Hi-Tec Oil Traders Pty Ltd ABN 28 053 837 362
5 Tarlington Place Smithfield NSW 2164
Correspondence: P.O Box 322 Castle Hill NSW 1765
Ph: 1300 796 009 | **Fax:** (02) 9604 1611 | **Email:** hitecoils@hi-tecoils.com.au
www.hi-tecoils.com.au

SAFETY DATA SHEET

Issue Date: 22 March 2022
Engine Flush
Version: 2

Product name: **Engine Flush**

1. COMPANY DETAILS AND PRODUCT IDENTIFICATION

COMPANY:	Hi-Tec Oil Traders Pty Ltd. (ABN 28 053 837 362)
ADDRESS:	PO Box 322 Castle Hill NSW 1765 5 Tarlington Place, Smithfield NSW 2164
TELEPHONE NUMBER:	1300 796 009
FAX NUMBER:	(02) 9604 1611
EMERGENCY TELEPHONE NUMBER:	1300 796 009
PRODUCT NAME:	Engine Flush
OTHER NAMES:	None
MANUFACTURER'S PRODUCT CODE:	HI8 - 3302
USE:	Engine cleaner additive
ADDITIONAL INFORMATION:	Refer to Product Information Sheet for additional information
OTHER INFORMATION:	Visit our website: www.hi-tecoils.com.au Email: hitecoils@hi-tecoils.com.au

2. HAZARDS IDENTIFICATION

STATEMENT OF HAZARDOUS NATURE:	HAZARDOUS SUBSTANCE NON-DANGEROUS GOODS Hazard classification according to criteria of NOHSC and GHS. Dangerous Goods classification according to the Australian Dangerous Goods (ADG) Code, IATA and IMDG criteria.
HAZARDOUS SUBSTANCE:	COMBUSTIBLE LIQUID, regulated for storage purposes only.
POISON SCHEDULE:	S5

SIGNAL WORD(S): **DANGER**

2. HAZARDS IDENTIFICATION (CONT)

GHS HAZARD CLASSIFICATIONS

Flammable liquid:	Category 4
Aspiration Hazard:	Category 1
Skin Corrosion/Irritation:	Category 2
Specific Target Organ Toxicity –	
Single Exposure:	Category 3 (Narcotic Effects)
Carcinogenicity:	Category 2
Chronic Aquatic Hazard:	Category 3

HAZARD STATEMENTS:

H227: Combustible liquid
H304: May be fatal if swallowed and enters airways.
H315: Causes skin irritation.
H336: May cause drowsiness or dizziness.
H351: Suspected of causing cancer.
H412: Harmful to aquatic life with long lasting effects.

PREVENTION STATEMENTS:

P201: Obtain special instructions before use.
P210: Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261: Avoid breathing mist/vapours/spray.
P271: Use only outdoors or in a well ventilated area.
P280: Wear protective gloves/protective clothing/eye protection/face protection
P281: Use personal protective equipment as required.

RESPONSE STATEMENTS:

P301+P310: IF SWALLOWED: Immediately call the POISON INFORMATION CENTER on 13 11 26 or doctor/physician.
P308+P313: IF exposed or concerned: Get medical advice/attention.
P312: Call the POISON INFORMATION CENTER on 13 11 26 or doctor/physician if you feel unwell.
P331: Do NOT induce vomiting.
P362: Take off contaminated clothing and wash before reuse.
P370+P378: In case of fire: Use alcohol resistant foam or normal protein foam for extinction.

STORAGE STATEMENTS:

P403+P233: Store in a well-ventilated place. Keep container tightly closed.
P405: Store locked up.

DISPOSAL STATEMENT:

P501: Dispose of contents/container in accordance with local regulations.

