



Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 25.01.2021

Version: 1

Revision: 25.01.2021

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

* **1.1 Product identifier**

* **Trade name:** HAKKENSPRAY

* **Article number:** ART1001290

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

* **Sector of Use**

SU3 Industrial uses: Uses of substances as such or in preparations at industrial sites

SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

* **Application of the substance / the mixture** See information supplied by the manufacturer.

* **Uses advised against**

All not mentioned uses

SU21 Consumer uses: Private households / general public / consumers

* **1.3 Details of the supplier of the safety data sheet**

* **Manufacturer/Supplier:**

Jumbo Totaal B.V.

Achterzeedijk 57

2992 SB

Barendrecht

The Netherlands

Tel : 00-31-(0)180-619009

www.jumbototaal.com

* **Information department:**

Product Safety department

Tel.: 00-31 - (0) 180-619009

reiniging@jumbototaal.com

Support is only given in the following languages: Dutch and English

* **1.4 Emergency telephone number:**

Product Safety Department

In case of a spill or accident, you can contact us at:

tel. (00) - 31 - 167 - 526 - 888 (during office hours)

During office hours we can be contacted for general information

at: tel. (00) - 31 - 167 - 526 - 900

Support is only given in the following languages: Dutch, English and German

SECTION 2: Hazards identification

* **2.1 Classification of the substance or mixture**

* **Classification according to Regulation (EC) No 1272/2008**



health hazard

Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.



Eye Irrit. 2 H319 Causes serious eye irritation.

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*** 2.2 Label elements***** Labelling according to Regulation (EC) No 1272/2008**

The product is classified and labelled according to the CLP regulation.

*** Hazard pictograms**

GHS07 GHS08

*** Signal word** Danger*** Hazard-determining components of labelling:**

Hydrocarbons, C11-C12, isoalkanes, <2% aromatics

Hydrocarbons, C11-C13, isoalkanes, <2% aromatics

*** Hazard statements**

H319 Causes serious eye irritation.

H304 May be fatal if swallowed and enters airways.

*** Precautionary statements**

P264 Wash thoroughly after handling.

P280 Wear eye protection / face protection.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P331 Do NOT induce vomiting.

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.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

*** 2.3 Other hazards** Not applicable.*** Results of PBT and vPvB assessment***** PBT:** Based on available data, the classification criteria are not met.*** vPvB:** Based on available data, the classification criteria are not met.**SECTION 3: Composition/information on ingredients***** 3.2 Mixtures***** Description:** Mixture of the substances listed below with nonhazardous additions.*** Dangerous components:**

CAS: 112-34-5 EINECS: 203-961-6 Index number: 603-096-00-8 Reg.nr.: 01-2119475104-44	2-(2-butoxyethoxy)ethanol Eye Irrit. 2, H319	25-50%
CAS: 90622-57-4 EC number: 918-167-1 Reg.nr.: 01-2119472146-39 UVCB	Hydrocarbons, C11-C12, isoalkanes, <2% aromatics Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 4, H413	20-25%
CAS: 90622-58-5 EC number: 920-901-0 Reg.nr.: 01-2119456810-40 UVCB	Hydrocarbons, C11-C13, isoalkanes, <2% aromatics Asp. Tox. 1, H304	20-25%

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CAS: 3470-98-2 EINECS: 222-437-8 Reg.nr.: 01-2120062728-48	1-butylpyrrolidin-2-one ⚠ Acute Tox. 4, H302; Skin Irrit. 2, H315; Eye Irrit. 2, H319	5-7%
CAS: 34590-94-8 EINECS: 252-104-2 Reg.nr.: 01-2119450011-60	Dipropylene glycol monomethyl ether substance with a Community workplace exposure limit	3-5%

* **SVHC** This product does not contain any SVHC substances

* **Additional information**

Product compositional ranges are shown for health, safety and environmental use and are not intended to form any part of a specification.

All values in this chapter are given in w%

For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

* **4.1 Description of first aid measures**

* **General information**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

Personal protection for the First Aider.

* **After inhalation**

Supply fresh air; consult doctor in case of complaints.

