

SAFETY DATA SHEET

Quantum Screenwash - Ready To Use NF

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

1.1. Product identifier

Product name	Quantum Screenwash - Ready To Use NF
Product number	ZGBOOQSWRO 5LNF
Internal identification	B18931, 18528

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	Volkswagen Group United Kingdom Ltd Yeomans Drive Blakelands Milton Keynes
	MK14 5AN 01908 601601

1.4. Emergency telephone number

Emergency telephone	Tel: +44 1604 701111 (Office Hours Monday - Friday (0900 Hrs - 1700 Hrs))
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

Physical hazards	Flam. Liq. 3 - H226
Health hazards	Not Classified
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

Pictogram



Signal word Warning

Hazard statements H226 Flammable liquid and vapour.

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Precautionary statements	<p>P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</p> <p>P233 Keep container tightly closed.</p> <p>P240 Ground and bond container and receiving equipment.</p> <p>P241 Use explosion-proof electrical equipment.</p> <p>P242 Use non-sparking tools.</p> <p>P243 Take action to prevent static discharges.</p> <p>P264 Wash contaminated skin thoroughly after handling.</p> <p>P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.</p> <p>P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.</p> <p>P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P337+P313 If eye irritation persists: Get medical advice/ attention.</p> <p>P370+P378 In case of fire: Use foam, carbon dioxide, dry powder or water fog to extinguish.</p> <p>P403+P235 Store in a well-ventilated place. Keep cool.</p> <p>P501 Dispose of contents/ container in accordance with national regulations.</p> <p>P102 Keep out of reach of children.</p>
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Detergent labelling < 5% non-ionic surfactants, < 5% perfumes, Contains BENZISOTHIAZOLINONE

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

ETHANOL 5-10%			
<table> <tr> <td>CAS number: 64-17-5</td> <td>EC number: 200-578-6</td> <td>REACH registration number: 01-2119457610-43-XXXX</td> </tr> </table>	CAS number: 64-17-5	EC number: 200-578-6	REACH registration number: 01-2119457610-43-XXXX
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			
METHANOL <0.6%			
<table> <tr> <td>CAS number: 67-56-1</td> <td>EC number: 200-659-6</td> <td>REACH registration number: 01-2119433307-44-XXXX</td> </tr> </table>	CAS number: 67-56-1	EC number: 200-659-6	REACH registration number: 01-2119433307-44-XXXX
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			

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2-BUTOXYETHANOL <1%		
CAS number: 111-76-2	EC number: 203-905-0	REACH registration number: 01-2119475108-36-XXXX
Classification Acute Tox. 4 - H302 Acute Tox. 4 - H312 Acute Tox. 4 - H332 Skin Irrit. 2 - H315 Eye Irrit. 2 - H319		
2,6-DIMETHYL-7-OCTEN-2-OL <1%		
CAS number: 18479-58-8	EC number: 242-362-4	REACH registration number: 01-2119457274-37-XXXX
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319		
PROPYLENE GLYCOL <1%		
CAS number: 57-55-6	EC number: 200-338-0	REACH registration number: 01-2119456809-23-XXXX
Classification Not Classified		
SODIUM HYDROXIDE <1%		
CAS number: 1310-73-2	EC number: 215-185-5	REACH registration number: 01-2119457892-27-XXXX
Classification Met. Corr. 1 - H290 Skin Corr. 1A - H314 Eye Dam. 1 - H318		
PIN-2(10)-ENE <1%		
CAS number: 127-91-3	EC number: 204-872-5	
Classification Flam. Liq. 3 - H226 Skin Irrit. 2 - H315 Skin Sens. 1B - H317 Asp. Tox. 1 - H304		

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TERPINOLENE	<1%	
CAS number: 586-62-9	EC number: 209-578-0	
M factor (Acute) = 1	M factor (Chronic) = 1	
Classification		
Skin Sens. 1B - H317		
Asp. Tox. 1 - H304		
Aquatic Acute 1 - H400		
Aquatic Chronic 1 - H410		
ALPHA-PINENE	<1%	
CAS number: 80-56-8	EC number: 201-291-9	
M factor (Acute) = 1		
Classification		
Flam. Liq. 3 - H226		
Skin Irrit. 2 - H315		
Skin Sens. 1 - H317		
Asp. Tox. 1 - H304		
Aquatic Acute 1 - H400		
BUTYLATED HYDROXYTOLUENE	<1%	
CAS number: 128-37-0	EC number: 204-881-4	REACH registration number: 01-2119565113-46-XXXX
M factor (Acute) = 1	M factor (Chronic) = 1	
Classification		
Aquatic Acute 1 - H400		
Aquatic Chronic 1 - H410		

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.

