SAFETY DATA SHEET
POLYGARD PC Screenwash -10°C Polycarbonate Compatible

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name	POLYGARD PC Screenwash -10°C Polycarbonate Compatible
Product number	18260
Internal identification	B18920
Container size	5 Litre bottles

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses	All purpose automotive windscreen cleaner
Uses advised against	This product is not recommended for any industrial, professional or consumer use other than the identified uses stated above.

1.3. Details of the supplier of the safety data sheet

Supplier	Miswa Chemicals Ltd Caswell Road Brackmills Northampton England NN4 7PW T: +44 (0)1604 701111 F: +44 (0)1604 701120 SDSAdmin@miswa.com

1.4. Emergency telephone number

Emergency telephone	Tel.: +44 (0)1604 701111 (Miswa Office Hours Monday - Friday (0900Hrs - 1700Hrs))

SECTION 2: Hazards identification

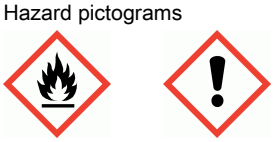
2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Flam. Liq. 3 - H226
Health hazards	Eye Irrit. 2 - H319
Environmental hazards	Not Classified
Human health	Vapours and spray/mists in high concentrations are narcotic. Symptoms following overexposure may include the following: Headache. Fatigue. Dizziness. Nausea, vomiting.
Environmental	The product is not expected to be hazardous to the environment.
Physicochemical	The product is flammable. Heating may generate flammable vapours.

2.2. Label elements

Hazard pictograms



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Signal word	Warning
Hazard statements	H226 Flammable liquid and vapour. H319 Causes serious eye irritation.
Precautionary statements	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P233 Keep container tightly closed. P240 Ground and bond container and receiving equipment. P241 Use explosion-proof electrical equipment. P242 Use non-sparking tools. P243 Take action to prevent static discharges. P264 Wash contaminated skin thoroughly after handling. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P337+P313 If eye irritation persists: Get medical advice/ attention. P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish. P403+P235 Store in a well-ventilated place. Keep cool. P501 Dispose of contents/ container in accordance with national regulations. P102 Keep out of reach of children.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

PROPAN-2-OL		10-30%
CAS number: 67-63-0	EC number: 200-661-7	REACH registration number: 01-2119457558-25-XXXX
Classification Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336		
ETHANOL		5-10%
CAS number: 64-17-5	EC number: 200-578-6	REACH registration number: 01-2119457610-43-XXXX
Classification Flam. Liq. 2 - H225 Eye Irrit. 2 - H319		

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ETHANEDIOL		5-10%
CAS number: 107-21-1	EC number: 203-473-3	REACH registration number: 01-2119456816-28-XXXX
Classification Acute Tox. 4 - H302 STOT RE 2 - H373		

METHANOL		<0.6%
CAS number: 67-56-1	EC number: 200-659-6	REACH registration number: 01-2119433307-44-XXXX
Classification Flam. Liq. 2 - H225 Acute Tox. 3 - H301 Acute Tox. 3 - H311 Acute Tox. 3 - H331 STOT SE 1 - H370		

The full text for all hazard statements is displayed in Section 16.

Composition comments: The data shown are in accordance with the latest EC Directives.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information: Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Never give anything by mouth to an unconscious person. Get medical attention if any discomfort continues.

Inhalation: Place unconscious person on their side in the recovery position and ensure breathing can take place. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention if any discomfort continues.

Ingestion: Rinse mouth thoroughly with water. Give plenty of water to drink. Give milk instead of water if readily available. Keep affected person under observation. Do not induce vomiting. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention immediately. Show this Safety Data Sheet to the medical personnel.

Skin contact: Immediately remove contaminated clothing. Rinse immediately with plenty of water. Remove contaminated clothing.

Eye contact: Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention promptly if symptoms occur after washing.

4.2. Most important symptoms and effects, both acute and delayed

General information: The severity of the symptoms described will vary dependent on the concentration and the length of exposure.