Inhalation of vapors and aerosols (mists, fumes) may cause lung edema.

* **After skin contact** Quickly remove all contaminated clothing, including footwear

* **After eye contact**

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor. Ensure complete irrigation of the eye by keeping eyelids apart and away from eye and moving the eyelids by occasionally lifting the upper and lower lids.

Rinse opened eye for at least 15 minutes under running water.

* **After swallowing**

Do NOT induce vomiting. if victim is conscious and alert, wash out mouth with water, give several glasses of water. Get medical aid immediately if necessary.

If spontaneous vomiting appears imminent or occurs, hold patient's head down. Lower than their hips to help avoid possible aspiration of vomits.

Seek immediate medical advice.

* **4.2 Most important symptoms and effects, both acute and delayed** Breathing difficulty
irritation / redness

* **Danger**

Danger of pneumonia. Danger of pulmonary oedema.

* **4.3 Indication of any immediate medical attention and special treatment needed** If swallowed, gastric irrigation

If swallowed or in case of vomiting, danger of entering the lungs Medical supervision for at least 48 hours

Later observation for pneumonia and pulmonary oedema

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SECTION 5: Firefighting measures

- * **5.1 Extinguishing media**
- * **Suitable extinguishing agents** CO₂, sand, extinguishing powder. Do not use water.
- * **For safety reasons unsuitable extinguishing agents**



Water.

Water with full jet.

- * **5.2 Special hazards arising from the substance or mixture** In case of fire, the following can be released:
Nitrogen oxides (NO_x)
Carbon monoxide (CO)
In certain fire conditions, traces of other toxic gases cannot be excluded.
Avoid contamination with oxidising agents i.e. nitrates, oxidising scents, chlorine bleaches, pool chlorine etc. as ignition may result
Danger of toxic pyrolysis products
- * **5.3 Advice for firefighters**
- * **Protective equipment:**
Wear self-contained respiratory protective device.
In case of danger, wear protective clothes
- * **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

SECTION 6: Accidental release measures

- * **6.1 Personal precautions, protective equipment and emergency procedures** Keep people at a distance and stay on the windward side.
Use respiratory protective device against the effects of fumes/dust/aerosol. Wear protective clothing.
Warning: Contaminated absorbent material may pose the same hazard as the spilled product.
- * **6.2 Environmental precautions:**
This material and its container must be disposed of as hazardous waste. Use appropriate container to avoid environmental contamination.
Dispose of this material and its container to hazardous or special waste collection point.
- * **6.3 Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Dispose contaminated material as waste according to item 13.
Do not flush with water or aqueous cleansing agents
- * **6.4 Reference to other sections**
See Section 7 for information on safe handling
See Section 8 for information on personal protection equipment. See Section 13 for disposal information.

SECTION 7: Handling and storage

- * **7.1 Precautions for safe handling**
Keep receptacles tightly sealed.

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Waste air is to be released into the atmosphere only via suitable separators.

Avoid the formation of oil haze.

Do not breathe spray.

Do not eat, drink or smoke when using this product.

Avoid contact during pregnancy and while nursing.

* **Information about protection against explosions and fires:** The product forms flammable fumes when heated.

* **7.2 Conditions for safe storage, including any incompatibilities**

Avoid contamination of water, foodstuffs, feeds or seed

Store in original containers.

* **Storage**

* **Requirements to be met by storerooms and receptacles:** No special requirements.

* **Information about storage in one common storage facility:**



Store away from foodstuffs.

See section 10.3: Possibility of hazardous reactions

* **Further information about storage conditions:** No further relevant information available.

* **Compatible materials** No further relevant information available.

* **Incompatible materials** No further relevant information available.

