

SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION: PRODUCT IDENTIFIER/CHEMICAL IDENTITY

- 1.1 PRODUCT IDENTIFIER:** Diesel Injector Cleaner
- 1.2 PRODUCT CODE:** ADDIC375
- 1.3 RELEVANT IDENTIFIED USES OF THE MIXTURE AND USES ADVISED AGAINST:**
RELEVANT IDENTIFIED USES: Multipurpose Fuel Additive.
RESTRICTIONS ON USE: None known.
- 1.4 DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET:**
SUPPLIER NAME: PENRITE OIL Company Pty Ltd (ABN: 25005 001 525),
ADDRESS (Australia): 110-116 Greens Road, Dandenong South VIC, Australia, 3175
TELEPHONE NUMBER (Australia): 1300 736 748; +61 3 8710 6600 (Int); Fax: 1800 736 748
ADDRESS (New Zealand): 75 Lady Ruby Drive, East Tamaki, Auckland, New Zealand, 2013
TELEPHONE NUMBER (New Zealand): 0800 533 698; Fax: 0800 533 698
E-MAIL: tech@penriteoil.com (Aust and NZ)
- 1.5 EMERGENCY TEL. NUMBER:** Australia: 1300 736 748; New Zealand: 0800 533 698
(Poisons Information Centre (Aust 131 126; NZ 0800 764 766))
- 1.6 HSNO DETAILS:**
HSNO APPROVAL NUMBER: HSR002587.
HSNO GROUP TITLE: Fuel Additives (Combustible, Toxic [6.7]) Group Standard 2006.

SECTION 2 – HAZARD(S) IDENTIFICATION

2.1 CLASSIFICATION OF THE HAZARDOUS CHEMICAL:

GHS CLASSIFICATION HAZARD

- CLASS & CATEGORY:** Under the Model Work Health and Safety Regulations the product would be rated as Hazardous:
Flammable Liquid - Category 4
Aspiration Hazard - Category 1
Specific Target Organ Toxicity (Single Exposure) - Category 3
Carcinogenicity - Category 2
Toxic to Reproduction - Category 2
Chronic Aquatic Toxicity - Category 3

2.2 LABEL ELEMENTS INCLUDING PRECAUTIONARY STATEMENTS:

SIGNAL WORD: Danger

PICTOGRAMS:



HAZARD STATEMENTS: H227 - Combustible Liquid.
H304 - May be fatal if swallowed and enters airways.
H336 - May cause drowsiness and dizziness.
H351 - Suspected of causing cancer.
H361d - Suspected of damaging the unborn child.
H412 - Harmful to aquatic life with long lasting effects.
AUH066 - Repeated exposure may cause skin dryness and cracking.

PRECAUTIONARY STATEMENTS:

PREVENTION: P102 - Keep out of reach of children.
P103 - Read label before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from flames and hot surfaces - No smoking.
P261 - Avoid breathing mist/vapours/spray.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/eye protection/face protection.

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SECTION 2 – HAZARD(S) IDENTIFICATION Continued

RESPONSE: P101 - If medical advice is needed, have product container or label at hand.
P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician.
P304 + P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P308 + P313 - IF exposed or concerned: Get medical advice/attention.
P312 - Call a POISON CENTRE or doctor/physician if you feel unwell.
P331 - Do NOT induce vomiting.
P370 + P378 - In case of fire: Use carbon dioxide, alcohol-resistant foam, dry chemical or water spray for extinction.

STORAGE: P233 - Keep container tightly closed.
P403 + P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.

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

2.3 OTHER HAZARDS: Due to the presence of solvents there is a possibility of organ system damage. The presence of the solvent component suggests that the product may be irritating to the skin, eyes and the respiratory system. The product contains Naphthalene which is considered extremely hazardous to children - the SUSMP states that Naphthalene can be fatal to children if swallowed. The product is a combustible liquid and will potentially form flammable/explosive mixtures in air. There may be static discharge issues with the product in large scale operations that could lead to a fire. People with pre-existing skin conditions, such as eczema or dermatitis, should take precautions so as not to exacerbate the condition. As for all chemical products, persons should not expose open wounds, cuts, abrasions or irritated skin to this material.

SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS

INGREDIENTS	CAS NUMBER	Concentration % W/W	GHS Classification*
Distillates, petroleum, hydrotreated light	64742-47-8	> 75%	Asp Haz 1 - H304
Solvent naphtha, petroleum, heavy aromatic	64742-94-5	20% - 25%	Asp Haz 1 - H304 AUH066 STOT SE 3 - H336 Chron Aq Tox 2 - H411
2-Ethylhexanol	104-76-7	4% - <5%	Skin Corr 1 - H314 Acut Tox 4 - H332 Tox Rep 2 - H361d
1,2,4-Trimethylbenzene**	95-63-6	2% - 3%	Flam Liq 3 - H226 Skin Irrit 2 - H315 Eye Irrit 2A - H319 Acut Tox 4 - H332 STOT SE 3 - H335 Chron Aq Tox 2 - H411
Naphthalene**	91-20-3	2% - 2.5%	Acut Tox 4 - H302 Carc Cat 2 - H351 Chron Aq Tox 1 - H410
1,3,5-Trimethylbenzene**	108-67-8	< 0.3%	Flam Liq 3 - H226 STOT SE 3 - H335 Chron Aq Tox 2 - H411

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SECTION 3 – COMPOSITION / INFORMATION ON INGREDIENTS Cont'd

INGREDIENTS	CAS NUMBER	Concentration % W/W	GHS Classification*
Benzene, dimethyl- (Xylene)	1330-20-7	< 0.3%	Flam Liq 3 - H226 Asp Haz 1 - H304 Acute Tox 4 - H312 Skin Irrit 2 - H315 Eye Irrit 2A - H319 Acute Tox 4 - H332 STOT SE 3 - H335
Complex mixture of additives	-	To 100%	Not Applicable

Not Applicable = Not Applicable * Please see Section 15 of this SDS for full text description of the Label Elements.

**These ingredients are potentially components of the Solvent naphtha, petroleum, heavy aromatic and not additional ingredients in the final mixture.

SECTION 4 – FIRST AID MEASURES

4.1 DESCRIPTION OF NECESSARY FIRST AID MEASURES:

INGESTION: Rinse mouth out with water. If swallowed, do NOT induce vomiting. For advice, contact the Poisons Information Centre (phone Australia 131 126; New Zealand 0800 764 766) or a Doctor at once. If vomiting occurs, lean patient forward or place on left side (head-down position, if possible) to maintain open airway and prevent aspiration. Within 6 hours of ingestion, if delayed symptoms, such as a fever greater than 38.3°C, shortness of breath, chest congestion or continued coughing/wheezing occurs transport immediately to a medical facility. As the product is hydrocarbon based and of low viscosity (~2.5cSt @ 40°C), if ingested seek urgent medical assistance.

EYE: If in eyes, hold eyelids apart and flush the eye immediately with large amounts of running water. Continue flushing for at least 15 minutes or until advised to stop by a Doctor. Check for contact lenses. If there are contact lenses, these should be removed after several minutes of rinsing by the exposed person or medical personnel if it can be done easily. After flushing, if irritation develops or persists, seek medical assistance.

SKIN CONTACT: If skin or hair contact has occurred remove any contaminated clothing and footwear, wash skin or hair thoroughly with soap and water. If irritation develops or persists, consult a Doctor.

INHALATION: If affected, remove the patient from further exposure into fresh air, if safe to do so. If providing assistance, avoid exposure to yourself - only enter contaminated environments with adequate respiratory equipment, once environment has been assessed for flammable vapours. Once removed, lay patient down in a well-ventilated area and reassure them whilst waiting for medical assistance. If not breathing, provide artificial respiration and seek immediate medical assistance. If unconscious, place in a recovery position and seek immediate medical assistance. If irritation develops or persists, consult a Doctor.

PROTECTION FOR FIRST AIDERS: No personnel shall place themselves in a situation that is potentially hazardous to themselves. Assess the scenario for PPE requirements before entering. Assess environment for flammable vapours before entering. Never enter an environment with a flammable atmosphere. Do not enter contaminated area without a respirator. As the product is hydrocarbon based and of low viscosity, if the person has ingested the product, do not use direct mouth-to-mouth resuscitation techniques. Always ensure that you are wearing gloves when dealing with first aid procedures involving chemicals and/or blood.

FIRST AID FACILITIES: Eye wash fountain and safety showers are recommended in the area where the product is used.

