

Material Safety Data Sheet

Powerplus Racing Fuel Methanol

Official Powerplus Document 2014 Edition



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Section 01: **Identification of Material and Supplier**

Product Name	Powerplus Racing Fuel Racing Methanol
Other Names	Methyl Alcohol. Carbino.; Methanol.
Product Codes/Trade Names	N/A
Recommended Use	Manufacture of formaldehyde, acetic acid and dimethyl terephthalate, chemical synthesis (methyl amines, methyl chloride, methyl methacrylate), antifreeze; solvent for nitrocellulose, ethylcellulose, polyvinyl butyral, shellac, rosin, manila resin, dyes; nenaturant for ethanol; dehydrator for natural gas; fuel for utility plants (methyl fuel); feedstock for manufacture of synthetic proteins by continuous fermentation; source of hydrogen for fuel cells; home-heating-oil extender.
Applicable In:	Australia
Supplier	Powerplus
Address	118 Swann Drive, Derrimut Victoria 3030
Telephone	+61 3 93690220
Email Address	info@acbgroup.com.au
Facsimile	+61 3 93690883
Emergency Phone Number	000 Fire Brigade and Police (Available in Australia only).
Poisons Information Centre	Poisons Information Centre: 13 11 26 (Available in Australia only).

This Material Safety Data Sheet (MSDS) 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 MSDS by any other person or organization. The Supplier will issue a new MSDS when there is a change in product specifications and/or ASCC standards, codes, guidelines, or Regulations.

Section 02: **Hazard Identification**

Hazards Identification	HAZARDOUS SUBSTANCE. DANGEROUS GOODS. Hazard classification according to the criteria of NOHSC. Dangerous goods classification according to the Australia Dangerous Goods Code.
Risk Phrase	
R11	Highly flammable
R41	Risk of serious damage to eyes
R23/24/25	Toxic by inhalation, in contact with skin & if swallowed
R39/23/24/25	Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed



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Safety Phrases

S7	Keep container tightly closed
S7/9	Keep container tightly closed and in a well-ventilated place
S16	In case of fire and/or explosion do not breathe fumes
S20	When using do not eat or drink
S24	Avoid contact with skin
S29	Do not empty into drains
S33	Take precautionary measures against static discharges
S36/37	Wear suitable protective clothing and gloves
S38	In case of insufficient ventilation wear suitable respiratory equipment
S43:B	In case of fire use sand, earth, chemical powder or alcohol type foam
S45	In case of accident or if you feel unwell seek medical advice immediately (show label where possible)
S1/2	Keep locked up and out of the reach of children

Section 03: **Composition/Information on Ingredients**

Chemical Name	Synonyms	Proportion	CAS Number:
Methanol	-	100%	64-17-5

Section 04: **First Aid Measures**

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

Swallowed

Immediately rinse mouth with water. If swallowed, do NOT induce vomiting. Give a glass of water. Keep at rest. Seek immediate medical attention.

Eyes

If in eyes, hold eyelids apart and flush the eye continuously with running water. Continue flushing until advised to stop by the Poisons Information Centre or a doctor, or for at least 15 minutes. In all cases of eye contamination, it is a sensible precaution to seek medical advice.

Skin

If skin or hair contact occurs, immediately remove any contaminated clothing and flush skin and hair with running water. Continue to flush with water until advised to stop by the Poisons Information Centre or a doctor



Inhaled

Using proper respiratory protection, remove victim from exposure to fresh air - avoid becoming a casualty. Remove contaminated clothing and loosen remaining clothing. Allow patient to assume most comfortable position and keep warm and at rest. If patient finds breathing difficult, and develops a bluish discoloration of the skin, ensure airways are clear, and have qualified person give oxygen through a face mask. Seek immediate medical advice.

First Aid Facilities

First aid kits, safety showers, eye wash stations.

Advice to Doctor

Treat symptomatically based on judgement of doctor and individual reactions of patient. Watch for toxic effects which may be delayed. Metabolic acidosis may occur up to 12 hours after ingestion. Central nervous system depression and acidosis from methanol metabolites, including formaldehyde liver function and optic nerve, and other effects should be treated symptomatically. Administration of ethanol reduces toxic effects by blocking the metabolic route to formaldehyde/formic acid production in the body.

Aggravated medical conditions caused by exposure
Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed. Methanol primarily affects the central nervous system, with symptoms of headache, nausea, vomiting and dizziness. Damage to the optic nerves may occur with chronic or high level exposure, causing visual problems and blindness. Chronic exposure to concentrations greater than 1000ppm can result in permanent blindness. Experimental teratogen.