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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.

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

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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.

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

ETHANOL

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

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

2-BUTOXYETHANOL

Long-term exposure limit (8-hour TWA): WEL 25 ppm 123 mg/m³

Short-term exposure limit (15-minute): WEL 50 ppm 246 mg/m³

Sk

2,6-DIMETHYL-7-OCTEN-2-OL

No exposure limit value known.

PROPYLENE GLYCOL

Long-term exposure limit (8-hour TWA): WEL 474 mg/m³ 150 ppm particulate vapour

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³ particulate

SODIUM HYDROXIDE

Short-term exposure limit (15-minute): WEL 2 mg/m³

PIN-2(10)-ENE

No exposure limit value known.

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TERPINOLENE

No exposure limit value known.

ALPHA-PINENE

No exposure limit value known.

BUTYLATED HYDROXYTOLUENE

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³

WEL = Workplace Exposure Limit

Sk = Can be absorbed through skin.

Sk = Can be absorbed through the skin.

Ingredient comments

WEL = Workplace Exposure Limits

ETHANOL (CAS: 64-17-5)

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

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

2-BUTOXYETHANOL (CAS: 111-76-2)

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DNEL

Industry - Dermal; Short term : 89 mg/kg/day
 Industry - Inhalation; Short term : 663 mg/m³
 Industry - Dermal; Long term : 75 mg/kg/day
 Industry - Inhalation; Long term : 98 mg/m³
 Consumer - Dermal; Short term : 44.5 mg/kg/day
 Consumer - Oral; Short term : 13.4 mg/kg/day
 Consumer - Inhalation; Short term : 123 mg/m³
 Consumer - Inhalation; Long term : 49 mg/m³

PNEC

- Fresh water; 8.8 mg/l
- Marine water; 0.88 mg/l
- Soil; 3.13 mg/kg soil dw
- Intermittent release; 9.1 mg/l
- Sediment (Freshwater); 34.6 mg/kg sediment dw
- Sediment (Marinewater); 3.46 mg/kg sediment dw
- STP; 463 mg/l

FATTY ALCOHOL ALKOXYLATE 4 (CAS: 111905-53-4)

DNEL No DNEL available.

PNEC No PNEC available.

2,6-DIMETHYL-7-OCTEN-2-OL (CAS: 18479-58-8)

DNEL

Workers - Inhalation; Long term systemic effects: 73.5 mg/m³
 Workers - Dermal; Long term systemic effects: 20.8 mg/kg bw/day
 General population - Inhalation; Long term systemic effects: 21.7 mg/m³
 General population - Dermal, Oral; Long term systemic effects: 12.5 mg/kg bw/day

PNEC

- Fresh water; 0.0278 mg/l
- Marine water; 0.00278 mg/l
- Intermittent release; 0.278 mg/l
- STP; 10 mg/l
- Sediment (Freshwater); 0.594 mg/kg sediment dw
- Sediment (Marinewater); 0.0594 mg/kg sediment dw
- Soil; 0.103 mg/kg soil dw

PROPYLENE GLYCOL (CAS: 57-55-6)

DNEL

Industry - Inhalation; Long term systemic effects: 168 mg/m³
 Industry - Inhalation; Long term local effects: 10 mg/m³
 Consumer - Inhalation; Long term systemic effects: 50 mg/m³
 Consumer - Inhalation; Long term local effects: 10 mg/m³

