

SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION: PRODUCT IDENTIFIER/CHEMICAL IDENTITY

1.1 PRODUCT IDENTIFIER: P26 Diesel Foaming Intake Cleaner (Aerosol)

1.2 PRODUCT CODE: P26DSLAIC

1.3 RELEVANT IDENTIFIED USES OF THE MIXTURE AND USES ADVISED AGAINST:

RELEVANT IDENTIFIED USES: Automotive engine air intake and EGR cleaner.

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: HSR002515.

HSNO GROUP TITLE: Aerosols (Flammable) Group Standard, 2017.

SECTION 2 – HAZARD(S) IDENTIFICATION

2.1 CLASSIFICATION OF THE HAZARDOUS CHEMICAL:

GHS CLASSIFICATION HAZARD

CLASS & CATEGORY: The product is an aerosol hydrocarbon mixture and has been assessed under the Model Work Health and Safety Regulations with the following Classification:
Flammable Aerosols - Category 1
Gases Under Pressure - Liquefied Gas
Skin Corrosion/Irritation - Category 2
Serious eye damage/Irritation - Category 2A
Specific Target Organ Toxicity (Single Exposure) - Category 3
Chronic Aquatic Toxicity - Category 3

2.2 LABEL ELEMENTS INCLUDING PRECAUTIONARY STATEMENTS:

SIGNAL WORD: Danger.

PICTOGRAMS:



HAZARD STATEMENTS:

H222 - Extremely flammable aerosol.
H280 - Contains gas under pressure; may explode if heated.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H336 - May cause drowsiness and dizziness.
H412 - Harmful to aquatic life with long lasting effects.

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SECTION 2 – HAZARD(S) IDENTIFICATION Continued

PRECAUTIONARY STATEMENTS:

PREVENTION:

P102 - Keep out of reach of children.
P103 - Read label before use.
P210 - Keep away from heat/sparks/open flames/hot surfaces - No smoking.
P211 - Do not spray on an open flame or other ignition source.
P251 - Pressurised container. Do not pierce or burn, even after use.
P261 - Avoid breathing mists, vapours or spray.
P264 - Wash hands thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.

RESPONSE:

P101 - If medical advice is needed, have product container or label at hand.
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.
P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 - Call a POISON CENTRE (phone Australia 131 126; New Zealand 0800 764 766) or doctor/physician if you feel unwell.
P332+P313 - If skin irritation occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P362 - Take off contaminated clothing and wash before reuse.

STORAGE:

P403+P235 - Store in a well-ventilated place. Keep cool
P410+P412 - Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
P405 - Store locked up.

DISPOSAL:

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

2.3 OTHER HAZARDS:

Studies also indicate that 2-butoxyethanol is readily absorbed through the skin from aqueous solution and that skin absorption of vapours may occur. Inhalation of concentrated vapours may have a narcotic effect as well as lead to drowsiness and dizziness. The product contains liquefied petroleum gases as a propellant. These hydrocarbons can cause central nervous system depression and cardiac sensitisation at high concentrations. The product will form flammable/explosive mixtures in air. Do not spray on naked flames or any incandescent materials. The product is in a pressurised container and should be protected from sunlight and should not be exposed to temperatures exceeding 50°C. The container should not be pierced or burnt, even after use. 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*
Butane	106-97-8	5% - 15%	Flam Gas 1 - H220 Gas under Press - H280
Ethanol, 2-butoxy-, (2-Butoxyethanol)	111-76-2	5% - 12%	Acute Tox 4 - H302 Acute Tox 4 - H312 Skin Irrit 2 - H315 Eye Irrit 2A - H319 Acute Tox 4 - H332
Propane	74-98-6	1% - 10%	Flam Gas 1 - H220 Gas under Press - H280

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SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS Continued

INGREDIENTS	CAS NUMBER	Concentration % W/W	GHS Classification*
Poly(oxy-1,2-ethanediyl), .alpha.-(nonylphenyl)-.omega.-hydroxy- (Nonylphenol ethoxylates)	9016-45-9	1% - 5%	Acute Tox 4 - H302 Skin Irrit 2 - H315 Eye Irrit 2A - H319 Chron Aq Tox 2 - H411
Ammonium Hydroxide	1336-21-6	≤0.9%	Acute Tox 4 - H302 Skin Corr 1B - H314 Acute Tox 4 - H332 Acute Aq Tox 1 - H400 AUH071
Other non-hazardous ingredients		To 100%	Not Applic

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

SECTION 4 – FIRST AID MEASURES

4.1 DESCRIPTION OF NECESSARY FIRST AID MEASURES:

INGESTION:

As the product is in an aerosol container ingestion should not be a normal route of entry. If ingested, 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.