Section 05: Fire Fighting Measures

Flammability

Extremely flammable liquid - Explosive Vapour.

Suitable extinguishing media

In case of fire, appropriate extinguishing media include water fog, if unavailable use fine water spray, foam, or dry agent such as carbon dioxide or dry chemical powder. Either allow fire to burn under controlled conditions or extinguish with alcohol type foam or dry chemical. Try to cover liquid spills with foam. Spill fires may be extinguished by flooding with large amounts of water. Use water spray to cool fire exposed surfaces and to protect personnel. If a leak or a spill has not ignited, use water spray to disperse the vapours and to protect personnel trying to stop a leak.

Hazards from combustion products

Highly flammable liquid - Explosive vapour. Vapours may form explosive mixtures with air.



Vapour may travel a considerable distance to source of ignition and flash back. Incompatible with oxidising agents, inorganic acids, aldehydes, alkylene oxides, halogens, acid anhydrides, monomers, polymerisable esters, acids, alkalis, and ignition sources. Heating can cause expansion or decomposition of the material, which can lead to the containers exploding. May evolve toxic gases when heated to decomposition.

Special protective precautions and equipment for fire fighters

Fire fighters should wear a positive-pressure self-contained breathing apparatus (SCBA) and protective fire fighting clothing (includes fire fighting helmet, coat, trousers, boots and gloves) or chemical splash suit. Clear fire area of all non-emergency personnel. Evacuate area and contact emergency services. Shut off "fuel" to fire. If safe to do so, remove containers from path of fire. Keep containers cool with water spray. Remain upwind and notify those downwind of fire and explosion hazard. Eliminate all ignition sources. Keep out of low areas. Do NOT allow fire fighting water to reach waterways, drains or sewers. Store fire fighting water for treatment.

HAZCHEM Code

2WE

Section 06: **Accidental Release Measures**

Emergency Procedure

Shut off all possible sources of ignition. Personnel involved in the clean up should wear full protective clothing as listed in section 8. Avoid accidents, clean up immediately. Evacuate all unnecessary personnel. Increase ventilation. Avoid walking through spilled product as it is slippery when spilt. Stop leak if safe to do so. Warn occupants in downwind areas of fire and explosion hazard. Keep public away. Shut off source if safe to do so without hazard. Use water spray to disperse vapour. Do NOT let product reach drains or water- ways. If product does enter a waterway, advise the Environmental Protection Authority or your local Waste Management. Use clean, non-sparking tools and equipment. Water spray may be used to cool and disperse vapours, protect personnel, and dilute spills to form non-flammable mixtures. Extreme hazard: Leaks of gas or spills of liquid can readily form flammable mixtures at temperatures at or above the flash point.

Containment Procedure:

Soak up spilled product using absorbent non-combustible material such as sand or soil. Avoid using sawdust or cellulose. Dilute contained spill with water.



Recover by pumping (use an explosion proof or hand pump) or with suitable absorbent. If liquid is too viscous for pumping, scrape up with shovels or pails and place in suitable containers for prompt disposal as hazardous waste. Wash down area with excess water. WATER SPILL: Eliminate sources of ignition. Warn occupants and shipping in downwind areas of fire and explosion hazard and request for them to stay clear. Hose over spill area to effect dilution of water soluble material. Consult an expert on disposal of any recovered material and ensure conformity to local disposal regulations.

Section 07: **Handling and Storage**

Handling

Ensure an eye bath and safety shower are available and ready for use. Observe good personal hygiene practices and recommended procedures. Wash thoroughly after handling. Take precautionary measures against static discharges by bonding and grounding equipment. Product can accumulate static charges which can cause an incendiary electrical discharge. Eliminate all ignition sources. Earth containers when dispensing fluids. Handle containers with care. Open slowly in order to control possible pressure release. Do NOT handle, store or open near an open flame, source of heat or sources of ignition. Do NOT pressurise, cut, heat, or weld containers. Empty product containers may contain product residue. Do NOT reuse empty containers without commercial cleaning or reconditioning. Container remains hazardous when empty. Continue to observe all precautions. Use spark-proof tools and explosion-proof equipment. Avoid contact with eyes, skin, and clothing. Do not inhale vapour/fumes. Avoid prolonged or repeated exposure. Prevent any possibility of contact with this product. Remove contaminated clothing and wash before reuse.