PNEC

- Fresh water; 260 mg/l
- Marine water; 26 mg/l
- STP; 20000 mg/kg
- Sediment (Freshwater); 572 mg/kg
- Sediment (Marinewater); 57.2 mg/kg
- Soil; 50 mg/kg
- Intermittent release; 183 mg/l

3,7-DIMETHYL-1,6-OCTADIEN-3-OL (CAS: 78-70-6)

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DNEL

Workers - Inhalation; Long term systemic effects: 2.8 mg/m³
 Workers - Inhalation; Short term Acute: 16.5 mg/m³
 Workers - Dermal; Long term systemic effects: 2.5 mg/kg bw/day
 Workers - Dermal; Short term Acute: 5 mg/kg bw/day
 Workers - Dermal; Long term local effects: 15 mg/cm²
 Workers - Dermal; Short term Acute: 15 mg/cm²
 General population - Inhalation; Long term systemic effects: 0.7 mg/m³
 General population - Inhalation; Short term Acute: 4.1 mg/m³
 General population - Dermal; Long term systemic effects: 1.25 mg/kg bw/day
 General population - Dermal; Short term Acute: 2.5 mg/kg bw/day
 General population - Dermal; Long term local effects: 15 mg/cm²
 General population - Dermal; Short term Acute: 15 mg/cm²
 General population - Oral; Long term systemic effects: 0.2 mg/kg bw/day
 General population - Oral; Short term Acute: 1.2 mg/kg bw/day

PNEC

- Fresh water; 0.2 mg/l
- Marine water; 0.02 mg/l
- Intermittent release; 2 mg/l
- STP; 10 mg/l
- Sediment (Freshwater); 2.22 mg/kg sediment dw
- Sediment (Marinewater); 0.222 mg/kg sediment dw
- Soil; 0.327 mg/kg soil dw

CITRAL (CAS: 5392-40-5)

DNEL

Workers - Inhalation; Long term systemic effects: 9 mg/m³
 Workers - Dermal; Long term systemic effects: 1.7 mg/kg bw/day
 Workers - Dermal; Long term local effects: 0.14 mg/cm²
 General population - Inhalation; Long term systemic effects: 2.7 mg/m³
 General population - Dermal; Long term systemic effects: 1 mg/kg bw/day
 General population - Dermal; Long term local effects: 0.14 mg/cm²
 General population - Oral; Long term systemic effects: 0.6 mg/kg bw/day

PNEC

- Fresh water; 0.00678 mg/l
- Marine water; 0.000678 mg/l
- Intermittent release; 0.0678 mg/l
- STP; 1.6 mg/l
- Sediment (Freshwater); 0.125 mg/kg sediment dw
- Sediment (Marinewater); 0.0125 mg/kg sediment dw
- Soil; 0.0209 mg/kg soil dw

d-LIMONENE (CAS: 5989-27-5)

DNEL

Workers - Inhalation; Long term systemic effects: 33.3 mg/m³
 Workers - Dermal; Short term local effects, Acute: 0.222 mg/cm²
 General population - Inhalation; Long term systemic effects: 8.33 mg/m³
 General population - Dermal; Short term local effects, Acute: 0.111 mg/cm²
 General population - Oral; Long term systemic effects: 4.76 mg/kg bw/day

PNEC

- Fresh water; 0.0054 mg/l
- Marine water; 0.00054 mg/l
- STP; 1.8 mg/l
- Sediment (Freshwater); 1.32 mg/kg sediment dw
- Marine water; 0.13 mg/kg sediment dw
- Soil; 0.262 mg/kg soil dw

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GERANIOL (CAS: 106-24-1)

DNEL Workers - Inhalation; Long term systemic effects: 161.6 mg/m³
 Workers - Dermal; Long term systemic effects: 12.5 mg/kg bw/day
 Workers - Dermal; Long term local effects: 11.8 mg/cm²
 General population - Inhalation; Long term systemic effects: 47.8 mg/m³
 General population - Dermal; Long term systemic effects: 7.5 mg/kg bw/day
 General population - Dermal; Long term local effects: 11.8 mg/cm²
 General population - Oral; Long term systemic effects: 13.75 mg/kg bw/day

