



## SAFETY DATA SHEET

### POLYGARD SCREENWASH (Arctic) READY TO USE (-8°C)

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

##### 1.1. Product identifier

Product name	POLYGARD SCREENWASH (Arctic) READY TO USE (-8°C)
Product number	18500,18214,18583
Internal identification	B18904

##### 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
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##### 1.4. Emergency telephone number

Emergency telephone	T: +44 (0)1604 701111 (Miswa Office Hours Monday - Friday (0900Hrs - 1700Hrs))
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#### SECTION 2: Hazards identification

##### 2.1. Classification of the substance or mixture

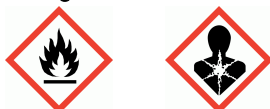
###### Classification

Physical hazards	Flam. Liq. 3 - H226
Health hazards	STOT SE 2 - H371
Environmental hazards	Not Classified

Classification (67/548/EEC or 1999/45/EC) Xn;R20/21/22,R68/20/21/22. R10.

##### 2.2. Label elements

###### Pictogram



###### Signal word

Warning

## POLYGARD SCREENWASH (Arctic) READY TO USE (-8°C)

<b>Hazard statements</b>	H226 Flammable liquid and vapour. H371 May cause damage to organs .
<b>Precautionary statements</b>	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. P260 Do not breathe vapour/spray. P264 Wash contaminated skin thoroughly after handling. P270 Do not eat, drink or smoke when using this product. 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. P308+P311 IF exposed or concerned: Call a POISON CENTER or doctor. 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. P405 Store locked up. P501 Dispose of contents/container in accordance with national regulations. P102 Keep out of reach of children.
<b>Contains</b>	METHANOL
<b>Detergent labelling</b>	< 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

<b>METHANOL</b>	<b>5-10%</b>
CAS number: 67-56-1	EC number: 200-659-6
	REACH registration number: 01-2119433307-44-XXXX
<b>Classification</b>	<b>Classification (67/548/EEC or 1999/45/EC)</b>
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	
<b>2-BUTOXYETHANOL</b>	<b>&lt;1%</b>
CAS number: 111-76-2	EC number: 203-905-0
	REACH registration number: 01-2119475108-36-XXXX
<b>Classification</b>	<b>Classification (67/548/EEC or 1999/45/EC)</b>
Acute Tox. 4 - H302	Xn;R20/21/22 Xi;R36/38
Acute Tox. 4 - H312	
Acute Tox. 4 - H332	
Skin Irrit. 2 - H315	
Eye Irrit. 2 - H319	

## POLYGARD SCREENWASH (Arctic) READY TO USE (-8°C)

<b>PROPYLENE GLYCOL</b>		<b>&lt;1%</b>
CAS number: 57-55-6	EC number: 200-338-0	REACH registration number: 01-2119456809-23-XXXX
<b>Classification</b> Not Classified	<b>Classification (67/548/EEC or 1999/45/EC)</b> -	
<b>2,6-DIMETHYL-7-OCTEN-2-OL</b>		<b>&lt;1%</b>
CAS number: 18479-58-8	EC number: 242-362-4	REACH registration number: 01-2119457274-37-XXXX
<b>Classification</b> Skin Irrit. 2 - H315 Eye Irrit. 2 - H319	<b>Classification (67/548/EEC or 1999/45/EC)</b> Xi;R36/38.	
<b>SODIUM HYDROXIDE</b>		<b>&lt;1%</b>
CAS number: 1310-73-2	EC number: 215-185-5	REACH registration number: 01-2119457892-27-XXXX
<b>Classification</b> Met. Corr. 1 - H290 Skin Corr. 1A - H314 Eye Dam. 1 - H318	<b>Classification (67/548/EEC or 1999/45/EC)</b> C;R35	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

<b>General information</b>	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.
<b>Inhalation</b>	Remove affected person from source of contamination. Keep affected person away from heat, sparks and flames. Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen.
<b>Ingestion</b>	Do not induce vomiting. Rinse mouth thoroughly with water. 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. Do not induce vomiting. Get medical attention immediately.
<b>Skin contact</b>	Remove affected person from source of contamination. Immediately remove contaminated clothing. Wash skin thoroughly with soap and water. Get medical attention promptly if symptoms occur after washing.
<b>Eye contact</b>	Remove affected person from source of contamination. Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Get medical attention if any discomfort continues.

