



MATERIAL SAFETY DATA SHEET

Powerplus Fuel E98

SECTION 1: IDENTIFICATION OF MATERIAL AND SUPPLIER

Product Name:	Powerplus Fuel
Other Names:	Powerplus E98
Product Codes/Trade Names:	N/A
Recommended Use:	Racing fuel
Applicable In:	Australia ACB Group (ABN 79 724 186 134)
Supplier:	Powerplus Fuel
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:	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 2: HAZARD IDENTIFICATION

GHS INFORMATION

Classification:

Flammable Liquids, Category 2

Eye Irritation, Category 2A

Germ Cell Mutagenicity, Category 1B

Carcinogenicity, Category 1B

Specific Target Organ Toxicity (Single Exposure), Category 3 - Narcotic Effects

Aspiration Hazard, Category 1

Label Elements

Hazard Pictogram(s):



Signal Word: Danger

Hazard**Statements:**

Highly flammable liquid and vapour.
Causes serious eye irritation. May cause genetic defects.
May cause cancer.
May cause drowsiness or dizziness.
May be fatal if swallowed and enters airways.

Precautionary Statements

Prevention: Obtain special instructions before use.

Do not handle until all safety precautions have been read and understood.
Keep away from heat, sparks, open flames, and hot surfaces. – No smoking.
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical, ventilating, and lighting equipment. Use only non-sparking tools.
Take precautionary measures against static discharge.
Avoid breathing mist, vapours, or spray.
Wash thoroughly after handling.
Use only outdoors or in a well-ventilated area.
Wear protective gloves, protective clothing and eye protection.

Response: If swallowed: Immediately call a poison center or doctor.
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a poison center or doctor if you feel unwell.
Do NOT induce vomiting.
If eye irritation persists: Get medical advice/attention.
In case of fire: Use dry chemical, CO₂, water spray or alcohol-resistant foam to extinguish.

Storage: Store in a well-ventilated place. Keep container tightly closed.
Keep cool.
Store locked up.

Disposal: Dispose of contents/container in accordance with applicable regional, national and local laws and regulations.

Hazards Not Otherwise Classified: Not applicable.

Ingredients with Unknown Toxicity: None.

This material is considered hazardous by the OSHA Hazard Communication Standard, (29 CFR 1910.1200).

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Preparation Description

Complex mixture of hydrocarbons consisting of paraffins, cycloparaffins, aromatic and olefinic hydrocarbons (including benzene at 1.0%v/v maximum), with carbon numbers predominantly in the C4 to C12 range. Contains oxygenated hydrocarbons, including ethanol or other alcohols. May also contain several additives at <0.1% v/v each. Dyes and markers can be used to indicate tax status and prevent fraud.

Chemical Name:	Synonyms	Proportion:	CAS Number:
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Gasoline	-----	10-20%	8006-61-9
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Ethanol	-----	75-95%	64-17-5
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SECTION 4: FIRST AID MEASURES

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

Swallowed:

If swallowed: Do NOT induce vomiting. Immediately call a poison center or doctor. If vomiting occurs naturally, have victim lean forward to reduce the risk of aspiration. Never give anything by mouth to an unconscious person.

If breathing or the heart stops, trained personnel should immediately begin artificial respiration (AR) or cardiopulmonary resuscitation (CPR) respectively. Get medical attention immediately.

Acute and delayed symptoms and effects: May be fatal if swallowed and enters airways. May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Eyes:

If in eyes: Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Acute and delayed symptoms and effects: Causes serious eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision. Ethanol may cause painful sensitization to light, chemical conjunctivitis and corneal damage.

Skin:

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Call a poison center or doctor if you feel unwell.

Acute and delayed symptoms and effects: May cause skin irritation. Signs/symptoms may include localized redness, swelling, and itching.

Inhaled:

If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison center or doctor if you feel unwell. If breathing or the heart stops, trained personnel should immediately begin artificial respiration (AR) or cardiopulmonary resuscitation (CPR) respectively. Get medical attention immediately.

Acute and delayed symptoms and effects: May cause drowsiness or dizziness. May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Excessive inhalation may cause headache, dizziness, confusion, loss of appetite and/or loss of consciousness.

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

Advice to Doctor: In case of accident or if you feel unwell, seek medical advice immediately (show the label or SDS where possible).

SECTION 5: FIRE FIGHTING MEASURES

Flammability: Highly flammable liquid and vapor. Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapor explosion hazard indoors, outdoors or in sewers. Runoff to sewer may create fire or explosion hazard. Containers may explode when heated. Liquid is lighter than water.

If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.

Fire involving Tanks or Car/Trailer Loads: Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Cool containers with flooding quantities of water until well after fire is out. Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank. ALWAYS stay away from tanks engulfed in fire. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn.

Suitable extinguishing media: Small Fire: Dry chemical, CO₂, water spray or alcohol-Resistant foam.

Large Fire: Water spray, fog or alcohol-resistant foam. Move containers from fire area if you can do it without risk.

Hazards from combustion products:

Combustion products include oxides of carbon.