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SECTION 4 – FIRST AID MEASURES Continued

4.2 MOST IMPORTANT SYMPTOMS & EFFECTS, BOTH ACUTE & DELAYED, CAUSED BY EXPOSURE:

ACUTE: Ingestion or inhalation of vapours may lead to irritation of the mouth and respiratory tract. Symptoms may include a burning sensation in the nose and throat, coughing or difficulty breathing. Ingestion may lead to nausea and diarrhoea. The product contains low levels of naphthalene which is considered extremely hazardous to children - the SUSMP states that Naphthalene can be fatal to children if swallowed. The product is rated as an aspiration hazard; if material is aspirated into the lungs it may exhibit as coughing, wheezing, congestion or fever. Vapours may cause drowsiness or dizziness. Inhalation of high vapour concentrations may cause central nervous system depression resulting in dizziness, headache, nausea and possible loss of coordination. Eye contact may lead to localised burning, redness and tearing. Skin contact may lead to redness or itching. If material is aspirated into the lungs it may exhibit as coughing, wheezing, congestion or fever.

CHRONIC: Repeated or prolonged skin contact may cause removal of natural fat from the skin, resulting in non-allergic contact dermatitis and absorption through the skin. Skin contact may aggravate/exacerbate existing skin conditions, such as dermatitis.

4.3 INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NECESSARY:

ADVICE TO DOCTOR: Treat symptomatically. As the product is predominantly hydrocarbon based and of low viscosity, if vomiting has occurred after ingestion, the patient should be monitored for adverse effects to ensure that the product has not aspirated into the lungs. Small amounts of this product aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary oedema. The product contains low levels of naphthalene which is considered extremely hazardous to children - the SUSMP states that Naphthalene can be fatal to children if swallowed. The product contains 2-Ethylhexanol which is suspected of damaging the unborn child. Inhalation of high vapour concentrations may cause central nervous system depression.

SECTION 5 – FIRE FIGHTING MEASURES

5.1 EXTINGUISHING MEDIA:

SUITABLE MEDIA: Use extinguishing media appropriate for surrounding fire. Use carbon dioxide, alcohol-resistant foam, dry chemical or water spray. Spray down fumes resulting from fire.

UNSUITABLE MEDIA: Avoid using full water jet directed at residual material that may be burning. Water may cause splattering on hot residues. Product will float on water.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

COMBUSTION HAZARDS: Combustion may produce oxides of carbon, as well as smoke and irritating vapours.

5.3 ADVICE FOR FIREFIGHTERS:

FIRE: This product is combustible with a typical flash point of 74°C. The vapour is heavier than air and will spread along the ground and may accumulate in low points or depressions. Therefore, ignition may occur well away from the point of release of the material. Keep storage tanks, pipelines, fire exposed surfaces, etc. cool with water spray.

HAZCHEM CODE: Not applicable.

EXPLOSION: No information to indicate that the product is an explosion hazard; though the volatile solvent component may form an explosive mixture with air. Note: Under the WHS legislation, this product is rated as Flammable Liquid - Category 4, with a typical Flash point of 74°C. Extinguish all sources of flame or spark. Closed containers may explode when exposed to extreme heat.

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SECTION 5 – FIRE FIGHTING MEASURES Continued

PROTECTIVE EQUIPMENT:

In the event of a fire, wear full protective clothing and self-contained breathing equipment with full-face piece operated in the pressure demand or other positive pressure mode.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

6.1 PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:

PERSONAL PROTECTION: For small spills, wear Nitrile gloves, glasses/goggles, boots and full-length clothing. During routine operation for a small spill in the open a respirator is not required. However, if mists or vapours are generated, an approved organic vapour/particulate respirator is required. For large spills, or in confined spaces, a full chemically resistant body-suit is recommended and the atmosphere must be evaluated for oxygen deficiency and as a precaution whether the atmosphere is flammable. If in doubt about potential oxygen deficiency, wear self-contained breathing apparatus. Never enter an environment with a flammable atmosphere.

CONTROL MEASURES: Ventilate area and extinguish and/or remove all sources of ignition. **CAUTION:** Vapour may form an explosive mixture with air. Never enter a spill area unless you know the vapours have dissipated to make the area safe. Stop the leak if safe to do so. **CAUTION:** The spilled product will be slippery. Avoid contact with the spilled material.

EMERGENCY PROCEDURES: In the event of a spill or accidental release, notify the relevant authorities in accordance with all applicable regulations.

6.2 ENVIRONMENTAL PRECAUTIONS:

SPILL ADVICE: Do not allow product to enter drains, surface water, sewers or watercourses - inform local authorities if this occurs. Take precautions against static discharge. Ensure all equipment is grounded and use non-sparking tools during clean up operations.