PNEC - Fresh water; 0.0108 mg/l
 - Marine water; 0.00108 mg/l
 - Intermittent release; 0.108 mg/l
 - STP; 0.7 mg/l
 - Sediment (Freshwater); 0.115 mg/kg
 - Sediment (Marinewater); 0.0115 mg/kg
 - Soil; 0.0167 mg/kg

BUTYLPHENYL METHYLPROPIONAL (CAS: 80-54-6)

DNEL Workers - Inhalation; Long term systemic effects: 0.201 mg/m³
 Workers - Dermal; Long term systemic effects: 0.0569 mg/kg bw/day
 Workers - Dermal; Long term local effects: 0.41 mg/cm²
 Workers - Dermal; Short term Acute: 0.41 mg/cm²
 General population - Inhalation; Long term systemic effects: 0.0593 mg/m³
 General population - Inhalation; Long term local effects: 0.0593 mg/m³
 General population - Dermal; Long term systemic effects: 0.0342 mg/kg bw/day
 General population - Dermal; Short term Acute: 0.205 mg/cm²
 General population - Dermal; Long term local effects: 0.41 mg/cm²
 General population - Oral; Long term systemic effects: 0.0342 mg/kg bw/day
 General population - Oral; Short term Acute: 0.205 mg/kg bw/day

PNEC - Fresh water; 0.00204 mg/l
 - Marine water; 0.000204 mg/l
 - Intermittent release; 0.0204 mg/l
 - STP; 1.049 mg/l
 - Soil; 0.0463 mg/kg soil dw

PARA-MENTH-1-EN-8-OL (CAS: 98-55-5)

DNEL No DNEL available.

PNEC - STP; 2.6 mg/l
 - Sediment (Freshwater); 1.85 mg/kg
 - Sediment (Marinewater); 0.185 mg/kg
 - Soil; 0.329 mg/kg

CITRONELLOL (CAS: 106-22-9)

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DNEL

Workers - Inhalation; Long term systemic effects: 161.6 mg/m³
 Workers - Inhalation; Long term local effects: 10 mg/m³
 Workers - Inhalation; Short term Acute: 10 mg/m³
 Workers - Dermal; Long term systemic effects: 327.4 mg/kg bw/day
 General population - Inhalation; Long term systemic effects: 47.8 mg/m³
 General population - Inhalation; Long term local effects: 10 mg/m³
 General population - Inhalation; Short term Acute: 10 mg/m³
 General population - Dermal; Long term systemic effects: 196.4 mg/kg bw/day
 General population - Dermal; Short term local effects, Acute: 2.950 mg/cm²
 Workers - Dermal; Short term Acute, local effects: 2.950 mg/cm²
 General population - Oral; Long term systemic effects: 13.8 mg/kg bw/day

PNEC

- Fresh water; 0.0024 mg/l
- Marine water; 0.00024 mg/l
- Intermittent release; 0.024 mg/l
- STP; 580 mg/l
- Sediment (Freshwater); 0.0256 mg/kg sediment dw
- Sediment (Marinewater); 0.00256 mg/kg sediment dw
- Soil; 0.00371 mg/kg soil dw

SODIUM HYDROXIDE (CAS: 1310-73-2)

DNEL

Consumer - Inhalation; local effects: 1 mg/m³
 Industry - Inhalation; Long term local effects: 1 mg/m³

Nerol (CAS: 106-25-2)

DNEL

Workers - Inhalation; Long term systemic effects: 5.4 mg/m³
 Workers - Dermal; Long term systemic effects: 0.76 mg/kg bw/day
 Workers - Dermal; Long term local effects: 0.133 mg/cm²
 General population - Inhalation; Long term systemic effects: 1.3 mg/m³
 General population - Dermal; Long term systemic effects: 0.38 mg/kg bw/day
 General population - Oral; Long term systemic effects: 0.38 mg/kg bw/day

PNEC

- Fresh water; 0.00745 mg/l
- Marine water; 0.000745 mg/l
- Intermittent release; 0.0745 mg/l
- STP; 12.9 mg/l
- Sediment (Freshwater); 0.133 mg/kg sediment dw
- Sediment (Marinewater); 0.0133 mg/kg sediment dw
- Soil; 0.0223 mg/kg soil dw