Special protective precautions and equipment for fire fighters:

Inhalation or contact with material may irritate or burn skin and eyes. Fire may produce irritating, corrosive and/or toxic gases. Vapors may cause dizziness or suffocation. Runoff from fire control may cause pollution. Wear positive pressure self-contained breathing apparatus (SCBA). Structural firefighters' protective clothing will only provide limited protection.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Emergency Procedure: As an immediate precautionary measure, isolate spill or leak area for at least 50 meters (150 feet) in all directions. Keep unauthorized personnel away. Stay upwind. Keep out of low areas. Ventilate closed spaces before entering. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). All equipment used when handling the product must be grounded.

Personal Precautions: Do not touch or walk through spilled material. Use personal

protection recommended in Section 8.

Environmental Precautions: Prevent entry into waterways, sewers, basements or confined areas.

Methods for Containment: Stop leak if you can do it without risk. A vapor suppressing foam may be used to reduce vapors.

Methods for Clean-Up: Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Use clean non-sparking tools to collect absorbed material.

Other Information: See Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

Handling: Do not swallow. Avoid breathing mist, vapours, or spray. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat, sparks, open flames, and hot surfaces. – No smoking. Keep container tightly closed.

Storage: Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. See Section 8 for information on Personal Protective Equipment.

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards: National Occupational Exposure Standard (NES) Australian Safety & Compensation Council, ASCC (formerly NOHSC)
Powerplus fuel E98

Ethanol [CAS No. 64-17-5]

ACGIH: 1000 ppm (TWA); A3 (2008)

OSHA: 1000 ppm

(TWA), 1900 mg/m³ (TWA);

Gasoline [CAS No. 8006-61-9]

ACGIH: 300 ppm (TWA); 500 ppm (STEL); A3 (1990)

OSHA: 300 ppm (TWA); 500 ppm (STEL) [Vacated];

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.

N/A

Biological Limit Values:
ENGINEERING CONTROLS

Ventilation:

Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapour, gas, etc.) below recommended exposure limits. Use explosion-proof electrical, ventilating, and lighting 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 PROTECTIVE EQUIPMENT (PPE)



Personal Hygiene

Body Protection

Minimise all forms of skin contact. In the event of risk from splashing wear e.g. Nitrile, PVC, or neoprene rubber apron. Wear safety shoes or boots which are chemical and petroleum distillate resistant.

Skin Protection:

Select hand gloves tested to a relevant standard (e.g. Europe EN374, US F739). When prolonged or frequent repeated contact occurs, Nitrile gloves may be suitable. (Breakthrough time of > 240 minutes). For incidental contact/splash protection Neoprene or PVC gloves may be suitable. Breakthrough times for gloves varies depending on, e.g. chemical resistance, material thickness, frequency and duration of contact. Selection should also take into account other usage requirements, e.g. dexterity, heat resistance, other chemical substances handled. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended. Wear protective clothing. Flame resistant clothing that meets is recommended in areas where material is stored or handled.

Eye Protection:

Eye Protection

Wear safety glasses or full face shield if splashes are likely to occur.

Respiratory Protection:

Care should be taken to keep exposures below applicable occupational exposure limits. If this cannot be achieved, use of a respirator fitted with an organic vapour cartridge combined with a particulate pre-filter should be considered. Where air-filtering respirators are unsuitable (e.g. where airborne concentrations are high, there is a confined space or a risk of oxygen deficiency) use appropriate positive pressure breathing apparatus.

Thermal Protection:

None should be needed under normal circumstances.

Smoking & Other Dusts

Smoking must be prohibited in all areas where this product is used - see safety information on flammability.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Mobile clear pale yellow liquid, free of any foreign matter
Odour:	Characteristic
pH, at stated concentration:	N/A
Vapour pressure:	45.3kPa
Vapour Density:	No data available
Boiling Point (°C):	30-205°C
Freezing/Melting Point (°C):	No data available.
Solubility:	Insoluble
Specific Gravity (H₂O = 1):	0.790-0.793 at 15°C.
FLAMMABLE MATERIALS	
<input type="checkbox"/> Flash Point:	-28.90°C
<input type="checkbox"/> Flash Point Method:	No data available
<input type="checkbox"/> Flammable (Explosive) Limit - Upper:	19% maximum.
<input type="checkbox"/> Flammable (Explosive) Limit – Lower:	1.4% minimum.
<input type="checkbox"/> Auto ignition Temperature:	No data available
ADDITIONAL PROPERTIES	
<input type="checkbox"/> Evaporation Rate	No data available.
<input type="checkbox"/> Volatile Organic Compounds Content (VOC)	(as specified by the Green Building Council of Australia) Not Applicable
<input type="checkbox"/> % Volatiles	No data available.

SECTION 10: STABILITY AND REACTIVITY

Reactivity:	Contact with incompatible materials. Sources of ignition. Exposure to heat.
Chemical Stability:	Stable under normal storage conditions.
Possibility of Hazardous Reactions:	None known.
Conditions to Avoid:	Contact with incompatible materials. Sources of ignition. Exposure to heat.
Incompatible Materials:	Acids. Strong oxidizers. Ammonia. Platinum.
Hazardous Decomposition Products:	Not available.