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. As the product is in a pressure pack, and rated as an eye irritant, as a precaution it is recommended that after rinsing, consult a doctor.

SKIN CONTACT:

If skin or hair contact has occurred remove any contaminated clothing and footwear, wash skin or hair thoroughly with soap and water. As the product is rated as a skin irritant, if irritation develops or persists, seek medical assistance.

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 the person feels unwell and symptoms, such as dizziness or uncoordination occur, contact the Poisons Information Centre (phone Australia 131 126; New Zealand 0800 764 766) 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.

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SECTION 4 – FIRST AID MEASURES Continued

PROTECTION FOR FIRST AIDERS:

No personnel shall place themselves in a situation that is potentially hazardous to themselves. Due to the volatility of the product, never enter the area until you have assessed the environment for oxygen depletion and flammable vapours. Never enter an environment with a flammable atmosphere. Do not enter contaminated area without a respirator or Self Contained Breathing Apparatus once you have assessed the atmosphere. As the product is hydrocarbon based, 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, or at least a source of flowing water, are recommended in the area where the product is used.

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. Inhalation of high vapour concentrations may cause central nervous system depression resulting in dizziness, drowsiness, headache, nausea and possible loss of coordination. Continued inhalation may result in unconsciousness and death. Eye contact may lead to localised burning, redness and tearing. Skin contact may lead to redness or itching. Continued skin exposure may lead to dryness and cracking. The residual component after evaporation of the propellant may present an aspiration hazard. If material is aspirated into the lungs it may exhibit as coughing, wheezing, congestion or fever.

CHRONIC:

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. A build-up of vapours in a confined space or intentional concentration of the vapours may cause symptoms, such as headache, drowsiness, dizziness, muscular weakness and in the worst case Central Nervous System depression including loss of consciousness. Intentional misuse by concentrating and inhaling the contents may be harmful or fatal. As the residual component after evaporation of the propellant may present an aspiration hazard, if ingested, 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.

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. The manufacturer states that the product is not miscible with water therefore the residual component after evaporation of the propellant will float on water.

5.2 SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE:

COMBUSTION HAZARDS:

Combustion will produce oxides of carbon, as well as small amounts of nitrogen, smoke and irritating vapours.

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SECTION 5 – FIRE FIGHTING MEASURES Continued

5.3 ADVICE FOR FIREFIGHTERS:

FIRE: This product is extremely flammable with a flash point of $< -18^{\circ}\text{C}$, due to the presence of propane and butane in an aerosol container. 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: ·2YE.

EXPLOSION: Extremely flammable gas. Vapours will form explosive mixtures with air. Vapours are heavier than air and may travel along the ground or be moved by ventilation and ignited by heat, pilot lights, other flames and ignition sources distant from the material handling point. The product is in an aerosol container that is liable to overpressure and distend or explode if subjected to sufficient heat. Ruptured aerosol containers are likely to be propelled during a fire. Extinguish all sources of flame or spark.

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 whether the atmosphere is flammable. If in doubt wear self-contained breathing apparatus. CAUTION: Never enter an environment with a flammable atmosphere. NOTE: For anything other than a spill of less than a couple of aerosol containers only trained personnel should deal with aerosol incidents.

CONTROL MEASURES: Evacuate all personnel from the spill area. Ventilate spill area and extinguish and/or remove all sources of ignition. CAUTION: Vapours may form an explosive mixture with air. Isolate area until vapours have dissipated. Never enter a spill area unless you know the vapours have dissipated to make the area safe. 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. 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. Ensure all equipment is grounded and use non-sparking tools during clean up operations. As mentioned above, spills involving a number of aerosol containers should only be dealt with by suitably trained personnel.

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SECTION 6 – ACCIDENTAL RELEASE MEASURES Continued

6.3 METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:

CONTAINMENT:

Do not enter the spill area until the vapours have dissipated. 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:

After the vapour has dissipated, having contained the residual spill material, 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 residual 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.