3. IDENTIFICATION / COMPOSITION OF INGREDIENTS

Ingredients	**CAS No**	**Conc,%**
Kerosene, (petroleum), hydrodesulfurised	64742-81-0	>60
Paraffinic distillate, heavy, solvent-dewaxed (severe)	64742-65-0	10-20
Solvent naptha petroleum, heavy aromatic	64742-95-5	1-10
Napthalene	91-20-3	<1.8
Ingredients determined to be non hazardous	-	<10

4. FIRST AID MEASURES

GENERAL INFORMATION:	You should call the Poisons Information Centre on 13 11 26 from anywhere in Australia (0800 764 766 in New Zealand) if you feel that you may have been poisoned, burned or irritated by this product. Have this SDS with you when you call.
EYE CONTACT:	Wash out immediately with fresh running water. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids. Seek medical attention without delay; if pain persists or recurs seek medical attention. Removal of contact lenses after an eye injury should only be undertaken by skilled personnel.
SKIN CONTACT:	Immediately remove all contaminated clothing, including footwear. Flush skin and hair with running water (and soap if available). Seek medical attention in event of irritation.
INHALATION:	If fumes or combustion products are inhaled remove from contaminated area. Lay patient down. Keep warm and rested. Prostheses such as false teeth, which may block airway, should be removed, where possible, prior to initiating first aid procedures. Apply artificial respiration if not breathing, preferably with a demand valve resuscitator, bag-valve mask device, or pocket mask as trained. Perform CPR if necessary. Transport to hospital, or doctor.
INGESTION:	If swallowed do **NOT** induce vomiting. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Observe the patient carefully. Never give liquid to a person showing signs of being sleepy or with reduced awareness; i.e. becoming unconscious. Give water to rinse out mouth, then provide liquid slowly and as much as casualty can comfortably drink. Seek medical advice.
IMMEDIATE MEDICAL ATTENTION / SPECIAL TREATMENT NEEDED:	For acute or short term repeated exposures to petroleum distillates or related hydrocarbons: Primary threat to life, from pure petroleum distillate ingestion and/or inhalation, is respiratory failure. Patients should be quickly evaluated for signs of respiratory distress (e.g. cyanosis, tachypnoea, intercostal retraction, obtundation) and given oxygen. Patients with inadequate tidal volumes or poor arterial blood gases (pO2 50 mm Hg) should be intubated. Arrhythmias complicate some hydrocarbon ingestion and/or inhalation and electrocardiographic evidence of myocardial injury has been reported; intravenous lines and cardiac monitors should be established in obviously symptomatic patients. The lungs excrete inhaled solvents, so that hyperventilation improves clearance. A chest x-ray should be taken immediately after stabilisation of breathing and circulation to document aspiration and detect the presence of pneumothorax. Epinephrine (adrenalin) is not recommended for treatment of bronchospasm because of potential myocardial sensitisation to catecholamines.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA:	Foam. Dry chemical powder. BCF (where regulations permit). Carbon dioxide. Water spray or fog - Large fires only.
FIRE INCOMPATIBILITY:	Avoid contamination with strong oxidising agents as ignition may result.
FIRE AND EXPLOSION HAZARDS:	Combustible. Slight fire hazard when exposed to heat or flame. Heating may cause expansion or decomposition leading to violent rupture of containers. On combustion, may emit toxic fumes of carbon monoxide (CO). May emit acrid smoke. Mists containing combustible materials may be explosive. Other combustion products include: carbon dioxide (CO2)
FIRE FIGHTING:	Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water course. Use water delivered as a fine spray to control fire and cool adjacent area. Avoid spraying water onto liquid pools. Do not approach containers suspected to be hot. Cool fire exposed containers with water spray from a protected location. If safe to do so, remove containers from path of fire.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures - See section 8