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:

CONTAINMENT: Contain the spill and absorb with a proprietary absorbent material, sand or earth. **CAUTION:** The spilled product will be slippery. Be careful of static discharges and/or sparking during clean up. For large spills prepare a bund/barrier/dyke ahead of the spill to confine the spill and allow later recovery. If there is the possibility of spills to enter drains, surface water, sewers or watercourses ensure bunding, or that drains are covered, to minimise the potential for this to occur.

CLEANING PROCEDURES: Having contained the spill, as mentioned above, collect all material quickly and place used absorbent in suitable containers. Be careful of static discharges and/or sparking during clean up. Use only non-sparking tools during cleaning operations. **CAUTION:** The spilled product will be slippery. Follow local regulations for the disposal of waste. For large spills that have been banded, the material can be pumped, using flammable liquid equipment, into vessels and returned for reprocessing or destruction. Personnel must wear the appropriate clothing as required in Section 6.1 during cleaning procedures; after the environment has been evaluated. Wash contaminated area and objects with detergent and water after spill has been cleared. Rinse the cleaned area with water. Do not allow wash water or rinsings to enter drains, surface water, sewers or water courses.

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SECTION 7 – HANDLING AND STORAGE, INCLUDING HOW THE CHEMICAL MAY BE SAFELY USED

7.1 PRECAUTIONS FOR SAFE HANDLING:

SAFE HANDLING:

Avoid contact with the product by using appropriate protective equipment such as gloves, glasses or goggles and full-length clothing. Extinguish any potential sources of ignition before using as flammable vapours will be generated during application. Do not leave containers in direct sunlight. Due to the possibility of pressure build up in the container, open the container with care. Avoid breathing mists or vapours. Avoid breathing mists or vapours. Do not smoke when handling the material. Prevent small spills and leakage to avoid slip hazards. Properly dispose of any contaminated rags or cleaning materials in order to prevent fire hazards. Eating, drinking, and smoking should be prohibited in the area where this material is handled, stored and processed. Workers should follow good personal hygiene practices, such as washing hands before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Keep containers tightly closed when not in use. Prevent product from entering waterways, drains or sewers. There is the potential for electrostatic accumulation in the product. As a precaution, containers should always be earthed before dispensing commences.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:

SAFE STORAGE:

Classified as a Class 1 Combustible Liquid (Flash Point=74°C). Store in a dry, well ventilated area away from direct sunlight, ignition sources, oxidising agents, foodstuffs and clothing. Keep containers closed when not in use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Store only in original containers. It is recommended that the product is stored below 25°C.

INCOMPATIBILITIES:

Strong oxidizing substances including strong acids.

SECTION 8 – EXPOSURE CONTROLS & PERSONAL PROTECTION

8.1 EXPOSURE CONTROL MEASURES:

EXPOSURE LIMIT VALUES: Exposure standards for the product have not been established. The following values are applicable for the individual components:

Distillates, petroleum, hydrotreated light (Manufacturer recommendation):

TWA: 165 ppm 1200 mg/m³

Solvent naphtha, petroleum, heavy aromatic (Manufacturer recommendation):

TWA: 500 ppm 2000 mg/m³ (OSHA)

1,2,4-Trimethyl Benzene (Manufacturer recommendation):

TWA: 25 ppm (ACGIH)

Naphthalene:

TWA: 10 ppm 52 mg/m³ STEL: 15 ppm 79 mg/m³

Benzene, dimethyl-:

TWA: 50 ppm 220 mg/m³ STEL: 100 ppm 441 mg/m³

8.2 BIOLOGICAL

MONITORING:

No data available.

8.3 CONTROL BANDING:

No data available.

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SECTION 8 – EXPOSURE CONTROLS & PERSONAL PROTECTION Cont'd

8.4 ENGINEERING CONTROLS:

ENGINEERING CONTROLS: Special ventilation is not normally required when using this product in normal use scenarios. However, in the operation of certain equipment, at elevated temperatures, or in confined spaces mists or vapour may be generated and local exhaust ventilation should be provided to maintain airborne concentration levels below the nominated exposure standard and at an acceptable level that does not cause irritation. Please note: Due to the flammable nature of the product, if there is a necessity to use ventilation equipment it should not be a potential source of ignition for any vapours generated.