Storage (including Incompatibles)

Store in a cool, dry, well-ventilated area. Keep containers tightly closed when not in use. Inspect regularly for deficiencies such as damage or leaks. Protect against physical damage. Store away from incompatible materials as listed in section 10. Protect from direct sunlight, heat, and ignition sources. Keep away from foodstuffs, and keep out of the reach of children. Ensure containers are adequately labelled. Large storage areas should have appropriate fire protection. Storage, transport and loading/unloading temperature: Ambient. Storage/transport pressure: Atmospheric. Product may present electrostatic accumulation hazard: use proper grounding procedures. Product is hygroscopic.



This product has a UN classification of 1230, Dangerous Goods Class 3 (flammable), and Subsidiary Risk 6.1 (Toxic) according to the Australian Code for the Transport of Dangerous Goods By Road by Road and Rail Container Type.

Packaging must comply with requirements of Hazardous Substances (Packaging) Regulations 2001. Store in original packaging as approved by manufacturer. USUAL SHIPPING CONTAINERS: Drums, Rail wagons MATERIALS AND COATINGS - SUITABLE: Iron, Mild steel, Stainless steel. MATERIALS AND COATINGS - UNSUITABLE: Lead, Magnesium, Polystyrene, Perspex, Leather, PVC, Zinc Coatings, Synthetic Resins. Compatibility with plastic materials can vary; we therefore recommend that compatibility is tested prior to use.

Section 08: **Exposure Controls/Personal Protection**

Exposure Standards

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

The following exposure standard has been established by The Australian Safety and Compensation Council (ASCC); Methanol CAS 67-56-1: TWA = 200ppm (262mg/m³) STEL = 250ppm (328mg/m³) 'Sk' Notice. NOTE: The exposure value at the TWA is the average airborne concentration of a particular substance when calculated over a normal 8 hour working day for a 5 day working week. 'Sk' Notice - Absorption through the skin may be a significant source of exposure. The exposure standard is invalidated if such contact should occur. 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.

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 work day.

Biological Limit Values

N/A

Ventilation

Where an inhalation risk exists, mechanical explosion proof extraction ventilation is recommended. Flammable/explosive vapours may accumulate poorly ventilated areas. Vapours are heavier than air and may travel some distance to an ignition source and flash back. Do NOT enter confined spaces where vapour may have collected. Maintain vapour levels below the recommended exposure standard. Keep containers closed when not in use.

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 Hygiene Body Protection

RESPIRATOR: Wear an approved respirator with suitable Type 'A' filter for organic gases and vapours. At high vapour levels, wear an Air-line respirator (AS1715/1716). EYES: Chemical goggles to prevent splashing in the eyes (AS1336/1337). HANDS: Wear butyl, viton, neoprene, or PVC protective gloves (AS2161). CLOTHING: Chemical-resistant coveralls, PVC splash apron and safety footwear (AS3765/2210).

Section 09: Physical and Chemical Properties

Appearance	Mobile clear colourless liquid
Odour	Faint Odour - Similar to Ethyl Alcohol
pH, at stated concentration	N/A
Vapour pressure	12.8 kPa (25°C) mm Hg (1 atmosphere)
Vapour Density	1.11
Boiling Point (°C)	64.5 deg C



Freezing/Melting Point (°C)	-97.7 deg C
Solubility	Soluble (100.00 wt%)
Specific Gravity (H2O = 1)	0.798 (15°C)720 to 775 kg/m3 at 15°C.
Flash Point	10°C
Flash Point Method	Closed cup
Flammable (Explosive)	
Limit - Upper	36.5%
Flammable (Explosive)	
Limit - Lower	6%.
Auto ignition Temperature	464°C
Evaporation Rate	0.00119 vol/vol/C
Volatile Organic Compounds	(As specified by the Green Building Council of Australia)
Content (VOC)	100%
% Volatiles	No Data Available

Section 10: **Stability and Reactivity**

Chemical Stability	Product is stable under normal conditions of use, storage and temperature. Highly Flammable Liquid. Hygroscopic (absorbs moisture from the air).
Incompatible Materials	Incompatible with oxidising agents, inorganic acids, aldehydes, alkylene oxides, halogens, acid anhydrides, monomers, polymerisable esters, acids, alkalis, and ignition sources.
Conditions to Avoid	Avoid heat, sparks, flames, direct sunlight, moisture, freezing, static accumulation/charges, mechanical shock, high temperatures, and other high energy ignition sources. Also avoid enclosed spaces.
Hazardous Decomposition	May evolve toxic gases when heated to decomposition. These may include carbon oxides, hydrocarbons, and formaldehyde.
Products Hazardous Reactions	Hazardous Polymerisation will not occur.