Environmental precautions - See section 12

MINOR SPILLS:	Environmental hazard - contain spillage. Slippery when spilt. Remove all ignition sources. Clean up all spills immediately. Avoid breathing vapours and contact with skin and eyes. Control personal contact with the substance, by using protective equipment. Contain and absorb spill with sand, earth, inert material or vermiculite. Wipe up. Place in a suitable, labelled container for waste disposal.
MAJOR SPILLS:	Environmental hazard - contain spillage. Slippery when spilt. Moderate hazard. Clear area of personnel and move upwind. Alert Fire Brigade and tell them location and nature of hazard. Wear breathing apparatus plus protective gloves. Prevent, by any means available, spillage from entering drains or water course. No smoking, naked lights or ignition sources. Increase ventilation. Stop leak if safe to do so. Contain spill with sand, earth or vermiculite. Collect recoverable product into labelled containers for recycling. Absorb remaining product with sand, earth or vermiculite. Collect solid residues and seal in labelled drums for disposal. Wash area and prevent runoff into drains. If contamination of drains or waterways occurs, advise emergency services.

7. HANDLING AND STORAGE

SAFE HANDLING:

Avoid all personal contact, including inhalation. Wear protective clothing when risk of exposure occurs. Use in a well-ventilated area. Prevent concentration in hollows and sumps. DO NOT enter confined spaces until atmosphere has been checked. Avoid smoking, naked lights or ignition sources. Avoid contact with incompatible materials. When handling, DO NOT eat, drink or smoke. Keep containers securely sealed when not in use. Avoid physical damage to containers. Always wash hands with soap and water after handling. Work clothes should be laundered separately. Use good occupational work practice. Observe manufacturer's storage and handling recommendations contained within this SDS. Atmosphere should be regularly checked against established exposure standards to ensure safe working conditions.

SAFE STORAGE:

Store in original containers. Keep containers securely sealed. No smoking, naked lights or ignition sources. Store in a cool, dry, well-ventilated area. Store away from incompatible materials and foodstuff containers. Protect containers against physical damage and check regularly for leaks. Observe manufacturer's storage and handling recommendations contained within this SDS.

SUITABLE CONTAINER:

Use metal can or drum packaging as recommended by manufacturer.
Check all containers are clearly labelled and free from leaks.

STORAGE INCOMPATIBILITY:

Avoid storage with oxidisers. Avoid strong acids, acid chlorides, acid anhydrides and chloroformates.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

CONTROL PARAMETERS

OCCUPATIONAL EXPOSURE LIMITS (OEL):

Ingredient	Material name	TWA	STEL	Peak	Notes
Paraffinic distillate, heavy, solvent-dewaxed (severe)	Oil mist, refined mineral	5 mg/m^3	Not available (NA)	NA	NA
Napthalene	Napthalene	10 ppm / 52 mg/m^3	79 mg/m^3/ 15 ppm	NA	NA

EMERGENCY LIMITS:

Ingredient	TEEL-1	TEEL-2	TEEL-3
Paraffinic distillate, heavy, solvent-dewaxed (severe)	140 mg/m^3	1,500 mg/m^3	8,900 mg/m^3
Napthalene	15 ppm	83 ppm	500 ppm

Ingredient	Original IDLH	Revised IDLH
Kerosene, (petroleum), hydrodesulfurised	Not available	Not available
Paraffinic distillate, heavy, solvent-dewaxed (severe)	2,500 mg/m^3	Not available
Solvent naptha petroleum, heavy aromatic	Not available	Not available
Napthalene	250 ppm	Not available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION (CONT)

OCCUPATIONAL EXPOSURE BANDING

Ingredient	Occupational Exposure Band Rating	Occupational Exposure Band Limit
kerosene, (petroleum), hydrodesulfurised	E	≤ 0.1ppm

Notes: *Occupational exposure banding is a process of assigning chemicals into specific categories or bands based on a chemical's potency and the adverse health outcomes associated with exposure. The output of this process is an occupational exposure band (OEB), which corresponds to a range of exposure concentrations that are expected to protect worker health.*

ENGINEERING CONTROLS: Use in a well-ventilated area. General exhaust is adequate under normal operating conditions.

PERSONAL PROTECTION:
Safety gloves.
Safety footwear.
PVC aprons or overalls.
Respirator with type A filter.
Barrier cream.