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

<b>General information</b>	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
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## POLYGARD SCREENWASH (Arctic) READY TO USE (-8°C)

<b>Inhalation</b>	In the unlikely event of over exposure to organic solvent vapours from this product, symptoms which may develop include headache, fatigue, dizziness and nausea.
<b>Ingestion</b>	Ingestion of large amounts may result in unconsciousness, blindness and death.
<b>Skin contact</b>	Skin irritation.
<b>Eye contact</b>	May cause temporary eye irritation.

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

<b>Notes for the doctor</b>	No specific recommendations. If in doubt, get medical attention promptly.
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## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

<b>Suitable extinguishing media</b>	Use fire-extinguishing media suitable for the surrounding fire. Extinguish with the following media: Alcohol-resistant foam. Carbon dioxide (CO <sub>2</sub> ). Water spray, fog or mist. Dry chemicals, sand, dolomite etc.
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<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
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### 5.2. Special hazards arising from the substance or mixture

<b>Specific hazards</b>	Fire creates: Toxic gases/vapours/fumes of: Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ). May explode when heated or when exposed to flames or sparks. Solvent vapours may form explosive mixtures with air. Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back. Vapours are heavier than air and may spread near ground and travel a considerable distance to a source of ignition and flash back. May form explosive or toxic mixtures with air. Vapour explosion and poison hazard indoors, outdoors and in sewers.
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<b>Hazardous combustion products</b>	Oxides of carbon. Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapours.
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### 5.3. Advice for firefighters

<b>Protective actions during firefighting</b>	Cool containers exposed to flames with water until well after the fire is out.
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<b>Special protective equipment for firefighters</b>	Wear chemical protective suit. Use air-supplied respirator, gloves and protective goggles.
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## SECTION 6: Accidental release measures

### 6.1. Personal precautions, protective equipment and emergency procedures

<b>Personal precautions</b>	Ensure suitable respiratory protection is worn during removal of spillages in confined areas. Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Avoid inhalation of vapours and contact with skin and eyes. Provide adequate ventilation. In case of spills, beware of slippery floors and surfaces. Take precautionary measures against static discharges. No smoking, sparks, flames or other sources of ignition near spillage.
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### 6.2. Environmental precautions

<b>Environmental precautions</b>	Do not discharge into drains or watercourses or onto the ground. Spillages or uncontrolled discharges into watercourses must be reported immediately to the Environmental Agency or other appropriate regulatory body.
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### 6.3. Methods and material for containment and cleaning up

## POLYGARD SCREENWASH (Arctic) READY TO USE (-8°C)

**Methods for cleaning up** Wear suitable protective equipment, including gloves, goggles/face shield, respirator, boots, clothing or apron, as appropriate. Stop leak if possible without risk. DO NOT touch spilled material! Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Provide adequate ventilation. Contain spillage with sand, earth or other suitable non-combustible material. Avoid the spillage or runoff entering drains, sewers or watercourses. Cover large spillages with alcohol-resistant foam. Contain and absorb spillage with sand, earth or other non-combustible material. Collect and place in suitable waste disposal containers and seal securely. For waste disposal, see Section 13.

### 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** Avoid spilling. Keep away from heat, sparks and open flame. Provide adequate ventilation. Avoid inhalation of vapours. Use approved respirator if air contamination is above an acceptable level. 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, cool and well-ventilated place. Keep away from oxidising materials, heat and flames. May attack some plastics, rubber and coatings. Take precautionary measures against static discharges.

