

SAFETY DATA SHEET

Methanol

SECTION 1: IDENTIFICATION OF MATERIAL AND SUPPLIER

Product Name:	Methanol
Other Names:	METHYL ALCOHOL; CARBINOL; METHANOL;
Product Codes/Trade Names:	-
Recommended Use:	Racing Fuel
Applicable In:	Australia
Supplier:	Powerplus Fuels (ABN 72682013172)
Address:	Level 1/ 92 Railway St S Altona 3018
Telephone:	+ 61 3 8398 0827
Email Address:	sales@powerplusfuels.com.au
Emergency Phone Number:	000 Fire Brigade and Police (available in Australia only).
Poisons Information Centre:	13 11 26 (available in Australia only).

This Safety Data Sheet (SDS) is issued by the Supplier in accordance with National standards and guidelines from the Australian Safety and Compensation Council (ASCC, formerly National Occupational Health and Safety Commission - NOHSC). The information in it must not be altered, deleted, or added to. The Supplier will not accept any responsibility for any changes made to its SDS by any other person or organization. The Supplier will issue a new SDS when there is a change in product specifications and/or ASCC standards, codes, guidelines, or Regulations.

SECTION 2: HAZARD IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE: Classified as **Hazardous** according to the criteria of the Australian Safety and Compensation Council ASCC (formerly NOHSC) Approved Criteria for Classifying Hazardous Substances [NOHSC:1008] 3rd Edition.

Methanol is classified as **Dangerous** Goods according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

GHS Classification

FLAMMABLE LIQUIDS - Category 2
ACUTE TOXICITY:oral - Category 3 ACUTE
TOXICITY:dermal - Category 3 ACUTE
TOXICITY:inhalation - Category 3
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A SPECIFIC
TARGET ORGAN TOXICITY (SINGLE EXPOSURE)
[central nervous system (CNS), optic nerve] - Category 1 SPECIFIC
TARGET ORGAN TOXICITY (SINGLE EXPOSURE)
[Respiratory tract irritation] - Category 3
SPECIFIC TARGET ORGAN TOXICITY (REPEATED
EXPOSURE) [gastrointestinal tract, kidneys, liver, respiratory tract, skin] -
Category 2

GHS Label elements, including precautionary statements

Pictogram



Signal word: Danger

Hazard statement(s)

Highly flammable liquid and vapor.
 Toxic if swallowed, in contact with skin or if inhaled. Causes serious eye irritation.
 Causes damage to organs: (central nervous system (CNS), optic nerve)
 May cause respiratory irritation.
 May cause damage to organs through prolonged or repeated exposure. (gastrointestinal tract, liver, respiratory tract, skin)

Precautionary statement(s)

Prevention

- P210 Keep away from heat/sparks/open flames/hot surfaces. – No. smoking.
- P233 Keep container tightly closed.
- P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.

Response

- P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician
- P303 + P361 + P353 IF ON SKIN (or hair): Remove/ Take off immediately all contaminated clothing. Rinse skin with water/ shower.
- P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P307 + P311 IF exposed: Call a POISON CENTER or doctor/ physician.
- P361 Remove/ Take off immediately all contaminated clothing.
- P370 + P378 In case of fire: Use dry sand, dry chemical, or alcohol-resistant foam for extinction.

Storage

- P403 + P233 Store in a well-ventilated place. Keep container tightly closed.

2.3 Other hazards

This substance is not considered to be persistent, bioaccumulating nor toxic (PBT)., This substance is not considered to be very persistent nor very bioaccumulating (vPvB).

Poisons Schedule (Aust) 6

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Substances

- Synonyms : Methyl alcohol
- Formula : CH₄O Molecular
- Weight : 32.04 g/mol
- CAS-No. : 67-56-1
- EC-No. : 200-659-6

Chemical Name:	Synonyms	Concentration:
Methanol	-----	100%

For the full text of the H-Statements mentioned in this Section, see Section 16.