EYE PROTECTION: Safety glasses with side shields; or as required. Chemical goggles. Contact lenses may pose a special hazard; soft contact lenses may absorb and concentrate irritants. A written policy document, describing the wearing of lenses or restrictions on use, should be created for each workplace or task. This should include a review of lens absorption and adsorption for the class of chemicals in use and an account of injury experience. Medical and first-aid personnel should be trained in their removal and suitable equipment should be readily available.

HAND/FEET PROTECTION:
Gloves: Butyl rubber, neoprene, PVC.
Safety footwear: PVC boots.

BODY PROTECTION: Overalls. Barrier cream. Eyewash unit.

GLOVE SELECTION INDEX:
Glove selection is based on a modified presentation of the:
"Forsberg Clothing Performance Index".
The effect(s) of the following substance(s) are taken into account in the computer generated selection:
ROX® 230 AG Automotive Engine Flush

Material	CPI
TEFLON	A

* CPI - Chemwatch Performance Index

A: Best Selection
B: Satisfactory; may degrade after 4 hours continuous immersion
C: Poor to Dangerous Choice for other than short term immersion

8. EXPOSURE CONTROLS / PERSONAL PROTECTION (CONT)

NOTE: As a series of factors will influence the actual performance of the glove, a final selection must be based on detailed observation. -
* Where the glove is to be used on a short term, casual or infrequent basis, factors such as "feel" or convenience (e.g. disposability), may dictate a choice of gloves which might otherwise be unsuitable following long-term or frequent use. A qualified practitioner should be consulted.

RESPIRATORY PROTECTION: Type A-P Filter of sufficient capacity. (AS/NZS 1716 & 1715, EN 143:2000 & 149:2001, ANSI Z88 or national equivalent). Where the concentration of gas/particulates in the breathing zone, approaches or exceeds the "Exposure Standard" (or ES), respiratory protection is required. Degree of protection varies with both face-piece and Class of filter; the nature of protection varies with Type of filter.

Required minimum protection factor	Half face respirator	Full face respirator	Powered air respirator
Up to 10 x ES	A-AUS P3	-	A-PAPR-AUS / Class 1 P3
Up to 50 x ES	-	A-AUS / Class 1 P3	-
Up to 100 x ES	-	A-2 P3	A-PAPR-2 P3^

^ - Full-face
A (All classes) = Organic vapours, B AUS or B1 = Acid gasses, B2 = Acid gas or hydrogen cyanide (HCN), B3 = Acid gas or hydrogen cyanide (HCN), E = Sulfur dioxide (SO2), G = Agricultural chemicals, K = Ammonia (NH3), Hg = Mercury, NO = Oxides of nitrogen, MB = Methyl bromide, AX = Low boiling point organic compounds (below 65 degC).

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL DESCRIPTION & COLOUR: Clear yellow liquid with a petroleum odour, does not mix with water.

ODOUR: Petroleum odour

ODOUR THRESHOLD: Not available

pH (as supplied): Not applicable

FREEZING/MELTING POINT (°C): Not available

BOILING POINT/RANGE (°C): Not available

FLASH POINT (°C): >61

EVAPORATION RATE: Not available

RELATIVE DENSITY (WATER=1): 0.804-0.824

PARTITION COEFFICIENT: Not available

AUTOIGNITION TEMP (°C): Not available

9. PHYSICAL AND CHEMICAL PROPERTIES (CONT)

DECOMPOSITION TEMPERATURE:	Not available
VISCOSITY (cSt):	Not available
MOLECULAR WEIGHT (g/mol):	Not applicable
TASTE:	Not available
EXPLOSIVE PROPERTIES:	Not available
FLAMMABILITY:	Combustible
EXPLOSIVE LIMITS:	Not available
VAPOUR PRESSURE (kPa):	Not available
SOLUBILITY IN WATER (g/l):	Immiscible
VAPOUR DENSITY (AIR=1)	>1
OXIDISING PROPERTIES:	Not available
SURFACE TENSION (dyn/cm or mN/m)	Not available
VOLATILE COMPONENT (%vol):	>60
GAS GROUP:	Not available
pH as a solution (1%):	Not applicable
VOC (g/l)	Not available

