



MATERIAL SAFETY DATA SHEET

Engine Flush

SECTION 1: IDENTIFICATION OF MATERIAL AND SUPPLIER

Product Name: Engine Flush
Proper Shipping Name: -
Product Codes/Trade Names: N/A
Recommended Use: Engine Flush cleaner
Applicable In: Australia
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

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.

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

Risk Phrases

R 11- Highly flammable.
R 22- Harmful if swallowed.
R36/38 – Irritating to eyes and skin.
R52/53- Harmful to aquatic organisms may cause long-term adverse.
R65- HARMFUL-May cause lung damage if swallowed.
R67 – Vapours may cause drowsiness and dizziness.

Safety Phrases

S16- Keep away from sources of ignition. No smoking.
S23- Do not breathe gas/fumes/vapour/spray
S51- Use only in well ventilated areas.
S09- Keep container in a well ventilated place.
S53- Avoid exposure- obtain special instructions before use.
S29- Do not empty into drains.
S401- To clean the floor and all objects contaminated by this material use water and detergent.
S07- Keep Container tightly closed.
S13- Keep away from food drink and animal feeding stuffs.
S26- In case of contact with eyes rinses with plenty of water and contact Doctor or Poisons Information Centre.
S46- If swallowed IMMEDIATELY contact Doctor or Poisons Information Centre (show this container or label).
S60- This material and its container must be disposed of as hazardous waste.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name:	Synonyms	Proportion %:	CAS Number:
WHITE SPIRIT		>75	8052-41-3
ETHYLENE GLYCOL MONOBUTYL ETHER		< 10	111-76-2
1,2, 4- TRIMETHYL BENZENE		> 6	95-63-6
DIACETONE ALCOHOL		<5	123-42-2
Ingredients determined to be non-hazardous		Balance	

SECTION 4: FIRST AID MEASURES

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

Swallowed: If swallowed, do NOT induce vomiting. If vomiting occurs, lean patient forward or place on the left side (head-down position, if possible) to maintain open airway and prevent aspiration. Avoid giving milk or oils. Avoid giving alcohol. If spontaneous vomiting appears imminent or occurs, hold patient's head down, lower than their hips to help avoid possible aspiration of vomit.

Eyes: If product gets in eyes, wash repeatedly with water while holding eyelids open to remove material.

Skin: Remove contaminated clothing and footwear. Flush exposed area with water and follow by washing with soap if available. .

Inhaled: No first aid measures normally required. If vapors or mists have been inhaled and irritation has developed, remove to fresh air and Observe until recovered. Lay patient down and keep them rested. If irritation becomes painful or persists more than about 30 minutes, seek medical advice.

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

Advice to Doctor: Treat symptomatically. Effects may be delayed. Delayed pulmonary oedema may result.

SECTION 5: FIRE FIGHTING MEASURES

Flammability: Liquid and vapour are highly flammable. Severe fire hazard when exposed to heat, flame and/or oxidizers.

Suitable extinguishing media: If material is involved in a fire use alcohol resistant foam, standard foam or dry agent (carbon dioxide, dry chemical powder)

Hazards from combustion products: Flammable liquid. May form flammable vapour mixtures with air. Flameproof equipment necessary in area where this chemical is being used. Nearby equipment must be earthed. Electrical requirements for work area should be assessed according to AS3000. Vapours may travel a considerable (open flames, pilot lights , furnaces, spark producing switches and electrical equipment etc) must be eliminated both in and near work area.
DO NOT SMOKE.

Special protective precautions and equipment for fire fighters: Alert fire brigade and tell them location and nature of hazard. May be violently or explosively reactive. When any large container (including road and rail tankers) is involved in a fire, consider evacuation by 500 meters in all directions.

HAZCHEM Code: . 3YE

SECTION 6: ACCIDENTAL RELEASE MEASURES

Emergency Procedure: Minor spills – Wear protective equipment to prevent skin and eye contamination. Avoid inhalation of vapors. Wipe up with absorbent (clean rag or paper towels). Collect and seal in properly labelled containers or drums for disposal.
Major spills – Shut off all possible sources of ignition. Clear area of all unprotected personnel. Prevent further leakage or spillage if safe to do so. Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contamination and the inhalation of vapours. Work up wind or increase ventilation. Contain-prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Use spark-free shovel. Collect and seal in properly labelled containers or drums for disposal. If contamination of sewers or waterways has occurred advise local emergency services.

SECTION 7: HANDLING AND STORAGE

Handling & Storage: Handling – Containers even those that have been emptied, may contain explosive vapours. Do not cut, drill, grind, weld or perform similar operations on or near containers. Do not allow clothing wet with material to stay in contact with skin. Electrostatic discharge may be generated during pumping- this may result in fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs.

Container Type - SUITABLE CONTAINER

- Packing as supplied by manufacturer.
- Plastic containers may only be used if approved for flammable liquid.
- For low viscosity materials (i) : Drums and jerry cans must be of the non-removable head type. (ii) : Where a can is to be used as an inner package, the can must have a screwed enclosure.
- For materials with a viscosity of at least 2680 cSt. (23 deg. C).

Incompatibilities: Store away from incompatible materials such as oxidising agents, heat and sources of ignition. Store away from direct sunlight and moisture

SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards: National Occupational Exposure Standard (NES) Australian Safety & Compensation Council, ASCC (formerly NOHSC)
Engine Flush
No exposure standard has been established for this product by the Australian Safety and Compensation Council (ASCC), however, it is recommended that the following are adopted: Petroleum Distillate N.O.S. (set by supplier) White spirits TWA = 790mg/m³ Petrol (gasoline) TWA = 900 mg/m³ Ethylene glycol monobutyl ether TWA = 96.9 mg/m³, 20ppm STEL – 50 ppm, 242 mg/m³ Diacetone alcohol TWA = 50ppm , 238 mg/m³

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:
ENGINEERING CONTROLS

N/A

Ventilation:

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Use a flame proof exhaust ventilation system. Ventilation system should be explosion resistant.