SECTION 4: FIRST AID MEASURES

If poisoning occurs, contact a doctor or Poisons Information Centre.

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

- Swallowed:** Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt, or waistband.
- Eyes:** Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician.
- Skin:** Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Get medical attention. If necessary, call a poison center or physician. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Inhaled:** Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt, or waistband.

First Aid Facilities: First aid kits, safety showers, eye wash stations

Most important symptoms/effects, acute and delayed

Potential acute health effects

- Inhalation** : Toxic if inhaled. May cause respiratory irritation.
Ingestion : Toxic if swallowed.
Skin contact : Toxic in contact with skin.
Eye contact : Causes serious eye irritation.

Over-exposure signs/symptoms

- Inhalation** : Adverse symptoms may include the following:
respiratory tract irritation
coughing
Ingestion : No specific data.
Skin : No specific data.
Eyes : Adverse symptoms may include the following:
pain or irritation
watering
redness

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

Specific treatments	:	No specific treatment.
Notes to physician	:	Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.
Protection of first aid personnel	:	No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

SECTION 5: FIRE FIGHTING MEASURES

Specific hazards arising from the chemical: Highly flammable liquid and vapor. In a fire or if heated, a pressure increase will occur and the container may burst, with the risk of a subsequent explosion. The vapor/gas is heavier than air and will spread along the ground. Vapors may accumulate in low or confined areas or travel a considerable distance to a source of ignition and flash back. Runoff to sewer may create fire or explosion hazard.

Suitable extinguishing media: Use dry chemical, CO₂, water spray (fog) or foam.

Hazards from combustion products: Decomposition products may include the following materials: carbon dioxide carbon monoxide

Special protective equipment for fire-fighters: Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

HAZCHEM Code: 2WE

SECTION 6: ACCIDENTAL RELEASE MEASURES

Emergency Procedure: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil, or air).

For emergency responders: If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Methods and material for containment and cleaning up:

Small spills: Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor.

Large spills: Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements, or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g., sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13 of SDS). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 of SDS for emergency contact information and section 13 of SDS for waste disposal.

SECTION 7: HANDLING AND STORAGE

Storage including incompatibilities: Store in accordance with local regulations. Store in a segregated and approved area. Store in original container protected from direct sunlight in a dry, cool, and well-ventilated area, away from incompatible materials (see section 10 of SDS) and food and drink. Store locked up. Eliminate all ignition sources. Separate from oxidizing materials. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Handling: Put on appropriate personal protective equipment (see section 8 of SDS). Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame, or any other ignition source. Use explosion-proof electrical (ventilating, lighting, and material handling) equipment. Use only non-sparking tools. Take precautionary measures against electrostatic discharges. Empty containers retain product residue and can be hazardous. Do not reuse container. Eating, drinking, and smoking should be prohibited in areas where this material is handled, stored, and processed. Workers should wash hands and face before eating, drinking, and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards:

National Occupational Exposure Standard (NES) Australian Safety & Compensation Council, ASCC (formerly NOHSC)

Component	CAS-No.	Value	Control parameters	Basis
Methanol	67-56-1	STEL	250 ppm 328 mg/m3	Australia. Workplace Exposure Standards
	Remarks	Skin absorption ACGIH is the documentation source		
		TWA	200 ppm 262 mg/m3	Australia. Workplace Exposure Standards
		Skin absorption ACGIH is the documentation source		

Notes:

All occupational exposures to atmospheric contaminants should be kept to as low a level as is workable (practicable) and in all cases to below the National Standard. These Exposure Standards are guides to be used in the control of occupational health hazards. 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. TWA (Time Weighted Average): 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 of, nor cause undue discomfort to, nearly all workers. STEL (Short Term Exposure Limit): the average airborne concentration over a 15-minute period that should not be exceeded at any time during a normal eight-hour workday.
N/A

Biological Limit Values: ENGINEERING CONTROLS

Ventilation:

Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels. Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits. The engineering controls also need to keep gas, vapor, or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Special Consideration for Repair &/or Maintenance of Contaminated Equipment:

Empty containers retain 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. Vapour is heavier than air – prevent concentration in hollows or sumps. Do not enter confined spaces where vapour may have collected. Keep containers closed when not in use.