10. STABILITY AND REACTIVITY

REACTIVITY:	See section 7.
CHEMICAL STABILITY:	Unstable in the presence of incompatible materials. Product is considered stable. Hazardous polymerisation will not occur.
HAZARDOUS REACTIONS:	See section 7.
CONDITIONS TO AVOID:	See section 7.
INCOMPATIBILITIES:	See section 7.
DECOMPOSITION PRODUCTS:	See section 5.

11. TOXICOLOGICAL INFORMATION

INHALED:	Inhalation of vapours may cause drowsiness and dizziness. This may be accompanied by sleepines, reduced alertness, loss of reflexes, lack of coordination and vertigo. Inhalation hazard is increased at higher temperatures. Acute effects from inhalation of high concentrations of gas/vapour are pulmonary irritation, including coughing, with nausea; central nervous system depression - characterised by headache and dizziness, increased reaction time, fatigue and loss of co-ordination.
INGESTION:	The liquid is highly discomforting. Ingestion may result in nausea, pain, vomiting. Vomit entering the lungs by aspiration may cause potentially lethal chemical pneumonitis.
SKIN CONTACT:	This material can cause inflammation of the skin on contact in some persons. The material may accentuate any pre-existing skin condition
EYE CONTACT:	There is some evidence to suggest that this material can cause eye irritation and damage in some persons.
CHRONIC:	There has been concern that this material can cause cancer or mutations, but there is not enough data to make an assessment. Constant or exposure over long periods to mixed hydrocarbons may produce stupor with dizziness, weakness and visual disturbance, weight loss and anaemia, and reduced liver and kidney function. Skin exposure may result in drying and cracking and redness of the skin. Chronic solvent inhalation exposures may result in nervous system impairment and liver and blood changes. [PATTYS].

MATERIAL	TOXICITY	IRRITATION
Engine Flush	Not available	Not available
kerosene, (petroleum), hydrodesulfurised	Dermal (rabbit) LD50: >2000 mg/kg[2] Inhalation(Rat) LC50; >4.3 mg/l4h[1] Oral(Rat) LD50; >5000 mg/kg[2]	Eye: no adverse effect observed (not irritating)[1] Skin: adverse effect observed (irritating)[1]
paraffinic distillate, heavy, solvent-dewaxed (severe)	Dermal (rabbit) LD50: >2000 mg/kg[2] Inhalation(Rat) LC50; 2.18 mg/l4h[2] Oral(Rat) LD50; >5000 mg/kg[2]	Eye: no adverse effect observed (not irritating) [1] Skin: no adverse effect observed (not irritating) [1]
solvent naphtha petroleum, heavy aromatic	Dermal (rabbit) LD50: >2000 mg/kg[2] Inhalation(Rat) LC50; >0.003 mg/L4h[1] Oral(Rat) LD50; 512 mg/kg[1]	Eye (rabbit): Irritating Eye: no adverse effect observed (not irritating) [1] Skin: adverse effect observed (irritating) [1]
Naphthalene	Dermal (rat) LD50: >2500 mg/kg[2] Inhalation(Rat) LC50; >0.4 mg/l4h[1] Oral(Rat) LD50; >2000 mg/kg[1]	Eye (rabbit): 100 mg - mild Skin (rabbit):495 mg (open) - mild

Legend: *1. Value obtained from Europe ECHA Registered Substances - Acute toxicity 2.* Value obtained from manufacturer's SDS. Unless otherwise specified data extracted from RTECS - Register of Toxic Effect of chemical Substances*

11. TOXICOLOGICAL INFORMATION (CONT)

KEROSENE, (PETROLEUM), HYDRODESULFURISED:

Kerosene may produce varying ranges of skin irritation, and a reversible eye irritation (if eyes are washed). Skin may be cracked or flaky and/or leathery, with crusts and/or hair loss. It may worsen skin cancers. There may also be loss of weight, discharge from the nose, excessive tiredness, and wheezing. The individual may be pale.