CINNAMYL ALCOHOL (CAS: 104-54-1)

DNEL

Workers - Inhalation; Long term systemic effects: 2.277 mg/m³
 Workers - Dermal; Long term systemic effects: 1.998 mg/kg bw/day
 General population - Inhalation; Long term systemic effects: 0.5665 mg/m³
 General population - Dermal; Long term systemic effects: 0.4926 mg/kg bw/day
 General population - Oral; Long term systemic effects: 3.995 mg/kg bw/day

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- PNEC**
- Fresh water; 0.109 mg/l
 - Marine water; 0.0109 mg/l
 - Intermittent release; 1.09 mg/l
 - STP; 16.127 mg/l
 - Sediment (Freshwater); 220.188 mg/kg sediment dw
 - Sediment (Marinewater); 220.188 mg/kg sediment dw
 - Soil; 0.185 mg/kg soil dw

Decanal (CAS: 112-31-2)

- DNEL**
- Workers - Inhalation; Long term systemic effects: 24.9 mg/m³
 - Workers - Dermal; Long term systemic effects: 7 mg/kg bw/day
 - General population - Inhalation; Long term systemic effects: 6.1 mg/m³
 - General population - Dermal; Long term systemic effects: 3.5 mg/kg bw/day
 - General population - Oral; Long term systemic effects: 3.5 mg/kg bw/day

- PNEC**
- Fresh water; 0.00117 mg/l
 - Marine water; 0.000117 mg/l
 - Intermittent release; 0.0117 mg/l
 - STP; 3.16 mg/l
 - Sediment (Freshwater); 0.0972 mg/kg sediment dw
 - Sediment (Marinewater); 0.00972 mg/kg sediment dw
 - Soil; 0.0187 mg/kg soil dw

Octanal (CAS: 124-13-0)

- DNEL**
- Workers - Inhalation; Long term systemic effects: 1.3 mg/m³
 - Workers - Dermal; Long term systemic effects: 0.37 mg/kg bw/day
 - General population - Inhalation; Long term systemic effects: 0.32 mg/m³
 - General population - Dermal; Long term systemic effects: 0.19 mg/kg bw/day
 - General population - Oral; Long term systemic effects: 0.19 mg/kg bw/day

- PNEC**
- Fresh water; 0.00154 mg/l
 - Marine water; 0.000154 mg/l
 - STP; 3.16 mg/l
 - Sediment (Freshwater); 0.07146 mg/kg sediment dw
 - Sediment (Marinewater); 0.00715 mg/kg sediment dw
 - Soil; 0.01339 mg/kg soil dw

4-(2,6,-TRIMETHYLCYCLOHEX-1-ENE-1-YL)-BUT-3-ENE-2-ONE (CAS: 14901-07-6)

- DNEL**
- Workers - Inhalation; Long term systemic effects: 23.21 mg/m³
 - Workers - Dermal; Long term systemic effects: 13.17 mg/kg bw/day
 - General population - Inhalation; Long term systemic effects: 5.72 mg/m³
 - General population - Dermal; Long term systemic effects: 6.58 mg/kg bw/day
 - General population - Oral; Long term systemic effects: 3.29 mg/kg bw/day

- PNEC**
- Fresh water; 0.004146 mg/l
 - Marine water; 0.0004146 mg/l
 - Intermittent release; 0.04146 mg/l
 - STP; 0.698 mg/l
 - Sediment (Freshwater); 63.23 mg/kg sediment dw
 - Sediment (Marinewater); 63.23 mg/kg sediment dw
 - Soil; 29.47 mg/kg soil dw

PIN-2(10)-ENE (CAS: 127-91-3)

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DNEL Workers - Inhalation; Long term systemic effects: 5.98 mg/m³
 Workers - Dermal; Short term local effects, Acute: 0.161 mg/cm²
 General population - Inhalation; Long term systemic effects: 1.06 mg/m³
 General population - Dermal; Short term local effects, Acute: 0.081 mg/cm²
 General population - Oral; Long term systemic effects: 0.31 mg/kg bw/day

PNEC - Fresh water; 0.002 mg/l
 - Marine water; 0.0002 mg/l
 - STP; 3.26 mg/l
 - Sediment (Freshwater); 0.485 mg/kg sediment dw
 - Sediment (Marinewater); 0.048 mg/kg sediment dw
 - Soil; 0.49 mg/kg soil dw

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

DNEL No DNEL available.

