

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:

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture****Classification****Physical hazards**

Flam. Liq. 3 - H226

Health hazards

Eye Irrit. 2 - H319

Environmental hazards

Not Classified

Classification (67/548/EEC or 1999/45/EC)

R10.

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

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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/bond container and receiving equipment.
P241 Use explosion-proof electrical equipment.
P242 Use only non-sparking tools.
P243 Take precautionary measures against static discharge.
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/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.

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

PROPAN-2-OL	10-30%
CAS number: 67-63-0 EC number: 200-661-7 REACH registration number: 01-2119457558-25-XXXX	
Classification	Classification (67/548/EEC or 1999/45/EC)
Flam. Liq. 2 - H225	F;R11 Xi;R36 R67
Eye Irrit. 2 - H319	
STOT SE 3 - H336	
METHANOL	1-5%
CAS number: 67-56-1 EC number: 200-659-6 REACH registration number: 01-2119433307-44-XXXX	
Classification	Classification (67/548/EEC or 1999/45/EC)
Flam. Liq. 2 - H225	F;R11 T;R23/24/25,R39/23/24/25
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	Classification (67/548/EEC or 1999/45/EC) Xn;R20/21/22 Xi;R36/38
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	Classification (67/548/EEC or 1999/45/EC) Xi;R36/38.
PROPYLENE GLYCOL <1%	
CAS number: 57-55-6 EC number: 200-338-0 REACH registration number: 01-2119456809-23-XXXX	
Classification Not Classified	Classification (67/548/EEC or 1999/45/EC) -
SODIUM HYDROXIDE <1%	
CAS number: 1310-73-2 EC number: 215-185-5 REACH registration number: 01-2119457892-27-XXXX	
Classification Skin Corr. 1A - H314 Eye Dam. 1 - H318	Classification (67/548/EEC or 1999/45/EC) C;R35

The Full Text for all R-Phrases and Hazard Statements are 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. 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.

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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

Methods for cleaning up

Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate

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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

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

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

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

WEL = Workplace Exposure Limit

Sk = Can be absorbed through skin.

Ingredient comments

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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

METHANOL (CAS: 67-56-1)

DNEL Industry - Dermal; Short term systemic effects: 40 mg/kg/day
 Industry - Dermal; Long term systemic effects: 40 mg/kg/day
 Industry - Inhalation; Short term systemic effects: 260 mg/m3
 Industry - Inhalation; Long term systemic effects: 260 mg/m3
 Consumer - Oral; Short term systemic effects: 8 mg/kg/day
 Consumer - Oral; Long term systemic effects: 8 mg/kg/day
 Consumer - Dermal; Short term systemic effects: 8 mg/kg/day
 Consumer - Dermal; Long term systemic effects: 8 mg/kg/day
 Consumer - Inhalation; Short term systemic effects: 50 mg/m3
 Industry - Inhalation; Short term local effects: 260 mg/m³
 Industry - Inhalation; Long term local effects: 260 mg/m³
 Consumer - Inhalation; Short term local effects: 50 mg/m³
 Consumer - Inhalation; Long term systemic effects: 50 mg/m³
 Consumer - Inhalation; Long term local effects: 50 mg/m³

PNEC - Fresh water; 154 mg/l
 - Marine water; 15.4 mg/l
 - Soil; 23.5 mg/kg
 - STP; 100 mg/l
 - Sediment (Freshwater); 570.4 mg/l

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

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

Quantum Screenwash - Ready To Use NF**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; 0.000278 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)

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

Quantum Screenwash - Ready To Use NF**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

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

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

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BUTYLPHENYL METHYLPROPIONAL (CAS: 80-54-6)