Section 11: **Toxicological Information**

Toxicological Data	Oral LD50 Rat : 5600mg/Kg Oral LD50 Rat : 5628mg/Kg Dermal LD50 Rabbit : 15800mg/Kg Inhalation LC50 Rat : 64000ppm/4hr Inhalation LC50 Mouse : 50g/m3/2hr SKIN : Moderate Irritant (Rabbit) EYES :Moderate Irritant (Rabbit)
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Effects Acute
Swallowed

Toxic if swallowed. Ingestion can result in nausea, vomiting, severe abdominal pain, back pain, central nervous system effects including optic nerve damage (hyperaemia etc), convulsions, blindness, loss of consciousness and ultimately proceed to coma and death. If the victim is showing signs of CNS depression (like those of drunkenness) there is greater likelihood of the patient breathing in vomit and causing damage to the lungs. Death may occur if large amounts are ingested. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause bronchopneumonia or pulmonary edema.ed.

Eyes

Severely irritating to eyes. May cause watering of the eyes, stinging or blurred vision and sensitivity to light. If not removed promptly, will injure the eye tissue, which may result in permanent damage.

Skin

Toxic in contact with skin. Contact with skin may result in irritation. Will have a degreasing effect on the skin. Can be absorbed through the skin with resultant adverse effects. Contact with the skin will result in defatting, leading to moderate irritation, discomfort and dermatitis. Repeated and prolonged skin contact may lead to irritant contact dermatitis. Can be absorbed through the skin in harmful amounts. Methyl alcohol may be absorbed which can contribute to damage of the optic nerve resulting in permanent visual changes, loss of vision or total blindness.

Inhaled

Toxic by inhalation. The vapour is irritating to the mucous membranes and respiratory tract. Inhalation of vapour can cause headache, nausea, central nervous system effects, dizziness, drowsiness, and visual impairment, possibly blindness. Central nervous system depression may lead to loss of co-ordination, impaired judgement and if exposure is prolonged, unconsciousness. Continued exposure can result in health effects as per ingestion.

Effects Chronic

No data available for long term exposure.

Section 12: **Ecological Information**

Eco-toxicity

No data available



Persistence and Degradability

This product is expected to biodegrade rapidly and be “readily biodegradable” according to OECD guidelines. If released into the atmosphere methanol degrades via reaction with photochemically produced hydroxyl radicals. It is expected to biodegrade in both soil and water. This substance is expected to be removed in waste water treatment facility.

Mobility

If spilt on soil, it is expected to be susceptible to significant leaching, as well as rapid evaporation from dry surfaces is likely to occur. This product is water soluble and is expected to remain primarily in water.

Environmental Fate (Exposure)

Avoid contaminating waterways, drains and sewers.

Bioaccumulation

No information available on bioaccumulation for this product.

Section 13: **Disposal Considerations**

Dispose of in accordance with all local, state and federal regulations. All empty packaging should be disposed of in accordance with Local, State, and Federal Regulations or recycled/reconditioned at an approved facility. Contact a specialist disposal company or the local waste regulator for advice. This should be done in accordance with ‘The Hazardous Waste Act’. Advise flammable nature. This product is NOT suitable for disposal by either landfill or via municipal sewers, drains, natural streams or rivers. This product is ashless and can be burned directly in appropriate equipment. For large volumes, atomise into incinerator (mixing with more flammable solvent if required) or recycle by gravimetric separation, distilling, and reusing.

Section 14: **Transport Information**

Proper Shipping Name	METHANOL
UN number	1230
DG Class	3
Subsidiary Risk 1	6.1 Toxic substance
Packaging Group	II
HAZCHEM code	2WE
Marine Pollutant	No
Special Precautions	Refer to incompatibilities in section 7 and stability and reactivity information in section 10.
Additional transport requirements	Nil



Section 15: **Regulatory Information**

Poisons Schedule	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	HSR001186

Section 16: **Other Information**

Contact	ACB Group (ABN 79 724 186 134) 118 Swann Drive, Derrimut Victoria-3030, Australia. Phone: +61 3 93690220 Fax: +61 3 93690883
AS1020 AS1076	The Control of undesirable static electricity. 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 AS/NZS 1715	Recommended Practices for Occupational Eye Protection Selection, Use and Maintenance of Respiratory Protective Devices
AS/NZS 1716 AS 1940	Respiratory Protective Devices The Storage and Handling of Flammable and Combustible Liquids.
AS 2161	Industrial Safety Gloves and Mittens (excluding electrical and medical gloves)
AS2380	Electrical equipment for explosive atmospheres – Explosion Protection Techniques (Parts 1 to 9).
AS3000	Electrical installations (known as the Australian/New Zealand Wiring Rules).
NOHSC:2011(2003)	National Code of Practice for the Preparation of Material 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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