8.5 INDIVIDUAL PROTECTION MEASURES:

EYE & FACE PROTECTION: Wear safety glasses/goggles to avoid eye contact when handling. If there is a risk of splashing during use, a full face shield is recommended. Use eye protection in accordance with AS 1336 and AS 1337.

SKIN (HAND) PROTECTION: If there is the chance of contact with the material wear gloves to provide hand protection. Nitrile rubber gloves are recommended.

SKIN (CLOTHING) PROTECTION:

During normal operating procedures, long sleeved clothing is recommended to avoid skin contact. Soiled clothing should be washed with detergent prior to re-use.

RESPIRATORY PROTECTION: During routine operation a respirator is not required. However, if mists or vapours are generated, an approved half face organic vapour/particulate respirator is required. Use respirators in accordance with AS 1715 and AS 1716.

THERMAL PROTECTION: Not applicable.

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE: Greenish-blue liquid.
ODOUR: Characteristic hydrocarbon solvent odour.
ODOUR THRESHOLD: No data available.
pH: Not applicable.
MELTING/FREEZING POINT: No data available.
INITIAL BOILING POINT: No data available.
BOILING RANGE (°C): No data available.
FLASHPOINT (°C): Typically 74°C.
EVAPORATION RATE: No data available.
FLAMMABILITY LIMITS (%): No data available.
VAPOUR PRESSURE (kPa): No data available.
VAPOUR DENSITY: No data available.
DENSITY (g/mL @ 15°C): Typically 0.828.
SOLUBILITY IN WATER(g/L): Insoluble in water.
PARTITION COEFFICIENT: No data available for n-octanol/water.
AUTO-IGNITION TEMP (°C): No data available.
DECOMPOSITION TEMP (°C): No data available.
VISCOSITY (cSt @ 100°C): No data available.
VISCOSITY(cSt @ 40°C): Typically 2.5.

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SECTION 10 – STABILITY AND REACTIVITY

- 10.1 REACTIVITY:** The product does not pose any further reactivity hazards other than those listed in the following sub-sections.
- 10.2 CHEMICAL STABILITY:** Stable under recommended storage and handling conditions (see section 7).
- 10.3 POSSIBILITY OF HAZARDOUS REACTIONS:** Keep away from strong oxidising agents, such as strong acids, chlorates, nitrates and peroxides. Hazardous polymerisation does not occur.
- 10.4 CONDITIONS TO AVOID:** The product has a relatively low flash point. Avoid ignition sources including heat and sparks. Observe the usual precautionary measures for handling chemicals. Do not heat the container or leave the container open when not in use.
- 10.5 INCOMPATIBLE MATERIALS:** Strong oxidising agents including strong acids.
- 10.6 HAZARDOUS DECOMPOSITION PRODUCTS:** Hazardous decomposition products are not expected to form during normal storage requirements. See Section 5.2 for Hazardous Combustion products.

SECTION 11 – TOXICOLOGICAL INFORMATION

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS:

The product is a mixture and test data is not available for the product as a whole.

Distillates, petroleum, hydrotreated light (IUCLID)

Oral – LD₅₀ (Rat): > 5000mg/kg

Dermal – LD₅₀ (Rabbit): > 2000mg/kg

Solvent naphtha, petroleum, heavy aromatic

Oral – LD₅₀ (Rat): > 2500mg/kg

Dermal – LD₅₀ (Rabbit): > 2000mg/kg

Inhalation – LC₅₀ (Rat, vapour, 6 hours): 11.67 mg/m³

1,2,4-Trimethylbenzene

Oral – LD₅₀ (Rat): 3400mg/kg – 6000mg/kg

Dermal – LD₅₀ (Rabbit): 3160mg/kg

Inhalation – LC₅₀ (Rat, vapour, 4 hours): 18000mg/m³

1-Hexanol, 2-ethyl-

Oral – LD₅₀ (Rat): > 2040mg/kg

Dermal – LD₅₀ (Rat): > 3000mg/kg

Inhalation – LC₅₀ (Rat, vapour, 4 hours): 0.89 – 5.3mg/l

Naphthalene

Oral – LD₅₀ (Rat): 2600mg/kg

Dermal – LD₅₀ (Rat): > 2500mg/kg

Inhalation – LC₅₀ (Rat, gas, 8 hours): > 100ppm

11.2 SWALLOWED:

This product may cause slight irritation to the mouth, throat and digestive tract. The Naphthalene component means this is a Schedule 6 Poison. Naphthalene is considered especially hazardous to children. As the product is hydrocarbon based and the viscosity is low, caution should be taken in respect to aspiration into the lungs. Small amounts of this product aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary oedema. Ingestion of large amounts may lead to nausea and vomiting. The additive package manufacturer states that a weak carcinogenic liver response was observed in mice, but not rats. During normal usage ingestion should not be a means of exposure.