DNEL
 Workers - Inhalation; Long term systemic effects: 0.048 mg/m³
 Workers - Inhalation; Short term Acute: 0.29 mg/m³
 Workers - Inhalation; Long term local effects: 0.048 mg/m³
 Workers - Dermal; Long term systemic effects: 3.33 mg/kg bw/day
 Workers - Dermal; Short term Acute: 20 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: 0.012 mg/m³
 General population - Inhalation; Short term Acute: 0.07 mg/m³
 General population - Inhalation; Long term local effects: 0.012 mg/m³
 General population - Dermal; Long term systemic effects: 1.67 mg/kg bw/day
 General population - Dermal; Short term Acute: 20 mg/kg bw/day
 General population - Dermal; Short term Acute: 0.41 mg/cm²
 General population - Dermal; Long term local effects: 0.41 mg/cm²
 General population - Oral; Long term systemic effects: 0.007 mg/kg bw/day
 General population - Oral; Short term Acute: 0.041 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
 - Sediment (Freshwater); 0.0584 mg/kg sediment dw
 - Sediment (Marinewater); 0.00584 mg/kg sediment dw
 - Soil; 0.0463 mg/kg soil dw

CITRONELLOL (CAS: 106-22-9)

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

Quantum Screenwash - Ready To Use NF**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

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

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

DNEL	Workers - Inhalation; Long term systemic effects: 0.245 mg/m ³ Workers - Dermal; Long term systemic effects: 0.139 mg/kg bw/day General population - Inhalation; Long term systemic effects: 0.0603 mg/m ³ General population - Dermal; Long term systemic effects: 0.0694 mg/kg bw/day
PNEC	- Fresh water; 0.00146 mg/l - Marine water; 0.000146 mg/l - Intermittent release; 0.0146 mg/l - STP; 0.0428 mg/l - Sediment (Freshwater); 22.451 mg/kg sediment dw - Sediment (Marinewater); 22.451 mg/kg sediment dw - Soil; 10.466 mg/kg soil dw

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.

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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 CC (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.

SECTION 10: Stability and reactivity

10.1. 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

Not applicable. Will not polymerise.

10.4. 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

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)

30,000.0

Acute toxicity - dermal

ATE dermal (mg/kg)

100000.0

Acute toxicity - inhalation

ATE inhalation (vapours mg/l)

1000.0

General information

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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 entry

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.

PROPAN-2-OL

Acute toxicity - oral

Acute toxicity oral (LD50 mg/kg)

5,840

Species

Rat Rat

ATE oral (mg/kg)

5,840.0

Acute toxicity - dermal

Acute toxicity dermal (LD50 mg/kg)

16.4

Species

Rabbit Rabbit

ATE dermal (mg/kg)

12874.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC50 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

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Rabbit eyes: Severe eye irritation.

Respiratory sensitisation

Not available.

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

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 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 respiratory system during ingestion or from vomiting may cause bronchopneumonia or pulmonary oedema.

METHANOL

Acute toxicity - oral

Acute toxicity oral (LD50 mg/kg)

5,623.0

Species

Rat

ATE oral (mg/kg)

300.0

Acute toxicity - dermal

Acute toxicity dermal (LD50 mg/kg)

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17100.0

Species

Rabbit

ATE dermal (mg/kg)

1000.0

Acute toxicity - inhalation

Acute toxicity inhalation (LC50 vapours mg/l)

83.2

Species

Rat

ATE inhalation (vapours mg/l)

10.0

Skin corrosion/irritation

Animal data

Not irritating.

Serious eye damage/irritation

Not irritating.

Respiratory sensitisation

Guinea pig: Not sensitising.

Skin sensitisation

Not sensitising.

Germ cell mutagenicity

Genotoxicity - in vitro

This substance has no evidence of mutagenic properties. Negative.

Carcinogenicity

This substance has no evidence of carcinogenic properties.

Reproductive toxicity

Reproductive toxicity - fertility

Fertility: - NOAEC 1.3 mg/l, , Rat Conclusive data but not sufficient for classification.

Specific target organ toxicity - single exposure

STOT - single exposure

Causes damage to organs .

Target organs

Eyes Central nervous system

Specific target organ toxicity - repeated exposure

STOT - repeated exposure

Based on available data the classification criteria are not met.

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

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Toxic in contact with skin. Danger of serious irreversible effects.