Inhalation: This is unlikely to occur but symptoms similar to those of ingestion may develop. In case of overexposure, organic solvents may depress the central nervous system causing dizziness and intoxication, and at very high concentrations unconsciousness and death.

Ingestion: May cause unconsciousness, blindness and possibly death.

Skin contact: Skin irritation.

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Eye contact	May cause blurred vision and serious eye damage.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	No specific recommendations. If in doubt, get medical attention promptly.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Extinguish with the following media: Alcohol-resistant foam. Carbon dioxide (CO2). Dry chemicals, sand, dolomite etc. Do not use water, if avoidable.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards	The product is flammable. Heating may generate flammable vapours. Thermal decomposition or combustion products may include the following substances: Toxic gases or vapours.
Hazardous combustion products	Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

5.3. Advice for firefighters

Protective actions during firefighting	Avoid breathing fire gases or vapours. Control run-off water by containing and keeping it out of sewers and watercourses.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions	Wear protective clothing as described in Section 8 of this safety data sheet.

6.2. Environmental precautions

Environmental precautions	Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body. Collect and place in suitable waste disposal containers and seal securely. Label the containers containing waste and contaminated materials and remove from the area as soon as possible.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up	Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Keep combustible materials away from spillage. Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Absorb in vermiculite, dry sand or earth and place into containers. Wash thoroughly after dealing with a spillage. Flush contaminated area with plenty of water. Take care as floors and other surfaces may become slippery.

6.4. Reference to other sections

Reference to other sections	For personal protection, see Section 8. See Section 11 for additional information on health hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions	Keep away from heat, sparks and open flame. Do not wear contact lenses. Avoid spilling. Eye wash facilities and emergency shower must be available when handling this product. During application and drying, solvent vapours will be emitted. Avoid contact with skin and eyes.

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7.2. Conditions for safe storage, including any incompatibilities

Storage precautions	Store in tightly-closed, original container in a dry and cool place. Store under well-ventilated conditions at a temperature below 25°C.
Storage class	Flammable liquid storage.

7.3. Specific end use(s)

Specific end use(s)	The identified uses for this product are detailed in Section 1.2.

SECTION 8: Exposure controls/Personal protection

8.1. Control parameters

Occupational exposure limits

PROPAN-2-OL

Long-term exposure limit (8-hour TWA): WEL 400 ppm 999 mg/m³
Short-term exposure limit (15-minute): WEL 500 ppm 1250 mg/m³

ETHANOL

Long-term exposure limit (8-hour TWA): WEL 1000 ppm 1920 mg/m³

ETHANEDIOL

Long-term exposure limit (8-hour TWA): WEL 52 mg/m³ 20 ppm
Short-term exposure limit (15-minute): WEL 104 mg/m3 40 ppm vapour
Sk
Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ particulate

METHANOL

Long-term exposure limit (8-hour TWA): WEL 200 ppm 266 mg/m³
Short-term exposure limit (15-minute): WEL 250 ppm 333 mg/m³
Long-term exposure limit (8-hour TWA): 2006/15/EC 200 ppm 260 mg/m³
Sk

WEL = Workplace Exposure Limit
Sk = Can be absorbed through skin.
Sk = Can be absorbed through the skin.

Ingredient comments	WEL = Workplace Exposure Limits

PROPAN-2-OL (CAS: 67-63-0)

DNEL	Industry - Inhalation; Long term systemic effects: 500 mg/m³ Consumer - Dermal; Long term systemic effects: 319 mg/kg/day Consumer - Oral; Long term systemic effects: 26 mg/kg/day Consumer - Inhalation; Long term systemic effects: 89 mg/m³ Industry - Dermal; Long term systemic effects: 888 mg/kg/day
PNEC	- Fresh water; 140.9 mg/l - marine water; 140.9 mg/l - Intermittent release; 140.9 mg/l - Sediment (Freshwater); 552 mg/kg - Sediment (Marinewater); 552 mg/kg - STP; 2251 mg/l - Soil; 28 mg/kg

ETHANOL (CAS: 64-17-5)