PARAFFINIC DISTILLATE, HEAVY, SOLVENT-DEWAXED (SEVERE):

No significant acute toxicological data identified in literature search.
The materials included in the Lubricating Base Oils category are related from both process and physical-chemical perspectives; The potential toxicity of a specific distillate base oil is inversely related to the severity or extent of processing the oil has undergone, since:
• The adverse effects of these materials are associated with undesirable components, and
• The levels of the undesirable components are inversely related to the degree of processing;
• Distillate base oils receiving the same degree or extent of processing will have similar toxicities;
• The potential toxicity of residual base oils is independent of the degree of processing the oil receives.
• The reproductive and developmental toxicity of the distillate base oils is inversely related to the degree of processing.
Unrefined & mildly refined distillate base oils contain the highest levels of undesirable components, have the largest variation of hydrocarbon molecules and have shown the highest potential cancer-causing and mutation-causing activities. Highly and severely refined distillate base oils are produced from unrefined and mildly refined oils by removing or transforming undesirable components. In comparison to unrefined and mildly refined base oils, the highly and severely refined distillate base oils have a smaller range of hydrocarbon molecules and have demonstrated very low mammalian toxicity. Testing of residual oils for mutation-causing and cancer-causing potential has shown negative results, supporting the belief that these materials lack biologically active components or the components are largely non-bioavailable due to their molecular size. Toxicity testing has consistently shown that lubricating base oils have low acute toxicities. Numerous tests have shown that a lubricating base oil's mutagenic and carcinogenic potential correlates with its 3-7 ring polycyclic aromatic compound (PAC) content, and the level of DMSO extractables (e.g. IP346 assay), both characteristics that are directly related to the degree/conditions of processing. For highly and severely refined distillate base oils: In animal studies, the acute, oral, semilethal dose is >5g/kg body weight and the semilethal dose by skin contact is >2g/kg body weight. The semilethal concentration for inhalation is 2.18 to >4 mg/L. The materials have varied from "non-irritating" to "moderately irritating" when tested for skin and eye irritation. Testing for sensitisation has been negative. The effects of repeated exposure vary by species; in animals, effects to the testes and lung have been observed, as well as the formation of granulomas. The substance is classified by IARC as Group 3: **NOT** classifiable as to its carcinogenicity to humans. Evidence of carcinogenicity may be inadequate or limited in animal testing.