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

7.1 PRECAUTIONS FOR SAFE HANDLING:

SAFE HANDLING:

Caution should be exercised when handling the product, as it is a pressurised aerosol container. Do not puncture or incinerate can or expose to excessive heat whilst handling to avoid overpressure concerns. Do not leave containers in direct sunlight. 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. Do not spray onto naked flames or any incandescent material. Do not perform operations on or near containers, such as welding, grinding or drilling that may become a potential source of ignition. Avoid inhalation of vapours and spray mist that will be generated during usage. Use only in well ventilated areas. This product is extremely flammable, DO NOT smoke whilst using the product. CAUTION: Do not tamper with the valve system of the container. Prevent small spills and leakage to avoid slip hazards. Take precautions to avoid the build up of residual vapours in low spots, such as hollows, drains or sumps. Properly dispose of any contaminated rags or cleaning materials in order to prevent fire hazards. Containers, even those that are empty, will contain residual flammable vapours. 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. Prevent product from entering waterways, drains or sewers. There is the potential for electrostatic accumulation in the product. Containers should always be earthed before dispensing commences.

7.2 CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:

SAFE STORAGE:

Store in a dry, well ventilated area away from direct sunlight, heat, potential ignition sources, oxidising agents including strong acids, foodstuffs and clothing. Protect the packaging from damage. When the packaged material is intact the product is deemed to be of limited hazard. The product should be stored at a temperature of less than 50°C to avoid overpressure concerns. Inspect regularly for damage, corrosion and leaks. Ensure appropriate fire extinguishing equipment is near the storage area in case of an incident.

INCOMPATIBILITIES:

Oxidising substances including strong acids and alkalis.

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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:

Butane:

TWA: 800 ppm 1900 mg/m³

Propane (Manufacturer's Recommendation) (Asphyxiant):

TWA: 1000 ppm 1800 mg/m³

2-Butoxyethanol:

TWA: 20 ppm 96.9 mg/m³ STEL: 50 ppm 242 mg/m³

8.2 BIOLOGICAL MONITORING:

The major metabolite of 2-Butoxyethanol is 2-Butoxyacetic acid which is excreted in urine.

8.3 CONTROL BANDING: No data available.

8.4 ENGINEERING CONTROLS:

ENGINEERING CONTROLS: Local ventilation is recommended to minimise the potential for exposure and for the build up of flammable vapours. If mists or vapours are generated or in enclosed spaces exhaust ventilation must be provided to maintain airborne concentration levels below the nominated exposure standards and at an acceptable level that does not cause irritation. It is recommended when large quantities are stored that local exhaust systems are used to minimise employee exposure. 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: As the contents are under pressure, it is recommended that you wear safety glasses/goggles when handling the product to avoid eye contact. Ensure container is facing away from the person before using. 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 gloves are recommended.

SKIN (CLOTHING) PROTECTION:

During normal operating procedures, long sleeved clothing is recommended to avoid skin contact. Wash soiled clothing with detergent prior to re-use.

RESPIRATORY PROTECTION: During routine operation with local ventilation a respirator is not required, as exposure standards should not be exceeded. PLEASE NOTE: The Liquefied petroleum gases propellant contains propane which is rated as an asphyxiant in HCIS. If ventilation is inadequate a determination should be made as to the amount of oxygen in the environment before a respirator is chosen. If mists or vapours are generated or when in enclosed spaces and there is a determination that there is suitable oxygen in the environment, an approved half face organic vapour (Type AX low boiling point organic is recommended)/particulate respirator is required. Use respirators in accordance with AS 1715 and AS 1716.

THERMAL PROTECTION: Not applicable.

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SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

9.1 PHYSICAL AND CHEMICAL PROPERTIES:

APPEARANCE:	Light Yellow aerosol spray.
ODOUR:	Characteristic solvent-like.
ODOUR THRESHOLD:	No data available.
pH:	9.5
MELTING/FREEZING POINT:	No data available.
INITIAL BOILING POINT:	No data available.
BOILING RANGE (°C):	No data available.
FLASHPOINT (°C):	< -18°C. Flashpoint residual component without propellant is 42°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 @ 20.0°C):	For residual component without propellant, typically 0.93.
SOLUBILITY IN WATER (g/L):	Insoluble in water.
PARTITION COEFFICIENT:	No data available.
AUTO-IGNITION TEMP (°C):	No data available.
DECOMPOSITION TEMP (°C):	No data available.
VISCOSITY (cSt @ 100°C):	No data available.
DYNAMIC VISCOSITY:	For residual component without propellant typically 20.0mPa-s.