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DNEL	Workers - Dermal; Long term systemic effects: 343 mg/kg Workers - Inhalation; Long term systemic effects: 950 mg/m³ Workers - Inhalation; Short term Acute, local effects: 1900 mg/m³ Consumer - Inhalation; Short term Acute, local effects: 950 mg/m³ Consumer - Dermal; Long term systemic effects: 206 mg/kg Consumer - Inhalation; Long term systemic effects: 114 mg/m³ Consumer - Oral; Long term systemic effects: 87 mg/kg
PNEC	- Fresh water; 0.96 mg/l - marine water; 0.79 mg/l - STP; 580 mg/l - Intermittent release; 2.75 mg/l - Sediment (Freshwater); 3.6 mg/kg sediment dw - Sediment (Marinewater); 2.9 mg/kg sediment dw - Soil; 0.63 mg/kg soil dw

ETHANEDIOL (CAS: 107-21-1)

DNEL	Industry - Dermal; Long term systemic effects: 106 mg/kg bw/day Industry - Inhalation; Long term local effects: 35 mg/m³ Consumer - Dermal; Long term systemic effects: 53 mg/kg bw/day Consumer - Inhalation; Long term local effects: 7 mg/m³
PNEC	- Fresh water; 10 mg/l - marine water; 1 mg/l - Sediment (Freshwater); 37 mg/kg sediment dw - Intermittent release; 10 mg/l - Soil; 1.53 mg/kg - STP; 199.5 mg/l - Sediment (Marinewater); 3.7 mg/kg sediment dw - Soil; 1.53 mg/kg soil dw

METHANOL (CAS: 67-56-1)

DNEL	Industry - Dermal; Short term Acute: 40 mg/kg bw/day Industry - Dermal; Long term systemic effects: 40 mg/kg bw/day Industry - Inhalation; Short term Acute: 260 mg/m³ Industry - Inhalation; Long term systemic effects: 260 mg/m³ Consumer - Dermal; Short term Acute: 8 mg/kg bw/day Consumer - Dermal; Long term systemic effects: 8 mg/kg bw/day Consumer - Inhalation; Long term systemic effects: 50 mg/m³ Industry - Inhalation; Short term Acute: 260 mg/m³ Industry - Inhalation; Long term local effects: 260 mg/m³ Consumer - Inhalation; Short term Acute: 50 mg/m³ Consumer - Inhalation; Long term local effects: 50 mg/m³
PNEC	- Fresh water; 20.8 mg/l - marine water; 2.08 mg/l - Soil; 3.18 mg/kg soil dw - STP; 100 mg/l - Sediment (Freshwater); 77 mg/kg sediment dw - Intermittent release; 1540 mg/l - Sediment (Marinewater); 7.7 mg/kg sediment dw

BENZYL VIOLET 4B (CAS: 1694-09-3)

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DNEL	No DNEL available.
PNEC	No PNEC available.

8.2. Exposure controls

Protective equipment

Appropriate engineering controls	Provide adequate general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients.
Eye/face protection	Contact lenses should not be worn when working with this chemical. The following protection should be worn: Chemical splash goggles.
Hand protection	Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. In case of intensive contact, wear protective gloves (EN 374). Adhere to the manufacturer's instructions and information relating to the use, storage, care and replacement of protective gloves. protective gloves shall be replaced immediately when physically damaged or worn. Appropriate Material - Butyl, Material Thickness - 0.6 to 0.8mm, Breakthrough Time - 8Hrs
Other skin and body protection	Use engineering controls to reduce air contamination to permissible exposure level. Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact. Provide eyewash station and safety shower. Use appropriate skin cream to prevent drying of skin. Barrier cream applied before work may make it easier to clean the skin after exposure, but does not prevent absorption through the skin.
Hygiene measures	Provide eyewash station. Wash promptly if skin becomes contaminated. Promptly remove non-impervious clothing that becomes contaminated. Do not eat, drink or smoke when using this product.
Respiratory protection	If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Gas filter, type A2.
Environmental exposure controls	Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Clear liquid.
Colour	Blue.
Odour	Slight alcoholic.
pH	pH (concentrated solution): 10
Melting point	Below minus 20°C
Initial boiling point and range	~88°C @ 760 mm Hg
Flash point	30°C Closed cup.
Relative density	0.977 @ 20°C
Solubility(ies)	Completely soluble in water. Very soluble in the following materials: Alcohols.