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SECTION 11 – TOXICOLOGICAL INFORMATION Continued

11.3 SKIN CORROSION/ IRRITATION:

This product is not expected to exhibit Dermal Corrosivity/Irritation, based on the available data and the known hazards of the components. However, the product may cause concern as a result of skin dryness, flaking or cracking. This product contains components that are rated as corrosive and irritants, however based upon the information provided by the additive package manufacturer, these are present at amounts below the Concentration cut-off level that would indicate that there is a potential corrosion/irritation hazard. May be mildly irritating to the skin. Correct handling procedures incorporating appropriate protective clothing and gloves should minimise the risk of skin irritation. Prolonged or repeated contact may cause defatting of the skin which may lead to dermatitis. People with pre-existing skin conditions, such as dermatitis, should take extreme care so as not to exacerbate the condition.

11.4 SERIOUS EYE DAMAGE/ IRRITATION:

This product is not expected to exhibit Eye Irritation or Serious Damage/Corrosivity, based on the available data and the known hazards of the components. This product contains components that are rated as corrosive and irritants, however based upon the information provided by the additive package manufacturer, these are present at amounts below the Concentration cut-off level that would indicate that there is a potential eye damage/irritation hazard. May be mildly irritating to the eyes. Symptoms may include localised burning, redness and tearing. Correct handling procedures incorporating appropriate eye protection should minimise the risk of eye irritation.

11.5 RESPIRATORY OR SKIN SENSITISATION:

This product is not expected to be a skin sensitiser, based on the available data and the known hazards of the components. This product is not expected to be a respiratory tract sensitiser, based on the available data and the known hazards of the components.

11.6 GERM CELL MUTAGENICITY:

This product is not expected to be mutagenic, based on the available data and the known hazards of the components.

11.7 CARCINOGENICITY:

This product is rated as Suspected of causing cancer. The product contains low levels of Naphthalene, as a component of the solvent naphtha, petroleum, heavy aromatic ingredient, which is rated as Carcinogenic Category 2: H351 - Suspected of causing cancer. The additive package manufacturer states that weak carcinogenic liver response was observed in mice, but not rats. A National Toxicology Program final report states that lifetime inhalation exposure to naphthalene resulted in increases in nose tumours in rats and lung tumours in female mice.

11.8 REPRODUCTIVE TOXICITY:

The product contains 2-Ethyl hexanol as a component, which is rated as Toxic to Reproduction Category 2: H361d - Suspected of damaging the unborn child according to the NICNAS IMAP Report.

11.9 SPECIFIC TARGET ORGAN TOXICITY (STOT) - SINGLE EXPOSURE:

This product is rated as May cause drowsiness and dizziness. This product contains hydrocarbon components, hence inhalation of vapours or mist (generated at elevated temperatures or by mechanical action) may cause irritation to the nose and throat. Inhalation of high concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea. Exposure to high levels of hydrocarbon solvent vapours may impact on the liver and kidneys.

11.10 SPECIFIC TARGET ORGAN TOXICITY (STOT) - REPEATED EXPOSURE:

There is no data available for the product as a whole. This product is not expected to cause organ damage from prolonged or repeated exposure, based on the available data and the known hazards of the components. The product contains trimethylbenzene. The literature data indicates that long term inhalation exposure to trimethylbenzene causes blood effects in laboratory animals.

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SECTION 11 – TOXICOLOGICAL INFORMATION Continued

11.11 ASPIRATION HAZARD: This product is rated as an aspiration hazard - May be fatal if swallowed and enters airways. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary oedema. This can be fatal. As the product is hydrocarbon based, if the product has been ingested or vomiting has occurred after ingestion, the patient must seek urgent medical attention and should be monitored for adverse effects.

11.12 OTHER INFORMATION: This product contains naphthalene. Naphthalene exposure may cause severe dermatitis in sensitised persons. Ingestion of naphthalene has caused hemolysis in humans deficient in glucose-6-phosphate dehydrogenase.