**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

##### METHANOL

Long-term exposure limit (8-hour TWA): WEL 200 ppm 266 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 250 ppm 333 mg/m<sup>3</sup>

Long-term exposure limit (8-hour TWA): 2006/15/EC 200 ppm 260 mg/m<sup>3</sup>

Sk

##### 2-BUTOXYETHANOL

Long-term exposure limit (8-hour TWA): WEL 25 ppm 123 mg/m<sup>3</sup>

Short-term exposure limit (15-minute): WEL 50 ppm 246 mg/m<sup>3</sup>

Sk

##### PROPYLENE GLYCOL

Long-term exposure limit (8-hour TWA): WEL 474 mg/m<sup>3</sup> 150 ppm particulate vapour

Long-term exposure limit (8-hour TWA): WEL 10 mg/m<sup>3</sup> particulate

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

No exposure limit value known.

##### SODIUM HYDROXIDE

Short-term exposure limit (15-minute): WEL 2 mg/m<sup>3</sup>

## POLYGARD SCREENWASH (Arctic) READY TO USE (-8°C)

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

### METHANOL (CAS: 67-56-1)

<b>DNEL</b>	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/m <sup>3</sup> Industry - Inhalation; Long term systemic effects: 260 mg/m <sup>3</sup> 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/m <sup>3</sup> Industry - Inhalation; Short term Acute: 260 mg/m <sup>3</sup> Industry - Inhalation; Long term local effects: 260 mg/m <sup>3</sup> Consumer - Inhalation; Short term Acute: 50 mg/m <sup>3</sup> Consumer - Inhalation; Long term local effects: 50 mg/m <sup>3</sup>
<b>PNEC</b>	- 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)

<b>DNEL</b>	Industry - Dermal; Short term : 89 mg/kg/day Industry - Inhalation; Short term : 663 mg/m <sup>3</sup> Industry - Dermal; Long term : 75 mg/kg/day Industry - Inhalation; Long term : 98 mg/m <sup>3</sup> Consumer - Dermal; Short term : 44.5 mg/kg/day Consumer - Oral; Short term : 13.4 mg/kg/day Consumer - Inhalation; Short term : 123 mg/m <sup>3</sup> Consumer - Inhalation; Long term : 49 mg/m <sup>3</sup>
<b>PNEC</b>	- 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)

<b>DNEL</b>	No DNEL available.
<b>PNEC</b>	No PNEC available.

### PROPYLENE GLYCOL (CAS: 57-55-6)

<b>DNEL</b>	Industry - Inhalation; Long term systemic effects: 168 mg/m <sup>3</sup> Industry - Inhalation; Long term local effects: 10 mg/m <sup>3</sup> Consumer - Inhalation; Long term systemic effects: 50 mg/m <sup>3</sup> Consumer - Inhalation; Long term local effects: 10 mg/m <sup>3</sup>
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## POLYGARD SCREENWASH (Arctic) READY TO USE (-8°C)

- 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

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

- DNEL**
- Workers - Inhalation; Long term systemic effects: 73.5 mg/m<sup>3</sup>
  - Workers - Dermal; Long term systemic effects: 20.8 mg/kg bw/day
  - General population - Inhalation; Long term systemic effects: 21.7 mg/m<sup>3</sup>
  - 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

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

- DNEL**
- Workers - Inhalation; Long term systemic effects: 2.8 mg/m<sup>3</sup>
  - Workers - Inhalation; Short term Acute: 16.5 mg/m<sup>3</sup>
  - 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/cm<sup>2</sup>
  - Workers - Dermal; Short term Acute: 15 mg/cm<sup>2</sup>
  - General population - Inhalation; Long term systemic effects: 0.7 mg/m<sup>3</sup>
  - General population - Inhalation; Short term Acute: 4.1 mg/m<sup>3</sup>
  - 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/cm<sup>2</sup>
  - General population - Dermal; Short term Acute: 15 mg/cm<sup>2</sup>
  - 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)

## POLYGARD SCREENWASH (Arctic) READY TO USE (-8°C)

**DNEL**

Workers - Inhalation; Long term systemic effects: 9 mg/m<sup>3</sup>  
 Workers - Dermal; Long term systemic effects: 1.7 mg/kg bw/day  
 Workers - Dermal; Long term local effects: 0.14 mg/cm<sup>2</sup>  
 General population - Inhalation; Long term systemic effects: 2.7 mg/m<sup>3</sup>  
 General population - Dermal; Long term systemic effects: 1 mg/kg bw/day  
 General population - Dermal; Long term local effects: 0.14 mg/cm<sup>2</sup>  
 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/m<sup>3</sup>  
 Workers - Dermal; Short term local effects, Acute: 0.222 mg/cm<sup>2</sup>  
 General population - Inhalation; Long term systemic effects: 8.33 mg/m<sup>3</sup>  
 General population - Dermal; Short term local effects, Acute: 0.111 mg/cm<sup>2</sup>  
 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