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9.2. Other information

Volatile organic compound	This product contains a maximum VOC content of 327 g/litre.

SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	There are no known reactivity hazards associated with this product.

10.2. Chemical stability

Stability	No particular stability concerns. Stable at normal ambient temperatures and when used as recommended.

10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Not applicable. Will not polymerise.

10.4. Conditions to avoid

Conditions to avoid	Avoid heat, flames and other sources of ignition. Avoid contact with the following materials: Acids. Oxidising agents.

10.5. Incompatible materials

Materials to avoid	Strong acids. Strong alkalis. Strong oxidising agents.

10.6. Hazardous decomposition products

Hazardous decomposition products	Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

ATE oral (mg/kg)	5,555.56

Acute toxicity - dermal

ATE dermal (mg/kg)	166,666.67

Acute toxicity - inhalation

ATE inhalation (vapours mg/l)	1,666.67

General information	To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated.
Inhalation	Gas or vapour in high concentrations may irritate the respiratory system. Symptoms following overexposure may include the following: Coughing.
Ingestion	Gastrointestinal symptoms, including upset stomach.
Skin contact	Repeated exposure may cause skin dryness or cracking.
Eye contact	Irritating to eyes. Symptoms following overexposure may include the following: Redness. Pain.
Acute and chronic health hazards	Not expected to be a health hazard when used under normal conditions.
Route of exposure	Inhalation Skin absorption Ingestion. Skin and/or eye contact
Target organs	Central nervous system Eyes Gastro-intestinal tract Kidneys Liver Respiratory system, lungs Blood
Medical symptoms	Irritation of eyes and mucous membranes. Central nervous system depression. Drowsiness, dizziness, disorientation, vertigo. Visual disturbances, including blurred vision.

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Toxicological information on ingredients.

	PROPAN-2-OL
Acute toxicity - oral	
Acute toxicity oral (LD_{50} mg/kg)	5,840.0
Species	Rat Rat
Notes (oral LD_{50})	
ATE oral (mg/kg)	5,840.0
Acute toxicity - dermal	
Acute toxicity dermal (LD_{50} mg/kg)	16.4
Species	Rabbit Rabbit
ATE dermal (mg/kg)	12,874.0
Acute toxicity - inhalation	
Acute toxicity inhalation (LC_{50} vapours mg/l)	25.5
Species	Rat
ATE inhalation (vapours mg/l)	25.5
Skin corrosion/irritation	
Animal data	Not irritating.
Serious eye damage/irritation	
Serious eye damage/irritation	Rabbit eyes: Severe eye irritation.
Respiratory sensitisation	
Respiratory sensitisation	Not available.
Skin sensitisation	
Skin sensitisation	Not considered to be a skin sensitizer
Germ cell mutagenicity	
Genotoxicity - in vitro	Negative.
Genotoxicity - in vivo	Negative.
Reproductive toxicity	
Reproductive toxicity - fertility	Does not interfere with fertility.
Reproductive toxicity - development	No evidence of reproductive toxicity in animal studies.
Specific target organ toxicity - single exposure	
STOT - single exposure	Inhalation: May cause drowsiness and dizziness.
Specific target organ toxicity - repeated exposure	

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STOT - repeated exposure	Oral and inhalation repeated exposure studies demonstrated target organ effects in male rats (kidney) and male/female mice (thyroid) by mechanisms of action that are not relevant to humans. Based on available data the classification criteria are not met.
Aspiration hazard	
Aspiration hazard	Aspiration hazard if swallowed. The fluid can enter the lungs and cause damage (chemical pneumonitis, possibly fatal).
Inhalation	Drowsiness, dizziness, disorientation, vertigo.
Ingestion	No specific health hazards known.
Skin contact	No specific health hazards known.
Eye contact	Irritating to eyes. Splashes in eyes may cause strong pain. Vapour acts as irritant.
Acute and chronic health hazards	Small amounts of liquid aspirated into the respiritory system during ingestion or from vomiting may cause bronchopneumonia or pulmonary oedema.