SECTION 11: TOXICOLOGICAL INFORMATION

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

Toxicological Data:

Component Toxicity

Component	CAS No.	LD50 oral	LD50 dermal	LC50
Ethanol	64-17-5	7060 mg/kg (rat)	20000 mg/kg (rabbit)	20000 ppm (rat); 10H
Gasoline	8006-61-9	Not available.	Not available.	300000 mg/m ³ (rat); 5M

Likely Routes of Exposure: Eye contact. Skin contact. Inhalation. Ingestion. Skin absorption.

Target Organs: Skin. Eyes. Gastrointestinal tract. Respiratory system. Blood. Bone marrow. Liver. Kidneys. Central nervous system.

Effects: Acute

Swallowed: May be fatal if swallowed and enters airways. May cause gastrointestinal irritation. Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Eyes: Causes serious eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision. Ethanol may cause painful sensitization to light, chemical conjunctivitis and corneal damage.

Skin: May cause skin irritation. Signs/symptoms may include localized redness, swelling, and itching.

Inhaled: May cause drowsiness or dizziness. May cause respiratory irritation. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain. Excessive inhalation may cause headache, dizziness, confusion, loss of appetite and/or loss of consciousness

Skin Sensitization: Not available.

Respiratory Sensitization: Not available.

Medical Conditions Aggravated By Exposure:

Not available.

Effects: Chronic

Target Organs:

Skin. Eyes. Gastrointestinal tract. Respiratory system. Blood. Cardiovascular system. Bone marrow. Liver. Kidneys. Reproductive system. Central nervous system.

Prolonged or repeated contact may dry skin and cause irritation. High vapour concentrations, generally greater than 10% by volume, may sensitize the heart and lead to lethal cardiac arrhythmias. Prolonged

exposure to Ethanol may cause liver, kidney, and heart damage.

Reports of chronic poisoning with Benzene, Toluene, Ethylbenzene or Xylene describe anemia, decreased blood cell count and bone marrow hypoplasia. Liver and kidney damage may occur. Repeated exposure of the eyes to high concentrations of Xylenes vapour may cause reversible eye damage. Chronic inhalation exposure to xylene causes mid-frequency hearing loss in laboratory animals. Xylene reacts synergistically with n-hexane to enhance hearing loss. Immunodepressive effects have also been reported for Benzene.

May cause cancer. Animal studies with Ethanol have reported the development of tumours. Long-term exposure to Gasoline vapours has caused cancer in laboratory animals. Chronic exposure to benzene has been associated with an increased incidence of leukemia and multiple myeloma (tumour composed of cells of the type normally found in the bone marrow).

Additional Notes

Component	Carcinogenicity ACGIH	IARC	NTP	OSHA	Prop 65
Ethanol	A3	Group 1	Not listed.	OSHA Carcinogen.	Not listed.
Gasoline	A3	Group 2B	Not listed.	OSHA Carcinogen.	Listed.

Mutagenicity: May cause genetic defects. Laboratory experiments with Ethanol have resulted in mutagenic effects.

Reproductive Effects: Ethanol may cause reproductive effects.

Developmental Effects

Teratogenicity: Not available.

Embryotoxicity: Ethanol has been shown to produce fetotoxicity in the embryo or fetus of laboratory animals. Prenatal exposure to ethanol is associated with a distinct pattern of congenital malformations that have collectively been termed the "fetal alcohol syndrome". Other ingredients in the blend have caused adverse fetal effects in laboratory animals. Exposure to Toluene may affect the developing fetus.

Toxicologically Synergistic Materials: Components in Gasoline reacts synergistically with n-hexane to enhance hearing loss.

SECTION 12: ECOLOGICAL INFORMATION

Eco-toxicity:

Ethanol:

Rainbow trout: LC50 = 12900-15300 mg/L, 96 Hr, Flow- through @ 24-24.3°C;

Rainbow trout: LC50 = 11200 mg/L, 24 Hr, Fingerling;

Phytobacterium phosphoreum: EC50 = 34900 mg/L, 5-30 min, Microtox test

Persistence / Degradability: Not available.

Bioaccumulation / Accumulation: Not available.

Mobility in Environment: Not available.

Other Adverse Effects: Not available.

SECTION 13: DIPOSAL CONSIDERATIONS

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

SECTION 14: TRANSPORT INFORMATION

Proper Shipping Name: Ethanol and Gasoline Mixture

UN number: 3475

DG Class: 3

Subsidiary Risk 1: None Allocated

Packaging Group: II

HAZCHEM code: :3YE

Marine Pollutant: No
Special Precautions for User: Refer to incompatibilities in section 7 and stability and reactivity information in section 10.
ADDITIONAL TRANSPORT REQUIREMENTS: Nil

SECTION 15: REGULATORY INFORMATION

Poisons Schedule: S5

SECTION 16: OTHER INFORMATION

For further information on this product, please contact:

ACB Group (ABN 79 724 186 134)
118 Swann Drive, Derrimut Victoria-3030, Australia.
Phone: +61 3 93690220
Fax: +61 3 93690883

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

AUTHORISATION

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END OF MSDS