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 should be maintained at a temperature below 50°C. Above this temperature, the container may overpressure and deform (distend) or if sufficient heat is applied explode. Do not pierce or burn the container even after use. Avoid moist atmospheres that may lead to corrosion of the container. The product has a flash point of < -18°C. Avoid ignition sources, including heat and sparks, when storing and using the product. Observe the usual precautionary measures for handling chemicals.
10.5 INCOMPATIBLE MATERIALS:	Strong oxidising agents including concentrated acids. Follow normal Dangerous Goods Storage requirements for aerosol containers.
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.

Butane:

Inhalation - LC₅₀ (Rat, 4 hours): 658mg/L

2-Butoxyethanol:

Oral - LD₅₀ (Rat): 530 - 3,000mg/kg

Dermal - LD₅₀ (Rabbit): 100 - 610mg/kg

Inhalation - LC₅₀ (Rat, 4 hours): 2.2 - 2.4mg/L

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SECTION 11 – TOXICOLOGICAL INFORMATION Continued

11.1 INFORMATION ON TOXICOLOGICAL EFFECTS (Continued):

Nonylphenol ethoxylates:

Oral - LD₅₀ (Rat): = 1310mg/kg bw

Dermal - LD₅₀ (Rabbit): = 2 mL/kg

Ammonium Hydroxide:

Oral - LD₅₀ (Rat): = 350mg/kg

11.2 SWALLOWED:

This product is expected to have a low order of toxicity associated with it when ingested. It may cause irritation to the mouth, throat and digestive tract. Ingestion of significant quantities, though difficult to achieve with aerosol containers, may result in central nervous system depression. Ingestion may present with symptoms that may include headache, dizziness, drowsiness, muscular weakness, fainting and in the worst-case loss of consciousness. The residual component after evaporation of the propellant may present an aspiration hazard, if ingested, 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. During normal usage ingestion should not be a means of exposure. The NICNAS PEC Report states "No deaths have been reported from cases of deliberate and accidental ingestion of 2-butoxyethanol in humans, but some of the victims lapsed into coma and experienced symptoms such as metabolic acidosis, shock and respiratory distress. Haemoglobinuria was observed in two cases (at the higher doses). In humans, headache and nausea have also been reported." The NICNAS PEC Report nominates that humans are less susceptible to the effects of 2-Butoxyethanol and its metabolite 2-Butoxyacetic acid than rats and mice with effects, such as haemolysis, being shown in rats with no effects being shown at similar exposure levels in human studies.

11.3 SKIN CORROSION/ IRRITATION:

The product is classified as irritating to skin based upon component values. The NICNAS PEC Report nominates that 2-Butoxyethanol was found to be irritating to the skin of rabbits. However, studies in human volunteers resulted in slight or no irritation. Repeated exposure may cause skin dryness or cracking. Correct handling procedures incorporating appropriate protective clothing and gloves should minimise the risk of skin irritation. People with pre-existing skin conditions, such as dermatitis, should take extreme care so as not to exacerbate the condition. Direct exposure of rapidly expanding gas or vapourising liquid may cause "Cold" burns similar to frostbite.

11.4 SERIOUS EYE DAMAGE/ IRRITATION:

The product is classified as causes serious eye irritation based upon component values. The NICNAS PEC Report nominates that 2-Butoxyethanol was found to be a severe eye irritant to both humans and animals. Direct spraying of the product into the eye may cause irritation, exhibited as localised burning, redness and production of tears. In a worst case scenario the cornea may be damaged by direct injection under pressure of the product into the eye. Always ensure the outlet is pointing away from you when operating the container. 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, according to the manufacturer, based on the available data and the known hazards of the components.