ETHANOL

Acute toxicity - oral	
Acute toxicity oral (LD_{50} mg/kg)	7,060.0
Species	Rat
ATE oral (mg/kg)	7,060.0
Acute toxicity - dermal	
Acute toxicity dermal (LD_{50} mg/kg)	2,001.0
Species	Rabbit
ATE dermal (mg/kg)	2,001.0
Acute toxicity - inhalation	
Acute toxicity inhalation (LC_{50} vapours mg/l)	124.7
Species	Rat
ATE inhalation (vapours mg/l)	124.7
Skin corrosion/irritation	
Animal data	Not irritating.
Serious eye damage/irritation	
Serious eye damage/irritation	Irritating to eyes: Category 2.
Skin sensitisation	
Skin sensitisation	Not sensitising.
Germ cell mutagenicity	
Genotoxicity - in vitro	Based on available data the classification criteria are not met.

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Genotoxicity - in vivo	Based on available data the classification criteria are not met.
Carcinogenicity	
Carcinogenicity	Based on available data the classification criteria are not met.
Reproductive toxicity	
Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Specific target organ toxicity - single exposure	
STOT - single exposure	Data lacking.
Specific target organ toxicity - repeated exposure	
STOT - repeated exposure	Data lacking.
Aspiration hazard	
Aspiration hazard	No data available.

Ingestion	After absorption: euphoria. After a latency period: dizziness, inebriation, paralysis, cyanosis, narcosis, respiratory paralysis.

ETHANEDIOL

Acute toxicity - oral	
Acute toxicity oral (LD_{50} mg/kg)	7,712.0
Species	Rat
Notes (oral LD_{50})	Acute oral toxicity is expected to be moderate in humans eventhough animals test results would suggest a low toxicity. Ingestion of approximately 100ml has caused death in humans. Ingestion may cause nausea, vomiting, abdominal discomfort or diarrhea. Excessive exposure may cause central nervous system effects, cardiopulmonary effects and kidney failure.
ATE oral (mg/kg)	500.0
Acute toxicity - dermal	
Acute toxicity dermal (LD_{50} mg/kg)	3,501.0
Species	Mouse
ATE dermal (mg/kg)	3,501.0
Acute toxicity - inhalation	
Acute toxicity inhalation (LC_{50} vapours mg/l)	2.6
Species	Rat
Notes (inhalation LC_{50})	At room temperature exposure to vapour is minimal due to low volatility. With good ventilation single exposure is not expected to cause adverse effect. If the product is heated or the working area has poor ventilation, vapour/mist may accumulate and cause respiratory irritation and symptoms such as headache and nausea.
Skin corrosion/irritation	