PNEC No PNEC available.

ALPHA-PINENE (CAS: 80-56-8)

DNEL Workers - Inhalation; Long term systemic effects: 5.98 mg/m³
 Workers - Dermal; Short term Acute: 0.161 mg/cm²
 General population - Inhalation; Long term systemic effects: 1.06 mg/m³
 General population - Dermal; Short term systemic effects, Acute: 0.081 mg/cm²
 General population - Oral; Long term systemic effects: 0.31 mg/kg bw/day

PNEC - Fresh water; 0.004 mg/l
 - Marine water; 0.0004 mg/l
 - STP; 3.26 mg/l
 - Sediment (Freshwater); 1.033 mg/kg sediment dw
 - Sediment (Marinewater); 0.103 mg/kg sediment dw
 - Soil; 0.539 mg/kg soil dw

DELTA-DAMASCONE (CAS: 57378-68-4)

DNEL No DNEL available.

PNEC No PNEC available.

MYRCENE (CAS: 123-35-3)

DNEL Workers - Inhalation; Long term systemic effects: 5.83 mg/m³
 Workers - Dermal; Long term systemic effects: 0.83 mg/kg bw/day
 General population - Inhalation; Long term systemic effects: 1.25 mg/m³
 General population - Dermal; Long term systemic effects: 0.42 mg/kg bw/day
 General population - Oral; Long term systemic effects: 0.42 mg/kg bw/day

PNEC - Fresh water; 0.008 mg/l
 - Marine water; 0.0008 mg/l
 - STP; 0.2 mg/l
 - Sediment (Freshwater); 5.022 mg/kg sediment dw
 - Sediment (Marinewater); 0.502 mg/kg sediment dw
 - Soil; 1.015 mg/kg soil dw

TERPINOLENE (CAS: 586-62-9)

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DNEL	Workers - Inhalation; Long term systemic effects: 3.6 mg/m ³ Workers - Dermal; Long term systemic effects: 0.52 mg/kg bw/day Workers - Dermal; Long term local effects: 0.044 mg/cm ² General population - Inhalation; Long term systemic effects: 0.9 mg/m ³ General population - Dermal, Oral; Long term systemic effects: 0.26 mg/kg bw/day
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PNEC	- Fresh water; 0.000634 mg/l - Marine water; 0.0000634 mg/l - Intermittent release; 0.00634 mg/l - STP; 0.2 mg/l - Sediment (Freshwater); 0.147 mg/kg sediment dw - Sediment (Marinewater); 0.0147 mg/l - Soil; 0.0291 mg/l
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BUTYLATED HYDROXYTOLUENE (CAS: 128-37-0)

DNEL	Workers - Inhalation; Long term systemic effects: 3.5 mg/m ³ Workers - Dermal; Long term systemic effects: 0.5 mg/kg bw/day General population - Inhalation; Long term systemic effects: 0.86 mg/m ³ General population - Dermal, Oral; Long term systemic effects: 0.25 mg/kg bw/day
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PNEC	- Fresh water; 0.000199 mg/l - Marine water; 0.0000199 mg/l - Intermittent release; 0.00199 mg/l - STP; 0.17 mg/l - Sediment (Freshwater); 0.996 mg/l - Sediment (Marinewater); 0.00996 mg/l - Soil; 0.04769 mg/l
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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.

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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. Perfume.
pH	pH (concentrated solution): 6.5 - 8.5
Melting point	Below minus 8°C
Initial boiling point and range	~90°C @ 760 mm Hg
Flash point	45°C Closed cup.
Relative density	0.975-0.985g/ml @ 20°C
Solubility(ies)	Completely soluble in water. Very soluble in the following materials: Alcohols.