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SECTION 11 – TOXICOLOGICAL INFORMATION Continued

- 11.7 CARCINOGENICITY:** The product is not expected to be a carcinogen, according to the manufacturer, based on the available data and the known hazards of the components.
- 11.8 REPRODUCTIVE TOXICITY:** This product is not expected to be a reproductive hazard, according to the manufacturer, based on the available data and the known hazards of the components.
- 11.9 SPECIFIC TARGET ORGAN TOXICITY (STOT) - SINGLE EXPOSURE:** This product is rated as May cause drowsiness and dizziness based upon component values. A build-up of vapours in a confined space or intentional concentration of the vapours may cause symptoms, such as headache, drowsiness, dizziness and muscular weakness. Inhalation of high concentrations may cause central nervous system depression resulting in headaches, dizziness and nausea. Continued inhalation of high concentration levels may result in unconsciousness and/or death. If vapours are generated during usage, they may be irritating to the eyes and respiratory tract. Intentional misuse by concentrating and inhaling the contents may be harmful or fatal. During normal use of the product with adequate ventilation, inhalation should not be a means of entry.
- 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.
- 11.11 ASPIRATION HAZARD:** As the residual component after evaporation of the propellant may present an aspiration hazard, if ingested, caution should be taken in respect to aspiration into the lungs. However, ingestion of significant quantities would be difficult to achieve with aerosol containers. Small amounts of this product aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary oedema. This can be fatal. If the product has been ingested or vomiting has occurred after ingestion, the patient should be monitored for adverse effects. As the product is in an aerosol container, continued inhalation of spray mists or aerosols may deposit material in the lung which could present as similar to the person aspirating the product into the lungs.
- 11.12 OTHER INFORMATION:** No additional data is available.

SECTION 12 – ECOLOGICAL INFORMATION

- 12.1 ECOTOXICITY:** The manufacturer nominates the following Ecotoxicity data:
- 2-Butoxyethanol:**
EC₅₀ (Daphnia magna, 48hr): >1,000mg/L.
LC₅₀ (Lepomis macrochirus, 96hr): 2590mg/L.
- Ammonium Hydroxide:**
EC₅₀ (Daphnia pulex, 48hr): 0.66mg/L.
LC₅₀ (Pimephales promelas, 96hr): 8.2mg/L.
- There is no data available for the product as a whole. Based upon calculated values, the overall product is expected to be rated as Harmful to aquatic life with long lasting effects.
- 12.2 PERSISTENCE & DEGRADABILITY:** There is no data available for the product as a whole. It is expected that the propellant will vaporise rapidly when released to atmosphere. The propellant consists of hydrocarbons that photo chemically decompose under atmospheric conditions.
- 12.3 BIOACCUMULATIVE POTENTIAL:** There is no data available for the product as a whole.

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SECTION 12 – ECOLOGICAL INFORMATION Continued

- 12.4 MOBILITY IN SOIL:** There is no data available for the product as a whole. The manufacturer nominates the following Partition Coefficient data:
Butane: 2.89, **2-Butoxyethanol:** 0.81, **Propane:** 2.3.
- 12.5 OTHER ADVERSE EFFECTS:** Do not allow the residual product to reach ground water, water courses or sewage systems.

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. Residual, 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.
- CONTAINERS:** Empty containers may contain residual product. DO NOT puncture or incinerate aerosol containers. CAUTION: Residues are highly flammable 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 disposed of. Empty aerosol containers should be taken for recycling or disposal through suitably licensed contractors in accordance with Government regulations. The containers are of metal construction and should not be re-pressurised, cut by a grinder, welded, brazed, soldered, drilled or exposed to heat, flames or other sources of ignition. Aerosol containers when exposed to such conditions/treatment may explode causing serious injury or death.

SECTION 14 – TRANSPORT INFORMATION

This product is regulated for land, sea or air transportation. Limited Quantities is 1L. (HS Code: 3402.20.90.00)

14.1 LAND (ADG Code):

- UN NUMBER:** 1950
UN PROPER SHIPPING NAME: AEROSOLS.
TRANSPORT HAZARD CLASS(ES): 2.1
PACKAGING GROUP: Not applicable.
ENVIRONMENTAL HAZARDS: No
SPECIAL PRECAUTIONS FOR USER: Special provisions: 63, 190, 277, 327, 344, 381
HAZCHEM CODE: ·2YE

14.2 SEA (IMDG):

- UN NUMBER:** 1950
UN PROPER SHIPPING NAME: AEROSOLS
TRANSPORT HAZARD CLASS(ES): 2.1
PACKAGING GROUP: Not applicable.
ENVIRONMENTAL HAZARDS: No
SPECIAL PRECAUTIONS FOR USER: MMS Number: F-D, S-U. Special Provisions: 63, 190, 277, 327, 344, 959.