SECTION 12 – ECOLOGICAL INFORMATION

12.1 ECOTOXICITY: There is no data available for the product as a whole. However, some of the components have been rated as Very toxic to aquatic life with long lasting effects and Toxic to aquatic life with long lasting effects. Based upon these nominated values the product is expected to be Harmful to aquatic life with long lasting effects.

12.2 PERSISTENCE & DEGRADABILITY: Based on the available data and the known hazards of the components, the solvent constituents are expected to be inherently biodegradable, though there may be components that persist in the environment.

12.3 BIOACCUMULATIVE POTENTIAL: There is no data available for the product as a whole.

12.4 MOBILITY IN SOIL: There is no data available for the product as a whole. The solvent component is relatively volatile and will evaporate to the air if released to the environment.

12.5 OTHER ADVERSE EFFECTS: There is no data available for the product as a whole. The product will float on water and the solvent component will evaporate rapidly into the air.

SECTION 13 – DISPOSAL CONSIDERATIONS

13.1 DISPOSAL METHODS: PRODUCT: The product should not be released to the environment, so any unused material should be recycled wherever possible or be disposed of as hazardous waste at an appropriate collection depot. The product is also suitable for incineration at very high temperatures to prevent formation of undesirable combustion products. Spilled product that cannot be recovered should be absorbed and then shovelled into a suitable waste container, such as a plastic drum and then be treated as a solid waste. Follow Government regulations for disposal of such waste. All unused, waste or spilled product must be taken for recycling or disposal by suitably licensed contractors in accordance with Government regulations. Note: Waste product must be handled as a Combustible liquid.

CONTAINERS: Empty containers may contain residual product. Caution: Residues are combustible and will ignite with a source of ignition. Containers should be completely drained in a well ventilated area where vapours cannot accumulate and then stored until reconditioned or disposed of. Empty containers should be taken for recycling or disposal through suitably licensed contractors in accordance with Government regulations. As containers may contain combustible residues, they should not be pressurised, cut by a grinder, drilled or exposed to heat, flames or other sources of ignition. Closed containers when exposed to such conditions/treatment may explode causing serious injury.

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SECTION 14 – TRANSPORT INFORMATION

This product is not regulated for land, sea or air transportation. (HS Code: 3811.29.00)

14.1 LAND (ADG Code):

UN NUMBER: Not applicable
UN PROPER SHIPPING NAME: Not applicable
TRANSPORT HAZARD CLASS(ES): Not applicable
PACKAGING GROUP: Not applicable
ENVIRONMENTAL HAZARDS: Not applicable
SPECIAL PRECAUTIONS FOR USER: Not applicable
HAZCHEM CODE: Not applicable

14.2 SEA (IMDG):

UN NUMBER: Not applicable
UN PROPER SHIPPING NAME: Not applicable
TRANSPORT HAZARD CLASS(ES): Not applicable
PACKAGING GROUP: Not applicable
ENVIRONMENTAL HAZARDS: Not applicable
SPECIAL PRECAUTIONS FOR USER: Not applicable

14.3 AIR (IATA):

UN NUMBER: Not applicable
UN PROPER SHIPPING NAME: Not applicable
TRANSPORT HAZARD CLASS(ES): Not applicable
PACKAGING GROUP: Not applicable
ENVIRONMENTAL HAZARDS: Not applicable
SPECIAL PRECAUTIONS FOR USER: Not applicable

SECTION 15 – REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS:

APPLICABLE REGULATIONS:

SUSMP: Schedule 6 (S6).
AICS: All ingredients are on the AICS List.
MONTREAL PROTOCOL: Not determined.
STOCKHOLM CONVENTION: Not determined.
ROTTERDAM CONVENTION: Not determined.
BASEL CONVENTION: Not determined.
INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS (MARPOL): Not determined.

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SECTION 15 – REGULATORY INFORMATION Continued

OTHER REGULATORY INFORMATION:

GHS CLASSIFICATION HAZARD CLASS & CATEGORY

AND HAZARD STATEMENT: Flammable Liquids Category 3; H226 - Flammable liquid and vapour.
Flammable Liquids Category 4; H227 - Combustible liquid.
Acute Toxicity Category 4; H302 - Harmful if swallowed.
Aspiration Hazard Category 1; H304 - May be fatal if swallowed and enters airway.
Acute Toxicity Category 4; H312 - Harmful in contact with skin.
Skin Corrosion/Irritation Category 1; H314 - Causes severe skin burns and eye damage.
Skin Irritation Category 2; H315 - Causes skin irritation.
Eye Irritation Category 2A; H319 - Causes serious eye irritation.
Acute Toxicity Category 4; H332 - Harmful if inhaled.
Specific Target Organ Toxicity (Single Exposure) Category 3; H335 - May cause respiratory irritation.
Specific Target Organ Toxicity (Single Exposure) Category 3; H336 - May cause drowsiness and dizziness.
Carcinogenicity Category 2; H351 - Suspected of causing cancer.
Toxic to Reproduction Category 2; H361d - Suspected of damaging the unborn child.
Chronic Aquatic Toxicity Category 1; H410 - Very toxic to aquatic life with long lasting effects.
Chronic Aquatic Toxicity Category 2; H411 - Toxic to aquatic life with long lasting effects
Chronic Aquatic Toxicity Category 3; H412 - Harmful to aquatic life with long lasting effects.
AUH066 - Repeated exposure may cause skin dryness or cracking.

HSNO APPROVAL NUMBER: HSR002587.

HSNO GROUP TITLE: Fuel Additives (Combustible, Toxic [6.7]) Group Standard 2006.

SECTION 16 – ANY OTHER RELEVANT INFORMATION

SDS INFORMATION:

Date of SDS Preparation: 12th December 2016

Revision: 3.0

REVISION CHANGES: New supplier information and changes to product formulation. Changes to Sections 1, 2, 3, 4, 8, 11, 14, 15 and 16.

ACRONYMS:

SUSMP	Standard for the Uniform Scheduling of Medicines and Poisons
CAS Number	Chemical Abstracts Service Registry Number
EINECS	European Inventory of Existing Commercial Chemical Substances
UN Number	United Nations Number
OSHA	Occupational Safety and Health Administration
ACGIH	American Conference of Governmental Industrial Hygienists
IMDG	International Maritime Dangerous Goods
IATA	International Air Transport Association
IUCLID	International Uniform Chemical Information Database
RTECS	Registry of Toxic Effects of Chemical Substances
%W/W	Percent weight for weight
OECD	Organisation for Economic Co-Operation and Development
ADG Code	Australian Code for the Transport of Dangerous Goods by Road and Rail
HAZCHEM Code	Emergency action code of numbers and letters which gives information to emergency services
NOHSC	National Occupational Health and Safety Commission
AICS	Australian Inventory of Chemical Substances
TWA	Time-Weighted Average
STEL	Short Term Exposure Limit
HSNO	Hazardous Substances and New Organisms Act 1996
GHS	Globally Harmonised System of Classification and Labelling of Chemicals
WHS	Work Health and Safety
PPE	Personal Protective Equipment.

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SECTION 16 – ANY OTHER RELEVANT INFORMATION Continued

LITERATURE REFERENCES AND SOURCES OF DATA:

OECD Guidelines for Testing of Chemicals
Annex I: OECD Test Guidelines for Studies Included in SIDS
Manual for the Assessment of Chemicals Chapter 2 Data Gathering
International Toxicity Testing Guidelines
Hazardous Substance Information System - Guidance Material for Hazard Classifications
Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice.
Model Work Health and Safety Regulations.
Model Work Health and Safety Regulations - Transitional Principles
Workplace Exposure Standards for Airborne Contaminants
Australian Dangerous Goods Code 7th Edition
Approved Criteria for Classifying Hazardous Substances [NOHSC:1008 (2004)]
Guidance on the Classification of Hazardous Chemicals under the WHS Regulations
Assigning a Hazardous Substance to a Group Standard
User Guide to the HSNO Thresholds and Classifications
Summary User Guide to the HSNO Thresholds and Classifications of Hazardous Substances
Correlation between GHS and New Zealand HSNO Hazard Classes and Categories
HSNO Control Regulations
Record of Group Standard Assignment
Labelling of Hazardous Substances Hazard and Precautionary Information
Thresholds and Classifications Under the Hazardous Substances and New Organisms Act 1996
Workplace Exposure Standards and Biological Exposure Indices
NICNAS IMAP Human Health Tier II Assessment for 1-Hexanol, 2-ethyl- CAS Number: 104-76-7

All information contained in this Safety Data Sheet and the health, safety and environmental information are considered to be accurate to the best of our knowledge as of the issue date specified above. However, no warranty or representation, expressed or implied, is made as to the accuracy or completeness of the data and information contained in this data sheet.

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