9.2. Other information

Volatile organic compound	This product contains a maximum VOC content of 110 g/litre.
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SECTION 10: Stability and reactivity

10.1. Reactivity

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

Stability	No particular stability concerns. Stable at normal ambient temperatures and when used as recommended.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	Not applicable. Will not polymerise.
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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.
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10.5. Incompatible materials

Materials to avoid	Strong acids. Strong alkalis. Strong oxidising agents.
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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.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

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ATE oral (mg/kg) 18,750.0

Acute toxicity - dermal

ATE dermal (mg/kg) 18,750.0

Acute toxicity - inhalation

ATE inhalation (vapours mg/l) 187.5

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.

Toxicological information on ingredients.

METHANOL

Acute toxicity - oral

Acute toxicity oral (LD₅₀ mg/kg) 5,628.0

Species Rat

Notes (oral LD₅₀) Toxic if swallowed.

ATE oral (mg/kg) 300.0

Acute toxicity - dermal

Acute toxicity dermal (LD₅₀ mg/kg) 15,800.0

Species Rabbit

Notes (dermal LD₅₀) Toxic in contact with skin.

ATE dermal (mg/kg) 300.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC₅₀ vapours mg/l) 83.2

Species Rat

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Notes (inhalation LC₅₀)	Toxic if inhaled.
ATE inhalation (vapours mg/l)	3.0
<u>Skin corrosion/irritation</u>	
Animal data	Not irritating.
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Not irritating.
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	Based on available data the classification criteria are not met.
<u>Skin sensitisation</u>	
Skin sensitisation	Not sensitising.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	This substance has no evidence of mutagenic properties. Negative.
<u>Carcinogenicity</u>	
Carcinogenicity	Based on available data the classification criteria are not met.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Fertility: - NOAEC 1.3 mg/l, , Rat Based on available data the classification criteria are not met.
<u>Specific target organ toxicity - single exposure</u>	
STOT - single exposure	Causes damage to organs .
Target organs	Central nervous system Optic Nerve (Nervus Opticus)
<u>Specific target organ toxicity - repeated exposure</u>	
STOT - repeated exposure	Based on available data the classification criteria are not met.
<u>Aspiration hazard</u>	
Aspiration hazard	Based on available data the classification criteria are not met.
.	
Inhalation	Toxic by inhalation. Possible effects include headache, dizziness, cramp, nausea, vomiting, blindness, unconsciousness and death. Danger of very serious irreversible effects.
Ingestion	Toxic if swallowed. Possible effects include headache, dizziness, nausea, vomiting, cramp, blindness, unconsciousness and death. There is danger of very serious and irreversible effects if swallowed.
Skin contact	Toxic in contact with skin. Danger of serious irreversible effects.

2-BUTOXYETHANOL

<u>Acute toxicity - oral</u>	
Acute toxicity oral (LD₅₀ mg/kg)	1,414.0
Species	Guinea pig

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ATE oral (mg/kg)	1,414.0
<u>Acute toxicity - dermal</u>	
ATE dermal (mg/kg)	2,000.0
<u>Acute toxicity - inhalation</u>	
ATE inhalation (vapours mg/l)	11.0
<u>Skin corrosion/irritation</u>	
Extreme pH	Slightly irritating. Rabbit
<u>Serious eye damage/irritation</u>	
Serious eye damage/irritation	Slightly irritating. Rabbit
<u>Respiratory sensitisation</u>	
Respiratory sensitisation	Based on available data the classification criteria are not met.
<u>Skin sensitisation</u>	
Skin sensitisation	Based on available data the classification criteria are not met.
<u>Germ cell mutagenicity</u>	
Genotoxicity - in vitro	Negative.
Genotoxicity - in vivo	Negative.
<u>Carcinogenicity</u>	
Carcinogenicity	Based on available data the classification criteria are not met.
<u>Reproductive toxicity</u>	
Reproductive toxicity - fertility	Based on available data the classification criteria are not met.
Reproductive toxicity - development	No evidence of reproductive toxicity in animal studies.
.	
Inhalation	Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.
Ingestion	Harmful: may cause lung damage if swallowed. Pneumonia may be the result if vomited material containing solvents reaches the lungs.
Skin contact	Repeated exposure may cause skin dryness or cracking.
Eye contact	Irritation of eyes and mucous membranes.
Route of exposure	Ingestion Inhalation
Target organs	Brain Respiratory system, lungs Mucous membranes
Medical symptoms	Skin irritation. Irritation of eyes and mucous membranes. High concentration of vapours may irritate respiratory system and lead to headache, fatigue, nausea and vomiting.