### SODIUM HYDROXIDE (CAS: 1310-73-2)

**DNEL**

Consumer - Inhalation; local effects: 1 mg/m<sup>3</sup>  
 Industry - Inhalation; Long term local effects: 1 mg/m<sup>3</sup>

### GERANIOL (CAS: 106-24-1)

**DNEL**

Workers - Inhalation; Long term systemic effects: 161.6 mg/m<sup>3</sup>  
 Workers - Dermal; Long term systemic effects: 12.5 mg/kg bw/day  
 Workers - Dermal; Long term local effects: 11.8 mg/cm<sup>2</sup>  
 General population - Inhalation; Long term systemic effects: 47.8 mg/m<sup>3</sup>  
 General population - Dermal; Long term systemic effects: 7.5 mg/kg bw/day  
 General population - Dermal; Long term local effects: 11.8 mg/cm<sup>2</sup>  
 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)



## POLYGARD SCREENWASH (Arctic) READY TO USE (-8°C)

<b>DNEL</b>	Workers - Inhalation; Long term systemic effects: 0.201 mg/m <sup>3</sup>
	Workers - Dermal; Long term systemic effects: 0.0569 mg/kg bw/day
	Workers - Dermal; Long term local effects: 0.41 mg/cm <sup>2</sup>
	Workers - Dermal; Short term Acute: 0.41 mg/cm <sup>2</sup>
	General population - Inhalation; Long term systemic effects: 0.0593 mg/m <sup>3</sup>
	General population - Inhalation; Long term local effects: 0.0593 mg/m <sup>3</sup>
	General population - Dermal; Long term systemic effects: 0.0342 mg/kg bw/day
	General population - Dermal; Short term Acute: 0.205 mg/cm <sup>2</sup>
	General population - Dermal; Long term local effects: 0.41 mg/cm <sup>2</sup>
	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	

<b>PNEC</b>	- 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)

<b>DNEL</b>	No DNEL available.
<b>PNEC</b>	- 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)

<b>DNEL</b>	Workers - Inhalation; Long term systemic effects: 161.6 mg/m <sup>3</sup>
	Workers - Inhalation; Long term local effects: 10 mg/m <sup>3</sup>
	Workers - Inhalation; Short term Acute: 10 mg/m <sup>3</sup>
	Workers - Dermal; Long term systemic effects: 327.4 mg/kg bw/day
	General population - Inhalation; Long term systemic effects: 47.8 mg/m <sup>3</sup>
	General population - Inhalation; Long term local effects: 10 mg/m <sup>3</sup>
	General population - Inhalation; Short term Acute: 10 mg/m <sup>3</sup>
	General population - Dermal; Long term systemic effects: 196.4 mg/kg bw/day
	General population - Dermal; Short term local effects, Acute: 2.950 mg/cm <sup>2</sup>
	Workers - Dermal; Short term Acute, local effects: 2.950 mg/cm <sup>2</sup>
General population - Oral; Long term systemic effects: 13.8 mg/kg bw/day	
<b>PNEC</b>	- 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	

### Nerol (CAS: 106-25-2)

## POLYGARD SCREENWASH (Arctic) READY TO USE (-8°C)

**DNEL**

Workers - Inhalation; Long term systemic effects: 5.4 mg/m<sup>3</sup>  
 Workers - Dermal; Long term systemic effects: 0.76 mg/kg bw/day  
 Workers - Dermal; Long term local effects: 0.133 mg/cm<sup>2</sup>  
 General population - Inhalation; Long term systemic effects: 1.3 mg/m<sup>3</sup>  
 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/m<sup>3</sup>  
 Workers - Dermal; Long term systemic effects: 1.998 mg/kg bw/day  
 General population - Inhalation; Long term systemic effects: 0.5665 mg/m<sup>3</sup>  
 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/m<sup>3</sup>  
 Workers - Dermal; Long term systemic effects: 7 mg/kg bw/day  
 General population - Inhalation; Long term systemic effects: 6.1 mg/m<sup>3</sup>  
 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/m<sup>3</sup>  
 Workers - Dermal; Long term systemic effects: 0.37 mg/kg bw/day  
 General population - Inhalation; Long term systemic effects: 0.32 mg/m<sup>3</sup>  
 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