2-BUTOXYETHANOL

Acute toxicity - oral

ATE oral (mg/kg)

2,000.0

Acute toxicity - dermal

ATE dermal (mg/kg)

2000.0

Acute toxicity - inhalation

ATE inhalation (vapours mg/l)

20.0

Skin corrosion/irritation

Extreme pH

Slightly irritating. Rabbit

Serious eye damage/irritation

Slightly irritating. Rabbit

Respiratory sensitisation

Based on available data the classification criteria are not met.

Skin sensitisation

Based on available data the classification criteria are not met.

Germ cell mutagenicity

Genotoxicity - in vitro

Negative.

Genotoxicity - in vivo

Negative.

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.

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 entry

Ingestion Inhalation

Target organs

Brain Respiratory system, lungs Mucous membranes

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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

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 toxicity - fish

LC₅₀, 96 hours: 9640 mg/l, *Pimephales promelas* (Fat-head Minnow)

Acute toxicity - aquatic invertebrates

EC₅₀, 24 hours: 9714 mg/l, *Daphnia magna*

Acute toxicity - aquatic plants

EC₅₀, 72 hours: > 1000 mg/l, *Scenedesmus subspicatus*

Acute toxicity - microorganisms

EC₅₀, : > 1000 mg/l, Activated sludge

METHANOL

Acute toxicity - fish

LC₅₀, 96 hours: 15400 mg/l, *Lepomis macrochirus* (Bluegill)

Acute toxicity - aquatic invertebrates

EC₅₀, 48 hours: > 10000 mg/l, *Daphnia magna*

Acute toxicity - aquatic plants

EC₅₀, 96 hours: ~ 22000 mg/l, *Pseudokirchneriella subcapitata*

2-BUTOXYETHANOL

Acute toxicity - fish

LC₅₀, 96 hours: >100 mg/l, Fish

Acute toxicity - aquatic invertebrates

EC₅₀, 48 hours: >100 mg/l, *Daphnia magna*

Acute toxicity - aquatic plants

EC₅₀, : 900 mg/l, *Scenedesmus subspicatus*

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.

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Ecological information on ingredients.

PROPAN-2-OL

Persistence and degradability

The product is expected to be biodegradable.

Biodegradation

- Degradation (%) 95%: 21 days

METHANOL

Biodegradation

The substance is readily biodegradable.

2-BUTOXYETHANOL

Persistence and degradability

The product is readily biodegradable.

12.3. Bioaccumulative potential

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

Ecological information on ingredients.

PROPAN-2-OL

The product is not bioaccumulating.

Partition coefficient

log Pow: 0.05

METHANOL

Not potentially bioaccumulative

Partition coefficient

: ~ 0.77

2-BUTOXYETHANOL

Partition coefficient

log Pow: < 2 : 0.8

12.4. Mobility in soil

Mobility

The product is soluble in water.

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Ecological information on ingredients.

PROPAN-2-OL

Mobility

The product is soluble in water.

Adsorption/desorption coefficient

Soil - Koc: ~ 1.1 @ °C

Henry's law constant

0.00000338 atm m³/mol @ 25°C

METHANOL

Mobility

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

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

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

Ecological information on ingredients.

PROPAN-2-OL

This substance is not classified as PBT or vPvB according to current EU criteria.

METHANOL

This substance is not classified as PBT or vPvB according to current EU criteria.

2-BUTOXYETHANOL

This substance is not classified as PBT or vPvB according to current EU criteria.

12.6. Other adverse effects

Ecological information on ingredients.

METHANOL

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

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UN No. (ADN) 1993

14.2. UN proper shipping name

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

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

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

Proper shipping name (ADN) FLAMMABLE LIQUID, N.O.S. (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

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-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 MARPOL73/78 and the IBC Code**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

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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 29/09/2014

Revision 4

Supersedes date 10/12/2012

SDS number 20529

SDS status Approved.

Risk phrases in full

- R10 Flammable.
- R11 Highly flammable.
- R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.
- R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
- R36 Irritating to eyes.
- R36/38 Irritating to eyes and skin.
- R39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
- R67 Vapours may cause drowsiness and dizziness.

Hazard statements in full

- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- H301 Toxic 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 .

Disclaimer

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.