PERSONAL PROTECTION

Personal Protection

Hygiene matters:

Wash hands, forearms, and face thoroughly after handling chemical products, before eating, smoking, and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Respiratory protection:

Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Hand Protection:

Chemical-resistant, impervious gloves complying with an approved standard should be always worn when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Eye protection:

Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases, or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection:

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. When there is a risk of ignition from static electricity, wear anti-static protective clothing. For the greatest protection from static discharges, clothing should include anti-static overalls, boots, and gloves.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Mobile clear colourless liquid
Odour:	Characteristic
pH, at stated concentration:	N/A
Vapour pressure:	Approx. 125 hPa @ 20 °C (68 °F)
Vapour Density:	1.1 Air=1
Boiling Point/range (°C):	Typically, 64.4-65 deg C
Melting Point (°C):	-98 deg C
Specific Gravity (H₂O = 1):	0.790-0.80 (20°C)

FLAMMABLE MATERIALS

- Flash Point:** 6°C
 - Flash Point Method:** Closed cup
 - Flammable (Explosive) Limit - Upper:** 36%
 - Flammable (Explosive) Limit – Lower:** 5.5%
 - Auto ignition Temperature:** 440°C
- ADDITIONAL PROPERTIES**
- Volatile Organic Compounds Content (VOC)** (as specified by the Green Building Council of Australia) 100%

SECTION 10: STABILITY AND REACTIVITY

Chemical stability

Stable under normal conditions of storage and use, hazardous reactions will not occur.

Possibility of hazardous reactions

no data available

Conditions to avoid

Avoid all possible sources of ignition (spark or flame). Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. Do not allow vapour to accumulate in low or confined areas.

Incompatible materials

Reactive or incompatible with the following materials: oxidizing materials

Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: TOXICOLOGICAL INFORMATION

Health effects information is based on reported effects in use from overseas and Australian reports.

Toxicological Data:

Information on toxicological effects

Information on likely routes of exposure

- Inhalation : Toxic if inhaled. May cause respiratory irritation.
- Ingestion : Toxic if swallowed.
- Skin contact : Toxic in contact with skin.
- Eye contact : Causes serious eye irritation.

Symptoms related to the physical, chemical, and toxicological characteristics

- Inhalation : Adverse symptoms may include the following: respiratory tract irritation coughing
- Ingestion : No specific data.
- Skin contact : No specific data.
- Eye contact : Adverse symptoms may include the following: pain or irritation watering redness

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Methanol				
	LD50 Oral	Rat	5,628 mg/kg	-

Conclusion/Summary : Not available

Product/ingredient name	Result	Species	Dose	Exposure
Methanol				
	LD50 Oral	Rat	5,628 mg/kg	-

Conclusion/Summary : Not available

Irritation/Corrosion

Conclusion/Summary

Skin : Not available
 Eyes : Not available
 Respiratory : Not available

Sensitization

Conclusion/Summary

Skin : Not available
 Respiratory : Not available

Potential chronic health effects

General : May cause damage to organs through prolonged or repeated exposure.
 Carcinogenicity : No known significant effects or critical hazards.
 Mutagenicity : No known significant effects or critical hazards.
 Teratogenicity : No known significant effects or critical hazards.
 Developmental effects : No known significant effects or critical hazards.
 Fertility effects : No known significant effects or critical hazards.