## POLYGARD SCREENWASH (Arctic) READY TO USE (-8°C)

<b>PNEC</b>	- 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)

<b>DNEL</b>	Workers - Inhalation; Long term systemic effects: 23.21 mg/m <sup>3</sup>
	Workers - Dermal; Long term systemic effects: 13.17 mg/kg bw/day
	General population - Inhalation; Long term systemic effects: 5.72 mg/m <sup>3</sup>
	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

<b>PNEC</b>	- 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	

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

<b>DNEL</b>	No DNEL available.
<b>PNEC</b>	No PNEC available.

### BENZYLOXYMETHANOL (CAS: 14548-60-8)

<b>DNEL</b>	No DNEL available.
<b>PNEC</b>	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

Wear chemical splash goggles. Contact lenses should not be worn when working with this chemical.

### Hand protection

Chemical-resistant, impervious gloves complying with an approved standard should be worn if a risk assessment indicates skin contact is possible. Wear protective gloves made of the following material: 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

## POLYGARD SCREENWASH (Arctic) READY TO USE (-8°C)

<b>Other skin and body protection</b>	Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact. Wear apron or protective clothing in case of contact. Barrier cream applied before work may make it easier to clean the skin after exposure, but does not prevent absorption through the skin.
<b>Hygiene measures</b>	Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station. No specific hygiene procedures recommended but good personal hygiene practices should always be observed when working with chemical products. Wash promptly with soap and water if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. Do not eat, drink or smoke when using this product.
<b>Respiratory protection</b>	If ventilation is inadequate, suitable respiratory protection must be worn. Wear a respirator fitted with the following cartridge: Gas filter, type A2.
<b>Environmental exposure controls</b>	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

<b>Appearance</b>	Coloured liquid.
<b>Colour</b>	Blue.
<b>Odour</b>	Alcoholic. Perfume.
<b>pH</b>	6.5 to 8.5
<b>Melting point</b>	Below minus 8°C
<b>Initial boiling point and range</b>	~90°C @ 760 mm Hg
<b>Flash point</b>	50°C CC (Closed cup).
<b>Upper/lower flammability or explosive limits</b>	Lower flammable/explosive limit: 6.0% v/v METHANOL IN AIR Upper flammable/explosive limit: 36.5% v/v METHANOL IN AIR
<b>Relative density</b>	0.985 @ 20°C
<b>Solubility(ies)</b>	Completely soluble in water. Very soluble in the following materials: Alcohols. Almost insoluble in the following materials: Hydrocarbons. Aromatic solvents.
<b>Comments</b>	Information given is applicable to the product as supplied.

#### 9.2. Other information

<b>Volatile organic compound</b>	This product contains a maximum VOC content of 90.0 g/litre.
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### SECTION 10: Stability and reactivity

#### 10.1. Reactivity

<b>Reactivity</b>	There are no known reactivity hazards associated with this product.
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#### 10.2. Chemical stability

<b>Stability</b>	Stable at normal ambient temperatures and when used as recommended.
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#### 10.3. Possibility of hazardous reactions

<b>Possibility of hazardous reactions</b>	Not applicable. Will not polymerise.
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#### 10.4. Conditions to avoid

## POLYGARD SCREENWASH (Arctic) READY TO USE (-8°C)

**Conditions to avoid** Avoid heat, flames and other sources of ignition. Avoid contact with strong oxidising agents.

### 10.5. Incompatible materials

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

### 10.6. Hazardous decomposition products

**Hazardous decomposition products** Fire creates: Thermal decomposition or combustion products may include the following substances: Acrid smoke or fumes. Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>).