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SECTION 14 – TRANSPORT INFORMATION Continued

14.3 AIR (IATA):

UN NUMBER: 1950
UN PROPER SHIPPING NAME: Aerosols, Flammable.
TRANSPORT HAZARD CLASS(ES): 2.1
PACKAGING GROUP: Not applicable
ENVIRONMENTAL HAZARDS: No
SPECIAL PRECAUTIONS FOR USER: A145, A167, A802.

SECTION 15 – REGULATORY INFORMATION

15.1 SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS:

APPLICABLE REGULATIONS:

SUSMP: Schedule 6 Poison.
AICS: All ingredients are on the AICS List.
MONTREAL PROTOCOL: Not applicable to this product.
STOCKHOLM CONVENTION: Not applicable to this product.
ROTTERDAM CONVENTION: Not applicable to this product.
BASEL CONVENTION: Not applicable to this product.
INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS (MARPOL): Not applicable for aerosols.

OTHER REGULATORY INFORMATION:

GHS CLASSIFICATION HAZARD CLASS & CATEGORY

AND HAZARD STATEMENT: Flammable Gases Category 1; H220 - Extremely flammable gas.
Flammable Aerosols Category 1; H222 - Extremely flammable aerosol.
Gases under Pressure Liquefied Gas; H280 - Contains gas under pressure; may explode if heated.
Acute Toxicity - Oral Category 4; H302 - Harmful if swallowed.
Acute Toxicity Category 4; H312 - Harmful in contact with skin.
Skin Corrosion/Irritation Category 1B; H314 - Causes severe skin burns and eye damage.
Skin Irritation Category 2; H315 - Causes skin irritation.
Serious Eye Damage/Irritation Category 2A; H319 - Causes serious eye irritation.
Acute Toxicity Category 4; H332 - Harmful if inhaled.
Specific Target Organ Toxicity (Single Exposure) Category 3; H336 - May cause drowsiness or dizziness.
Acute Aquatic Toxicity Category 1; H400 - Very toxic to aquatic life.
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.
AUH071 - Corrosive to the respiratory tract.

HSNO APPROVAL NUMBER: HSR002515.

HSNO APPROVED HAZARDOUS SUBSTANCE

NAME: Aerosols (Flammable) Group Standard, 2017.

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SECTION 16 – ANY OTHER RELEVANT INFORMATION

SDS INFORMATION:

Date of SDS Preparation: 8th January 2019

Revision: 0.1

REVISION CHANGES: Change the product name.

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
HSE-WEL	Health and Safety Executive - Workplace Exposure Limit
EH40	EH40/2005 Workplace Exposure Limits
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
NICNAS	National Industrial Chemicals Notification & Assessment Scheme
IMAP	Inventory Multi-Tiered Assessment and Prioritisation
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
LD ₅₀	Median Lethal Dose
LC ₅₀	Median Lethal Concentration
EC ₅₀	Effective Concentration of a substance that causes 50% of the maximum response after exposure for a nominated time
NOAEL	No Observed Adverse Effect Level
NOEC	No Observed Effect Concentration
ECHA	European Chemicals Agency
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
HCIS	Hazardous Chemical Information System
RCP	Reciprocal Calculation Procedure

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 (HSIS) - Guidance Material for Hazard Classifications
Preparation of Safety Data Sheets for Hazardous Chemicals Code of Practice.
Model Work Health and Safety Regulations.
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

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SECTION 16 – ANY OTHER RELEVANT INFORMATION Continued

LITERATURE REFERENCES AND SOURCES OF DATA (Continued):

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.

HCIS Hazardous Chemical Details Nonylphenol ethoxylates CAS No 9016-45-9.

NICNAS IMAP Human Health Tier II Assessment for Nonylphenol ethoxylates and their sulfate and phosphate esters including CAS Number: 9016-45-9.

NICNAS IMAP Human Health Tier II Assessment for Ammonia and Ammonium Hydroxide CAS Number 1336-21-6.

NICNAS Priority Existing Chemical (PEC) Report: 2- Butoxyethanol PEC6.

NICNAS Summary Report: 2- Butoxyethanol in cleaning products.

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.

Health and safety precautions and environmental advice noted in this data sheet may not be accurate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. The Company accepts no responsibility for any injury, loss or damage, resulting from abnormal use of the material, from any failure to adhere to recommendations, or from any hazards inherent in the nature of the material.