11. TOXICOLOGICAL INFORMATION (CONT)

SOLVENT NAPTHA PETROLEUM, HEAVY AROMATIC:	For petroleum: This product contains benzene, which can cause acute myeloid leukaemia, and n-hexane, which can be metabolized to compounds which are toxic to the nervous system. This product contains toluene, and animal studies suggest high concentrations of toluene lead to hearing loss. This product contains ethyl benzene and naphthalene, from which animal testing shows evidence of tumour formation. Cancer-causing potential: Animal testing shows inhaling petroleum causes tumours of the liver and kidney; these are however not considered to be relevant in humans. Mutation-causing potential: Most studies involving gasoline have returned negative results regarding the potential to cause mutations, including all recent studies in living human subjects (such as in petrol service station attendants). Reproductive toxicity: Animal studies show that high concentrations of toluene (>0.1%) can cause developmental effects such as lower birth weight and developmental toxicity to the nervous system of the foetus.
NAPHTHALENE:	The material may be irritating to the eye, with prolonged contact causing inflammation. Repeated or prolonged exposure to irritants may produce conjunctivitis. **WARNING:** This substance has been classified by the IARC as Group 2B: Possibly Carcinogenic to Humans.
KEROSENE, (PETROLEUM), HYDRODESULFURISED & PARAFFINIC DISTILLATE, HEAVY, SOLVENT-DEWAXED (SEVERE) & SOLVENT NAPTHA PETROLEUM, HEAVY AROMATIC:	Animal studies indicate that normal, branched and cyclic paraffins are absorbed from the gastrointestinal tract and that the absorption of n-paraffins is inversely proportional to the carbon chain length, with little absorption above C30. With respect to the carbon chain lengths likely to be present in mineral oil, n-paraffins may be absorbed to a greater extent than iso- or cyclo-paraffins. The major classes of hydrocarbons are well absorbed into the gastrointestinal tract in various species. In many cases, the hydrophobic hydrocarbons are ingested in association with fats in the diet. Some hydrocarbons may appear unchanged as in the lipoprotein particles in the gut lymph, but most hydrocarbons partly separate from fats and undergo metabolism in the gut cell. The gut cell may play a major role in determining the proportion of hydrocarbon that becomes available to be deposited unchanged in peripheral tissues such as in the body fat stores or the liver.
KEROSENE, (PETROLEUM), HYDRODESULFURISED & NAPTHALENE:	The material may cause skin irritation after prolonged or repeated exposure and may produce on contact skin redness, swelling, the production of vesicles, scaling and thickening of the skin.

11. TOXICOLOGICAL INFORMATION (CONT)

ACUTE TOXICITY:	Data either not available or does not fit the criteria for classification.
SKIN IRRITATION/CORROSION:	Data available to make classification.
SERIOUS EYE DAMAGE/IRRITATION:	Data either not available or does not fit the criteria for classification.
RESPIRATORY OR SKIN SENSITISATION:	Data either not available or does not fit the criteria for classification.
MUTAGENICITY:	Data either not available or does not fit the criteria for classification.
CARCINOGENICITY:	Data available to make classification.
REPRODUCTIVITY:	Data either not available or does not fit the criteria for classification.
STOT – SINGLE EXPOSURE:	Data available to make classification.
STOR – REPEAT EXPOSURE:	Data either not available or does not fit the criteria for classification.
ASPIRATION HAZARD:	Data available to make classification.

12. ECOLOGICAL INFORMATION

TOXICITY: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. **DO NOT** discharge into sewer or waterways.

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
Engine Flush	Not available	Not available	Not available	Not available	Not available
Kerosene, (petroleum), hydrodesulfurised	NOEC	3072	Fish	= 1mg/L	1
Paraffinic distillate, heavy, solvent-dewaxed (severe)	ErC50	72	Algae or other aquatic plants	>1000mg/l	1
	NOEC(ECx)	504	Crustacea	>1mg/l	1
	EC50	96	Algae or other aquatic plants	>1000mg/l	1
	EC50	48	Crustacea	>1000mg/l	1

12. ECOLOGICAL INFORMATION (CONT)

Ingredient	Endpoint	Test Duration (hr)	Species	Value	Source
Solvent naptha petroleum, heavy aromatic	EC50(ECx)	48	Crustacea	0.95mg/l	1
	EC50	96	Algae or other aquatic plants	1mg/l	2
	EC50	72	Algae or other aquatic plants	<1mg/l	1
	EC50	48	Crustacea	0.95mg/l	1
	LC50	96	Fish	0.58mg/l	2
Napthalene	LC50	96	Fish	0.009-0.012mg/L	4
	EC50	48	Crustacea	0.007-0.01mg/L	4
	BCF	1344	Fish	23-146	7
	NOEC(ECx)	720	Fish	0.002mg/L	4
	EC50	72	Algae or other aquatic plants	~0.4~0.5mg/l	2