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

#### Acute toxicity - oral

**ATE oral (mg/kg)** 3,550.3

#### Acute toxicity - dermal

**ATE dermal (mg/kg)** 11,834.32

#### Acute toxicity - inhalation

**ATE inhalation (vapours mg/l)** 118.34

#### Specific target organ toxicity - single exposure

**STOT - single exposure** May cause damage to organs.

#### **General information**

To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated.

#### **Inhalation**

Vapours may irritate throat/respiratory system. Symptoms following overexposure may include the following: Headache. Dizziness. Drowsiness. Nausea, vomiting. Vapours in high concentrations are narcotic.

#### **Ingestion**

Ingestion of large amounts may cause headaches, nausea, vomiting, abdominal pain, drowsiness and unconsciousness. Methanol can cause blindness when ingested.

#### **Skin contact**

Contains components which may penetrate the skin. Product has a defatting effect on skin. May cause allergic contact eczema.

#### **Eye contact**

May cause temporary eye irritation.

#### **Acute and chronic health hazards**

Not expected to be a health hazard when used under normal conditions. Risk of long-term effects is considered to be minimal from exposure to concentrations below the level of OEL. Prolonged or repeated exposure to vapours in high concentrations may cause the following adverse effects: Central and/or peripheral nervous system damage. Brain damage.

#### **Route of entry**

Inhalation Ingestion. Skin absorption

#### **Target organs**

Central nervous system Eyes Gastro-intestinal tract Kidneys Liver Respiratory system, lungs Blood

#### **Medical symptoms**

Symptoms following overexposure may include the following: Nausea, vomiting. Severe stomach pain. Central nervous system depression. Blindness. Unconsciousness, possibly death.

#### **Medical considerations**

Irritation of eyes and mucous membranes. Central nervous system depression. Drowsiness, dizziness, disorientation, vertigo. Visual disturbances, including blurred vision.

#### Toxicological information on ingredients.

### METHANOL

## POLYGARD SCREENWASH (Arctic) READY TO USE (-8°C)

### Acute toxicity - oral

Acute toxicity oral (LD<sub>50</sub> mg/kg) 5,628.0

Species Rat

Notes (oral LD<sub>50</sub>) Toxic if swallowed.

ATE oral (mg/kg) 300.0

### Acute toxicity - dermal

Acute toxicity dermal (LD<sub>50</sub> mg/kg) 15,800.0

Species Rabbit

Notes (dermal LD<sub>50</sub>) Toxic in contact with skin.

ATE dermal (mg/kg) 1,000.0

### Acute toxicity - inhalation

Acute toxicity inhalation (LC<sub>50</sub> vapours mg/l) 83.2

Species Rat

Notes (inhalation LC<sub>50</sub>) Toxic if inhaled.

ATE inhalation (vapours mg/l) 10.0

### Skin corrosion/irritation

Animal data Not irritating.

### Serious eye damage/irritation

Serious eye damage/irritation Not irritating.

### Respiratory sensitisation

Respiratory sensitisation Based on available data the classification criteria are not met.

### Skin sensitisation

Skin sensitisation Not sensitising.

### Germ cell mutagenicity

Genotoxicity - in vitro This substance has no evidence of mutagenic properties. Negative.

### Carcinogenicity

Carcinogenicity Based on available data the classification criteria are not met.

### Reproductive toxicity

Reproductive toxicity - fertility Fertility: - NOAEC 1.3 mg/l, , Rat Based on available data the classification criteria are not met.

### Specific target organ toxicity - single exposure

STOT - single exposure Causes damage to organs .