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

No data available.

Personal Hygiene

EYES: Chemical goggles to prevent splashing in the eyes or safety glasses with side shields. (AS1336/1337). HANDS: Butyl rubber or PVC gloves break through time 4hr (AS2161). CLOTHING: Flame-retardant coveralls and anti-static footwear (AS3765/2210). Overalls & PVC Apron.

Respiratory Protection:

RESPIRATOR: Type ANO filter of sufficient capacity.

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:

Clear yellow liquid

pH, at stated concentration:

N/A

Vapour pressure:

No data available.

Relative Vapour Density:

>1

Boiling Point (°C):

No data available.

Freezing/Melting Point (°C):

N/A

Solubility:

Immiscible.

Specific Gravity (H₂O = 1):

0.775-0.815

FLAMMABLE MATERIALS

Flash Point:

➤ 23°C

Flash Point Method:

Not available..

Flammable (Explosive) Limit - Upper:

No data available (as percentage volume in air)

Flammable (Explosive) Limit – Lower:

No data available (as percentage volume in air)

Auto ignition Temperature:

No data available.

ADDITIONAL PROPERTIES

Evaporation Rate

No data available.

Molecular Weight

No data available.

Volatile Organic Compounds Content (VOC)

(as specified by the Green Building Council of Australia) 100%

% Volatiles

No data available.

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability:

Product is stable under recommended conditions of use, storage and temperature. Flammable liquid.

Incompatible Materials:

Incompatible with oxidizing agents, heat and sources of ignition.

Conditions to avoid:

Avoid excessive heat, sparks, open flames, direct sunlight, moisture, freezing, static charges and high temperatures

Hazardous Decomposition Products:

This product may generate carbon dioxide, carbon monoxide, and complex hydrocarbons when involved in a fire.

Hazardous Reactions:

No data available.

SECTION 11: TOXICOLOGICAL INFORMATION

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

Effects

White spirits

TOXICITY IRRITATION

Inhalation (human) TClO: 600 mg/m³/8h Nil Reported
Oral (rat) LD50: >5000 mg/kg Eye (human): 470 ppm/15m
Inhalation (rat) LC50: >5500 mg/m³/4h

IRRITATION

Nil Reported
Eye (human): 470 ppm/15m
Eye (rabbit): 500 mg/24h Moderate

Ethylene Glycol Monobutyl Ether

TOXICITY

Oral (rat) LD50: 470 mg/kg
Dermal (rabbit) LD50: 220 mg/kg
Inhalation (human) TClO: 100 ppm
Inhalation (human) TClO: 195 ppm/8h * [Union Carbide]
Inhalation (rat- male) LC50: 486 ppm *

IRRITATION

Skin (rabbit): 500 mg, open; Mild
Eye (rabbit): 100 mg/24h- Moderate
Eye (rabbit): 100 mg SEVERE

1,2,4- Trimethyl benzene

TOXICITY

Inhalation (rat) LC50: 18000 mg/m³/4h

IRRITATION

Nil Reported

Diacetone Alcohol

TOXICITY

Oral (rat) LD50: 4000 mg/kg
Dermal (rabbit) LD50: 13500 mg/kg
Inhalation (human) TClO: 400 ppm resp.effect
Inhalation(human)TClO:100 ppm Irritant
*

IRRITATION

Skin (rabbit): 500 mg Open Mild
Eye (human): 100 ppm/15 mins.

Eye (rabbit): 5 mg SEVERE

Acute Ingestion: Harmful if swallowed. May cause lung damaged if swallowed. .

Acute Eyes: May be irritating to eyes.

Acute Skin: Irritating to skin.

Acute Inhalation: High concentration of vapors can be harmful in enclosed spaces. Vapors may cause dizziness or suffocation. Vapors may cause drowsiness and dizziness.

Chronic No specific data available.

SECTION 12: ECOLOGICAL INFORMATION

Eco-toxicity:	Acute toxicity estimate (based on ingredients): >100mg/L Long term aquatic hazard: Acute toxicity estimate (based on ingredients): >100mg/L
Persistence and Degradability:	No data available.
Mobility:	No data available.
Environmental Fate (Exposure)	Do NOT let product reach waterways, drains and sewers.

SECTION 13: DIPOSAL CONSIDERATIONS

Disposal methods: • Containers may still present a chemical hazard/ danger when empty.

- Return to supplier for reuse/ recycling if possible.

Legislation addressing waste disposal requirements may differ by country, state and/ or territory. Each user must refer to laws

operating in their area.

- DO NOT allow wash water from cleaning or process equipment to enter drains.
- It may be necessary to collect all wash water for treatment before disposal.
- Recycle wherever possible.
- Consult manufacturer for recycling options or consult local or regional waste management authority for disposal if no suitable treatment or disposal facility can be identified.

SECTION 14: TRANSPORT INFORMATION

Proper Shipping Name:	FLAMMABLE LIQUID N.O.S contains white spirit
UN number:	1993
DG Class:	3 Flammable Liquid
Subsidiary Risk 1:	-
Packaging Group:	II
HAZCHEM code:	. 3YE

SECTION 15: REGULATORY INFORMATION

Poisons Schedule: S5

SECTION 16: OTHER INFORMATION

For further information on this product, please contact:

Powerplus Fuel

118 Swann Drive, Derrimut VIC-3030

Phone: +61 3 93690220

Fax: +61 3 93690883

Email: info@acbgroup.com.au

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 (1994) National Code of Practice for the Labeling 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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END OF MSDS