Legend: *Extracted from 1. IUCLID Toxicity Data 2. Europe ECHA Registered Substances - Ecotoxicological Information - Aquatic Toxicity 3. EPIWIN Suite V3.12 (QSAR) - Aquatic Toxicity Data (Estimated) 4. US EPA, Ecotox database - Aquatic Toxicity Data 5. ECETOC Aquatic Hazard Assessment Data 6. NITE (Japan) - Bioconcentration Data 7. METI (Japan) - Bioconcentration Data 8. Vendor Data*

PERSISTENCE AND DEGRADABILITY:

	Persistence: Water/Soil	Persistence: Air
Napthalene	HIGH (Half-life = 258 days)	LOW (Half-life = 1.23 days)

BIOACCUMULATIVE POTENTIAL:

Ingredient	Bioaccumulation
kerosene, (petroleum),hydrodesulfurised	LOW (BCF = 159)
solvent naphtha petroleum, heavy aromatic	LOW (BCF = 159)
naphthalene	HIGH (BCF = 18000)

MOBILITY IN SOIL:

Ingredient	Mobility
naphthalene	LOW (KOC = 1837)

13. DISPOSAL CONSIDERATIONS

PRODUCT/ PACKAGING DISPOSAL:

Consult manufacturer for recycling options and recycle where possible .
Consult State Land Waste Management Authority for disposal.
Incinerate residue at an approved site.
Recycle containers if possible, or dispose of in an authorised landfill.

14. TRANSPORT INFORMATION

ROAD & RAIL TRANSPORT:

ADG REQUIREMENT — Not classified as a Dangerous Good according to the Australian Code for the Transport of Dangerous Goods by Road and Rail.

MARITIME TRANSPORT:

IMO/IMDG REQUIREMENT — Not classified as a Dangerous Good according to the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea.

AIR TRANSPORT:

ICAO/IATA REQUIREMENT — Not classified as a Dangerous Good according to the criteria of the International Maritime Air Transport Association (IATA) Dangerous Goods Regulations for transport by air.

15. REGULATORY INFORMATION

POISONS SCHEDULE: S5

REGULATORY LISTS: Australian Inventory of Chemical Substances (AICS)

16. OTHER INFORMATION

CONTACT PERSON/POINT: General Manager 1300 796 009

This information was prepared in good faith from the best information available at the time of issue. It is based on the present level of research and to this extent we believe it is accurate. However, no guarantee of accuracy is made or implied and since conditions of use are beyond our control, all information relevant to usage is offered without warranty. The manufacturer will not be held responsible for any unauthorised use of this information or for any modified or altered versions.

If you are an employer it is your duty to tell your employees, and any others that may be affected, of any hazards described in this sheet and of any precautions that should be taken.

Safety Data Sheets are updated frequently. Please ensure you have a current copy.

LITERATURE REFERENCES:

* NOHSC: 2011 National Code of Practice for the preparation of Safety Data Sheets.
* Safe Work Australia: 2016 Preparation of Safety Data Sheets for Hazardous Chemicals.
* NOHSC: 1008 Approved Criteria for Classifying Hazardous Substances.
* NOHSC: 10005 List of Designated Hazardous Substances.
* NOHSC: 1005 Control of Workplace Hazardous Substances, National Code of Practice.
* NOHSC: 2007 Control of Workplace Hazardous Substances, National Code of Practice.
* NOHSC: 1003 Exposure Standards for Atmospheric Contaminants in the Occupational Environment, National Exposure Standards.
* NOHSC: 3008 Exposure Standards for Atmospheric Contaminants in the Occupational Environment, Guidance Note.
* NOHSC: 1015 Storage and Handling of Workplace Dangerous Goods, National Standard.
* NOHSC: 2017 Storage and Handling of Workplace Dangerous Goods, National Code of Practice.
* SUSDP: Standard for the Uniform Scheduling of Drugs and Poisons

16. OTHER INFORMATION (CONT)

* ADG: Australian Dangerous Goods Code
* SDS of component materials.

LAST CHANGE: Supercedes document issued: 19 May 2017
Reason/s for revision: Minor editorial changes to comply with GHS requirements.

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END OF SDS