Target organs Central nervous system Optic Nerve (Nervus Opticus)

## POLYGARD SCREENWASH (Arctic) READY TO USE (-8°C)

### Specific target organ toxicity - repeated exposure

**STOT - repeated exposure** Based on available data the classification criteria are not met.

### Aspiration hazard

**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

### Acute toxicity - oral

**Acute toxicity oral (LD<sub>50</sub> mg/kg)** 1,414.0

**Species** Guinea pig

**ATE oral (mg/kg)** 1,414.0

### Acute toxicity - dermal

**ATE dermal (mg/kg)** 2,000.0

### Acute toxicity - inhalation

**ATE inhalation (vapours mg/l)** 20.0

### Skin corrosion/irritation

**Extreme pH** Slightly irritating. Rabbit

### Serious eye damage/irritation

**Serious eye damage/irritation** Slightly irritating. Rabbit

### Respiratory sensitisation

**Respiratory sensitisation** Based on available data the classification criteria are not met.

### Skin sensitisation

**Skin sensitisation** Based on available data the classification criteria are not met.

### Germ cell mutagenicity

**Genotoxicity - in vitro** Negative.

**Genotoxicity - in vivo** Negative.

### Carcinogenicity

**Carcinogenicity** Based on available data the classification criteria are not met.

### Reproductive toxicity

## POLYGARD SCREENWASH (Arctic) READY TO USE (-8°C)

<b>Reproductive toxicity - fertility</b>	Based on available data the classification criteria are not met.
<b>Reproductive toxicity - development</b>	No evidence of reproductive toxicity in animal studies.
<b>Inhalation</b>	Entry into the lungs following ingestion or vomiting may cause chemical pneumonitis.
<b>Ingestion</b>	Harmful: may cause lung damage if swallowed. Pneumonia may be the result if vomited material containing solvents reaches the lungs.
<b>Skin contact</b>	Repeated exposure may cause skin dryness or cracking.
<b>Eye contact</b>	Irritation of eyes and mucous membranes.
<b>Route of entry</b>	Ingestion Inhalation
<b>Target organs</b>	Brain Respiratory system, lungs Mucous membranes
<b>Medical symptoms</b>	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 components are not classified as environmentally hazardous. However, large or frequent spills may have hazardous effects on the environment.

#### 12.1. Toxicity

**Toxicity** Not considered toxic to fish.

#### Ecological information on ingredients.

##### METHANOL

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

##### 2-BUTOXYETHANOL

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

#### 12.2. Persistence and degradability



## POLYGARD SCREENWASH (Arctic) READY TO USE (-8°C)

**Persistence and degradability** The product is biodegradable but it must not be discharged into drains without permission from the authorities. 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.

### 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

#### 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 m<sup>3</sup>/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.

## POLYGARD SCREENWASH (Arctic) READY TO USE (-8°C)

### 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

**Other adverse effects** Not applicable.

#### 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 is classified as hazardous 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
UN No. (ADN)	1993

#### 14.2. UN proper shipping name

**Proper shipping name (ADR/RID)** FLAMMABLE LIQUID, N.O.S. (CONTAINS METHANOL)

**Proper shipping name (IMDG)** FLAMMABLE LIQUID, N.O.S. (CONTAINS METHANOL)

**Proper shipping name (ICAO)** FLAMMABLE LIQUID, N.O.S. (CONTAINS METHANOL)

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

## POLYGARD SCREENWASH (Arctic) READY TO USE (-8°C)

### 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 MARPOL73/78 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

<b>National regulations</b>	Control of Pollution (Special Waste) Regulations 1980 (as amended). The Chemicals (Hazard Information and Packaging for Supply) Regulations 2009 (SI 2009 No. 716).
<b>EU legislation</b>	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).
<b>Guidance</b>	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.

**POLYGARD SCREENWASH (Arctic) READY TO USE (-8°C)****SECTION 16: Other information**

<b>Revision comments</b>	NOTE: Lines within the margin indicate significant changes from the previous revision.
<b>Issued by</b>	HS&E Manager.
<b>Revision date</b>	11/01/2016
<b>Revision</b>	8
<b>Supersedes date</b>	27/05/2015
<b>Risk phrases in full</b>	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. R68/20/21/22 Harmful: possible risk of irreversible effects through inhalation, in contact with skin and if swallowed.
<b>Hazard statements in full</b>	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. H311 Toxic in contact with skin. H312 Harmful in contact with skin. H314 Causes severe skin burns and eye damage. H315 Causes skin irritation. 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)). H371 May cause damage to organs .

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.