and liquid can irritate the eyes resulting in redness, pain and swelling.
Skin contact Brief skin contact may cause minor and short-lasting irritation. Prolonged contact (e.g. Repeated daily contact, or working in clothing saturated with the product) may cause drying and cracking of the skin due to the de-fatting action. Dermatitis may also occur in some individuals.
Inhalation Vapour may cause irritation to the nose, throat and upper respiratory tract.
Ingestion Unlikely under normal occupational exposures, but methanol is very toxic by mouth and 60-120ml (1 g/kg) may be a fatal dose. Initial symptoms resemble ethanol intoxication (drunkenness) and may include fatigue, dizziness, headache, nausea, vomiting.
Chronic: Repeated exposure at over the occupational standard may lead to damage to liver, heart, kidneys, lungs and other organs including the retina and optic nerve.

Skin corrosion/irritation
No classification.

Serious eye damage/irritation
No classification.

Respiratory or skin sensitization
Category 3 hazard.

Germ cell mutagenicity
No classification.

Carcinogenicity
No classification under IARC monographs.

Reproductive toxicity
No classification.

Specific target organ toxicity (STOT) - single exposure
Category 1 hazard. Exposure via oral, dermal or inhalation may result in damage to the optic nerve and central nervous system.

Specific target organ toxicity (STOT) - repeated exposure
No classification.

Aspiration hazard
No classification

SECTION 12: Ecological information

Toxicity
No data available.

Persistence and degradability
Expected to biodegrade in both soil and water.

Bioaccumulative potential
Not expected to bio-accumulate.

Mobility in soil
No information available.

Other adverse effects
Environmental fate (exposure) Do not contaminate drains and waterways.

SECTION 13: Disposal considerations

Disposal methods

Product disposal
Dispose of in accordance with local authority guidelines.

Packaging disposal
Dispose of in accordance with local authority guidelines.

Other disposal recommendations
Special precautions Nil.

SECTION 14: Transport information

UN Number	1230
Hazchem emergency action code (EAC)	2WE
UN Proper Shipping Name	Methanol
Transport hazard class(es)	3, 6.1
Packing group	II

Special precautions for user
Not to be loaded with explosives (Class 1), flammable gases (Class 2.1), if both are in bulk, toxic gases (Class 2.3), spontaneously combustible substances (Class 4.2), oxidising agents (Class 5.1), organic peroxides (Class 5.2) or radioactive substances (Class 7), however exemptions may apply.

SECTION 15: Regulatory information

Chemical Safety Assessment
• Poison Schedule: S6
• TWA (Time Weighted Average): The average airborne concentration of a particular substance when calculated over a normal eight hour working day, for a five-day week.
• STEL (Short-Term Exposure Limit): The average airborne concentration over a 15-minute period which should not be exceeded at any time during a normal eight-hour work day.

SECTION 16: Other information

Further information/disclaimer
This SDS is prepared in accordance with the Safe Work Australia, Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice, (2011). The information contained within is believed to be accurate at the date of preparation/review. Hurst Scientific makes no claims of the accuracy or completeness of the information and excludes all liability for any loss or damage related to the supply or use of the information in this material safety data sheet. It is recommended the user make their own determinations as to the suitability of the information provided to the application in which the product is to be used.

Preparation information
References
1. Safe Work Australia, Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice, (2011).
2. Safe Work Australia, National Code of Practice for the Labelling of Workplace Hazardous Chemicals (2015).
3. Safe Work Australia, Workplace Exposure Standards for Airborne Contaminants (2013)
4. National Transport Commission Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG Code); Canprint: Canberra (2007), Volume 1, 7th Edition.
5. Standards Australia, Dangerous Goods Initial Emergency Response Guide: Australian Handbook (SAA/SNZ HB76); Homebush (2004).