Chronic toxicity

Conclusion/Summary : Not available

Carcinogenicity

Conclusion/Summary : Not available

Mutagenicity

Conclusion/Summary : Not available

Teratogenicity

Conclusion/Summary : Not available

Reproductive toxicity

Conclusion/Summary : Not available

Specific target organ toxicity (single exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Methanol	Category 3 Category 1 Category 2 Category 3 Category 1 Category 2		Respiratory tract irritation central nervous system (CNS) optic nerve Respiratory tract irritation central nervous system (CNS) optic nerve

Specific target organ toxicity (repeated exposure)

Product/ingredient name	Category	Route of exposure	Target organs
Methanol	Category 2		kidneys liver gastrointestinal tract skin respiratory tract kidneys liver gastrointestinal tract skin respiratory tract

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	100.2 mg/kg
Route	ATE value
Dermal	300.5 mg/kg
Route	ATE value
Inhalation (vapors)	3.005 mg/l

Other information : Not available

SECTION 12: ECOLOGICAL INFORMATION

Aquatic and terrestrial toxicity

Product/ingredient name	Result	Species	Exposure
Methanol			
	Acute EC50 13,000 mg/l Fresh water	Fish - Rainbow	4 d
		trout, Donaldson trout	

Conclusion Summary: Not available

Persistence/degradability

Conclusion/Summary : Not available

Bioaccumulative potential

Product/ingredient name	LogPow	BCF	Potential
Methanol	-0.77	-	low

Mobility in soil

Soil/water partition coefficient (KOC): Not available

Other adverse effects : No known significant effects or critical hazards.

SECTION 13: DIPOSAL CONSIDERATIONS

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions, and any by-products should always comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Vapour from product residues may create a highly flammable or explosive atmosphere inside the container. Do not cut, weld or grind used containers unless they have been cleaned thoroughly internally. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: TRANSPORT INFORMATION

UN number		
ADR/RID: 1230	IMDG: 1230	IATA-DGR: 1230
UN proper shipping name		
ADR/RID: METHANOL	IMDG:	
METHANOL	IATA-DGR:	
Methanol		
Transport hazard class(es)		
ADR/RID: 3 (6.1)	IMDG: 3 (6.1)	IATA-DGR: 3 (6.1)
Packaging group		
ADR/RID: II	IMDG: II	IATA-DGR: II
Environmental hazards		
ADR/RID: no	IMDG Marine pollutant: no	IATA-DGR: no
Special precautions for user		
no data available		

SECTION 15: REGULATORY INFORMATION

Poisons Schedule (Aust):	6
EPG	16
AICS Name	Methanol
NZ Toxic substance	3
HSNO Hazard Classification	3.1B 6.1D 6.4A 6.8B 6.9A 9.3C
ERMA Approval code	HSR0011 86

SECTION 16: OTHER INFORMATION

For further information on this product, please contact:

Powerplus Racing Fuels
ABN 72682013172
Level 1/ 92 Railway St S
Altona, VIC 3018
AUSTRALIA
Ph: +61 3 8398 0827

ADDITIONAL INFORMATION

Australian Standards References:

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 to 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 Liquids.
AS 2161	Industrial Safety Gloves and Mittens (excluding electrical and medical gloves)
AS 2380	Electrical equipment for explosive atmospheres – Explosion Protection Techniques (Parts 1 to 9).
AS 3000	Electrical installations (known as the Australian/New Zealand Wiring Rules).

Other References:

NOHSC:2011(2003)	National Code of Practice for the Preparation of Safety Data Sheets 2nd Edition, April 2003, National Occupational Health, and Safety Commission.
NOHSC; 2012 (1994)	National Code of Practice for the Labelling of Workplace Substances, March 1994, Australian Government Publishing Service, Canberra.
NES	National Occupational Exposure Standards for workplace Atmospheric Contaminants (NES) Australian Safety and Compensation Council, ASCC (Formerly NOHSC) 1995 as amended.
ADG Code 6th Edition	Australian Dangerous Goods Code 6th Edition

AUTHORISATION

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REV. 2

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