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Animal data	Not irritating. Rabbit
Serious eye damage/irritation	
Serious eye damage/irritation	Not irritating. Rabbit
Respiratory sensitisation	
Respiratory sensitisation	Guinea pig: Not sensitising.
Skin sensitisation	
Skin sensitisation	- Guinea pig: Not sensitising.
Germ cell mutagenicity	
Genotoxicity - in vitro	Negative.
Genotoxicity - in vivo	Negative.
Carcinogenicity	
Carcinogenicity	The current toxicological kowledge allows to not classify the product as a carcinogen.
Reproductive toxicity	
Reproductive toxicity - fertility	Ingestion of large amounts has been shown to interfere with reproduction in animals.
Specific target organ toxicity - repeated exposure	
STOT - repeated exposure	Observations in humans include: Nystagmus (involuntary eye movement). In animals effects have been reported on the following organs: kidneys and liver. NOAEL 150 mg/kg/day, Oral, Rat
Target organs	Kidneys
Inhalation	At room temperature, exposure to vapor is minimal due to low volatility. With good ventilation, single exposure is not expected to cause adverse effects. If material is heated or areas are poorly ventilated, vapor/mist may accumulate and cause respiratory irritation and symptoms such as headache and nausea.
Ingestion	Oral toxicity is expected to be moderate in humans due to ethylene glycol even though tests with animals show a lower degree of toxicity. Ingestion of quantities (approximately 65 mL (2 oz.) for diethylene glycol or 100 mL (3 oz.) for ethylene glycol) has caused death in humans. May cause nausea and vomiting. May cause abdominal discomfort or diarrhea. Excessive exposure may cause central nervous system effects, cardiopulmonary effects (metabolic acidosis), and kidney failure. For Ethylene glycol: Lethal Dose, Human, adult 100 ml LD50, rat, male and female 7,712 mg/kg.
Skin contact	Prolonged skin contact is unlikely to result in absorption of harmful amounts. Repeated skin exposure to large quantities may result in absorption of harmful amounts. Massive contact with damaged skin or of material sufficiently hot to burn skin may result in absorption of potentially lethal amounts.
Eye contact	May cause temporary eye irritation.
Route of exposure	Ingestion.
Target organs	Kidneys Liver

SECTION 12: Ecological information

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Ecotoxicity	The product is not expected to be hazardous to the environment. The product components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

12.1. Toxicity

Ecological information on ingredients.

PROPAN-2-OL

Acute aquatic toxicity	
Acute toxicity - fish	LC_{50}, 96 hours: 9640 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	EC_{50}, 24 hours: 9714 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 72 hours: > 1000 mg/l, Scenedesmus subspicatus
Acute toxicity - microorganisms	EC_{50}, : > 1000 mg/l, Activated sludge

ETHANOL

Acute aquatic toxicity	
Acute toxicity - fish	LC50, 96 hours: 15300 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: 9268 - 14221 mg/l, Daphnia magna
Acute toxicity - aquatic plants	LOEC, 192 hours: 5000 mg/l, Scenedesmus subspicatus
Acute toxicity - microorganisms	LOEC, : 6500 (16hr) mg/l,

ETHANEDIOL

Toxicity	Product not classified as dangerous to aquatic organisms.
Acute aquatic toxicity	
Acute toxicity - fish	LC50, 96 hours: 72860 mg/l, Pimephales promelas (Fat-head Minnow)
Acute toxicity - aquatic invertebrates	EC_{50}, 48 hours: > 100 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC_{50}, 96 hours: 6500 - 13000 mg/l, Selenastrum capricornutum
Acute toxicity - microorganisms	EC20, 30 minutes: > 1995 mg/l, Activated sludge
Chronic aquatic toxicity	
Chronic toxicity - fish early life stage	NOEC, 7 days: 15380 mg/l, Pimephales promelas (Fat-head Minnow)
Chronic toxicity - aquatic invertebrates	NOEC, 7 days: 8590 mg/l, Ceriodaphnia Sp.

12.2. Persistence and degradability

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Persistence and degradability	The surfactant(s) contained in this product complies(comply) with the biodegradability criteria as laid down in Regulation (EC) No. 648/2004 on detergents. Data to support this assertion are held at the disposal of the competent authorities of the Member States and will be made available to them at their direct request, or at the request of a detergent manufacturer. The product is biodegradable but it must not be discharged into drains without permission from the authorities.

Ecological information on ingredients.

PROPAN-2-OL

Persistence and degradability	The product is expected to be biodegradable.
Biodegradation	Water - Degradation (%) 95%: 21 days

ETHANOL

Persistence and degradability	The product is biodegradable.

ETHANEDIOL

Persistence and degradability	The product is biodegradable.
Biodegradation	Water - Degradation (%) 90 - 100%: 10 days Passes OECD test(s) for ready biodegradability. Material is ultimately biodegradable (reaches > 70% biodegradation in OECD test(s) for inherent biodegradability).

12.3. Bioaccumulative potential

Bioaccumulative potential	The product does not contain any substances expected to be bioaccumulating.

Ecological information on ingredients.