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.

METHANOL

Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 96 hours: 15400 mg/l, Lepomis macrochirus (Bluegill)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: > 10000 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 96 hours: ~ 22000 mg/l, Pseudokirchneriella subcapitata

2-BUTOXYETHANOL

Acute aquatic toxicity

Acute toxicity - fish	LC ₅₀ , 96 hours: 1464 mg/l, Oncorhynchus mykiss (Rainbow trout)
Acute toxicity - aquatic invertebrates	EC ₅₀ , 48 hours: 1800 mg/l, Daphnia magna
Acute toxicity - aquatic plants	EC ₅₀ , 72 hours: 911 mg/l, Pseudokirchneriella subcapitata NOEC, 72 hours: 88 mg/l, Pseudokirchneriella subcapitata

12.2. Persistence and degradability

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.

METHANOL

Biodegradation The substance is readily biodegradable.

2-BUTOXYETHANOL

Persistence and degradability The product is readily biodegradable.

12.3. Bioaccumulative potential

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

Ecological information on ingredients.

METHANOL

Bioaccumulative potential Not potentially bioaccumulative
Partition coefficient : -0.77

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2-BUTOXYETHANOL

Partition coefficient log Pow: < 2 : 0.8

12.4. Mobility in soil

Mobility The product is soluble in water.

Ecological information on ingredients.

METHANOL

Mobility The product is soluble in water. The product contains volatile organic compounds (VOCs) which will evaporate easily from all surfaces.

2-BUTOXYETHANOL

Mobility The product is soluble in water.

Henry's law constant 0.0098 Pa m³/mol @ °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.

METHANOL

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

2-BUTOXYETHANOL

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

Ecological information on ingredients.

METHANOL

Other adverse effects Do not allow material to contaminate ground water system.

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) 1993

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UN No. (IMDG)	1993
UN No. (ICAO)	1993
UN No. (ADN)	1993

14.2. UN proper shipping name

Proper shipping name (ADR/RID) FLAMMABLE LIQUID, N.O.S. (CONTAINS PROPAN-2-OL, METHANOL)

Proper shipping name (IMDG) FLAMMABLE LIQUID, N.O.S. (CONTAINS PROPAN-2-OL, METHANOL)

Proper shipping name (ICAO) FLAMMABLE LIQUID, N.O.S. (CONTAINS PROPAN-2-OL, METHANOL)

Proper shipping name (ADN) FLAMMABLE LIQUID, N.O.S. (CONTAINS PROPAN-2-OL, METHANOL)

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
ADN packing group	III
ICAO packing group	III

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

EmS	F-E, S-E
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

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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).
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	06/11/2018
Revision	8
Supersedes date	29/06/2018
SDS number	20529
SDS status	Approved.

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Hazard statements in full

H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H290 May be corrosive to metals.
H301 Toxic if swallowed.
H302 Harmful if swallowed.
H304 May be fatal if swallowed and enters airways.
H311 Toxic in contact with skin.
H312 Harmful in contact with skin.
H314 Causes severe skin burns and eye damage.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H318 Causes serious eye damage.
H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H370 Causes damage to organs (Central nervous system, Optic Nerve (Nervus Opticus)).
H400 Very toxic to aquatic life.
H410 Very toxic to aquatic life with long lasting effects.

This information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process. Such information is, to the best of the company's knowledge and belief, accurate and reliable as of the date indicated. However, no warranty, guarantee or representation is made to its accuracy, reliability or completeness. It is the user's responsibility to satisfy himself as to the suitability of such information for his own particular use.