PROPAN-2-OL

Bioaccumulative potential	The product is not bioaccumulating.
Partition coefficient	log Pow: 0.05

ETHANOL

Partition coefficient	log Pow: < 2

ETHANEDIOL

Bioaccumulative potential	Not potentially bioaccumulative
Partition coefficient	log Pow: -1.36

12.4. Mobility in soil

Mobility	The product is soluble in water.

Ecological information on ingredients.

PROPAN-2-OL

Mobility	The product is soluble in water.

Adsorption/desorption coefficient	Water - Koc: ~ 1.1 @ °C
Henry's law constant	0.00000338 atm m3/mol @ 25°C

ETHANEDIOL

Mobility	The product is soluble in water. Volatilization from natural bodies of water or moist soil is not expected to be an important fate process. Potential for mobility in soil is very high.
Adsorption/desorption coefficient	Water - Koc: ~ 1 @ °C
Henry's law constant	~ 8.05E-09 atm m3/mol @ 25°C

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment	This product does not contain any substances classified as PBT or vPvB.

Ecological information on ingredients.

PROPAN-2-OL

Results of PBT and vPvB assessment	This substance is not classified as PBT or vPvB according to current EU criteria.

ETHANEDIOL

Results of PBT and vPvB assessment	This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information	Waste should be treated as controlled waste. Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority. The packaging must be empty (drop-free when inverted).
Disposal methods	Absorb in vermiculite, dry sand or earth and place into containers. Dispose of waste via a licensed waste disposal contractor. Containers should be thoroughly emptied before disposal because of the risk of an explosion.

SECTION 14: Transport information

14.1. UN number

UN No. (ADR/RID)	1987
UN No. (IMDG)	1987
UN No. (ICAO)	1987
UN No. (ADN)	1987

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	ALCOHOLS, N.O.S. (CONTAINS ETHANOL, PROPAN-2-OL)

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Proper shipping name (IMDG)	ALCOHOLS, N.O.S. (CONTAINS ETHANOL, PROPAN-2-OL)
Proper shipping name (ICAO)	ALCOHOLS, N.O.S. (CONTAINS ETHANOL, PROPAN-2-OL)
Proper shipping name (ADN)	ALCOHOLS, N.O.S. (CONTAINS ETHANOL, PROPAN-2-OL)

14.3. Transport hazard class(es)

ADR/RID class	3
ADR/RID classification code	F1
ADR/RID label	3
IMDG class	3
ICAO class/division	3
ADN class	3

Transport labels

14.4. Packing group

ADR/RID packing group	III
IMDG packing group	III
ICAO packing group	III
ADN packing group	III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

EmS	F-E, S-D
ADR transport category	3
Emergency Action Code	•3Y
Hazard Identification Number (ADR/RID)	30
Tunnel restriction code	(D/E)

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	Not applicable.

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

National regulations	Control of Pollution (Special Waste) Regulations 1980 (as amended). The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).

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EU legislation	Dangerous Substances Directive 67/548/EEC. Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH) (as amended). Regulation (EC) No 1272/2008 of the European Parliament and of the Council of 16 December 2008 on classification, labelling and packaging of substances and mixtures (as amended).
Guidance	Workplace Exposure Limits EH40. Introduction to Local Exhaust Ventilation HS(G)37. CHIP for everyone HSG228. Approved Classification and Labelling Guide (Sixth edition) L131.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Revision comments	NOTE: Lines within the margin indicate significant changes from the previous revision.
Issued by	HS&E Manager.
Revision date	14/02/2020
SDS number	20793
SDS status	Approved.
Hazard statements in full	H225 Highly flammable liquid and vapour. H226 Flammable liquid and vapour. H301 Toxic if swallowed. H302 Harmful if swallowed. H311 Toxic in contact with skin. H319 Causes serious eye irritation. H331 Toxic if inhaled. H336 May cause drowsiness or dizziness. H370 Causes damage to organs (Central nervous system, Optic Nerve (Nervus Opticus)). H373 May cause damage to organs (Kidneys) through prolonged or repeated exposure if swallowed.