* **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

* 8.1 Control parameters

* **Components with limit values that require monitoring at the workplace: CAS: 112-34-5 2-(2-butoxyethoxy)ethanol**

IOELV Short-term value: 101.2 mg/m³, 15 ppm
Long-term value: 67.5 mg/m³, 10 ppm

CAS: 34590-94-8 Dipropylene glycol monomethyl ether

IOELV Long-term value: 308 mg/m³, 50 ppm
Skin

* DNELs

CAS: 112-34-5 2-(2-butoxyethoxy)ethanol

Oral	DNEL	5 mg/kg bw/day (Human: General public) (Long term systemic effects)
Dermal	DNEL	50 mg/kg bw/day (Human: Generals public) (Long term systemic effects) 83 mg/kg bw/day (Human: Worker) (Long term systemic effects)
Inhalative	DNEL	67.5 mg/m ³ (Human: Worker) (Long term systemic effects) 60.7 mg/m ³ (Human: Generals public) (Short term systemic effects) 67.5 mg/m ³ (Human: Worker) (Long term local effects) 40.5 mg/m ³ (Human: General public) (Long term local effects) 101.2 mg/m ³ (Human: Worker) (Short term local effects) 40.5 mg/m ³ (Human: General public) (Long term systemic effects)

CAS: 34590-94-8 Dipropylene glycol monomethyl ether

Oral	DNEL	36 mg/kg (Human: Generals public) (Long term systemic effects)
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Dermal	DNEL	36 mg/kg bw/day (Human: Generals public) (Long term systemic effects)
	DNEL	121 mg/kg bw/day (Human: Generals public) (Long term systemic effects) 283 mg/kg bw/day (Human: Worker) (Long term systemic effects)
Inhalative	DNEL	37.2 mg/m ³ (Human: Generals public) (Long term systemic effects) 308 mg/m ³ (Human: Worker) (Long term systemic effects)

*** PNECs****CAS: 112-34-5 2-(2-butoxyethoxy)ethanol**

Oral PNEC 56 mg/kg (Predators) (Food)

PNEC 4.4 mg/kg dw (Sediment Freshwater) 0.44
mg/kg dw (Sediment marinewater)

0.32 mg/kg dw (Soil)

PNEC 1.1 mg/l (Freshwater)

0.11 mg/l (Marine water (seawater))

200 mg/l (Waste water treatment plant)

11 mg/l (Freshwater intermittent)

CAS: 34590-94-8 Dipropylene glycol monomethyl**ether** PNEC 70.2 mg/kg dw (Sediment Freshwater)

7.02 mg/kg dw (Sediment marinewater)

2.74 mg/kg dw (Soil)

PNEC 19 mg/l (Freshwater)

1.9 mg/l (Marine water (seawater))

4,168 mg/l (Waste water treatment plant)

190 mg/l (Freshwater intermittent)

*** Additional information:**

The lists that were valid during the creation were used as basis. No DNEL can be determined with respect to H304

CAS: 90622-58-5 Hydrocarbons, C11-C13, isoalkanes, <2% aromatics

Inhalative	Indicative Occupational Exposure Limit Value (i)	1,200 mg/m ³ (Human: Worker) (RCP-TGG)
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*** 8.2 Exposure controls**

Recommendations are based on working at ambient temperature, unless stated otherwise

*** Appropriate engineering controls**

Local exhaust ventilation usually required, if risk of overexposure exists, wear approved respirator
If, despite local air extraction, an unfavorable concentration of the substance in the air can occur, respiration should be protected using PPEs. This protection may include:

- dust gas mask, combined with an absorption cartridge if necessary
- filter gas masks with absorption cartridge or filter canister of the correct type
- fresh air mask
- fume cupboard

*** Individual protection measures, such as personal protective equipment***** General protective and hygienic measures**

Immediately remove all soiled and contaminated clothing Wash hands before breaks and at the end of work. Avoid contact with the eyes and skin.

Do not eat, drink, smoke or sniff while working.

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Do not carry product impregnated cleaning cloths in trouser pockets.

* **Breathing equipment:** Ensure good ventilation/exhaustion at the workplace.

* **Hand protection**



Use chemical resistant gloves classified under standard EN 374: Protective gloves against chemicals and micro-organisms.

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. Check the permeability prior to each renewed use of the glove.

For the permanent contact in work areas with heightened risk of injury (mechanical hazard) no recommendation for a suitable glove material can be given.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

* **Penetration time of glove material**

When prolonged or frequently repeated contact may occur, a glove with a protection class of 5 or higher (breakthrough time greater than 240 minutes according to EN 374) is recommended. When only brief contact is expected, a glove with a protection class of 3 or higher (breakthrough time greater than 60 minutes according to EN 374) is recommended.

NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all requisite workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), as well as the instructions/specifications provided by the glove supplier.

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

EN 374:

class Breakthrough time

- 1 > 10 min
- 2 > 30 min
- 3 > 60 min
- 4 > 120 min
- 5 > 240 min
- 6 > 480 min

* **For the permanent contact gloves made of the following materials are suitable:** Fluorocarbon rubber (Viton)

Nitrile rubber, NBR

Chloroprene rubber,

CR PVA gloves

Recommended thickness of the material: ϵ 0.5 mm

* **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**

Butyl rubber, BR

Fluorocarbon rubber

(Viton) Nitrile rubber, NBR

Chloroprene rubber, CR

PVC gloves

PVA gloves

Recommended thickness of the material: ϵ 0.5 mm

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* **As protection from splashes gloves made of the following materials are suitable:** Butyl rubber, BR

Fluorocarbon rubber

(Viton) Nitrile rubber, NBR

Chloroprene rubber, CR

PVC gloves

PVA gloves

Recommended thickness of the material: \approx 0.1 mm

* **Not suitable are gloves made of the following materials:** Natural rubber, NR

Leather gloves

Strong gloves

* **Eye/face protection** Safety glasses

* **Body protection:** Impervious

protective clothing

Take off contaminated clothing and wash it before reuse.

* **Boots**



made out of rubber

made out of plastic

* **Risk management measures**



ANSI Z 358.1 Emergency Eyewash and Shower equipment

Keep good industrial hygiene.

SECTION 9: Physical and chemical properties

* **9.1 Information on basic physical and chemical properties**

* **General Information**

* **Physical state**

Fluid

* **Colour:**

Colourless

* **Odour:**

Characteristic

* **Odour threshold:**

Not determined.

* **Melting point/freezing point:**

Not determined.

* **Boiling point or initial boiling point and boiling range**

175 °C

* **Heat of vaporization**

* **Flammability**

Not applicable.

* **Lower and upper explosion limit**

* **Lower:**

0.6 Vol % (CAS)

* **Test data:**

* **Upper:**

7 Vol % (CAS)

* **Flash point:**

70 °C

* **Self igniting:**

Product is not selfigniting.

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* Minimum ignition energy	
* Decomposition temperature:	Not determined.
* pH	Not determined.
* pH value solutions:	Not applicable.
* Viscosity (4):	
* Kinematic viscosity	Not determined.
* dynamic at 20 °C:	2.5 mPas
* Solubility	
* Water:	Slightly soluble
* Partition coefficient n-octanol/water (log value)	Not determined.
* Vapour pressure at 20 °C:	0.7 hPa

* **Vapour pressure (1):**

112-34-5 | 2-(2-butoxyethoxy)ethanol | 5.5 Pa @ 20°C

* Steam pressure:	
* Density and/or relative density	
* Density at 20 °C:	0.85 g/cm ³
* Relative density	Not determined.
* Vapour density	Not determined.

* **9.2 Other information**

* Appearance:	
* Form:	Liquid
* Important information on protection of health and environment, and on safety.	
* Ignition temperature:	>200 °C
* Test data:	
* Explosive properties:	Product does not present an explosion hazard. Not determined.
* Solvent content:	
* Organic solvents (VOC/HAP):	93.0 %
* Change in condition	
* Critical Temperature	
* Oxidising properties	Not applicable.

* **Evaporation rate**

90622-57-4 | Hydrocarbons, C11-C12, isoalkanes, <2% aromatics | 0.08 (n-butylacetaat = 1)

* **Information with regard to physical hazard classes**

* Explosives	Not applicable.
* Flammable gases	Not applicable.
* Aerosols	Not applicable.
* Oxidising gases	Not applicable.
* Gases under pressure	Not applicable.
* Flammable liquids	Not applicable.
* Flammable solids	Not applicable.
* Self-reactive substances and mixtures	Not applicable.
* Pyrophoric liquids	Not applicable.
* Pyrophoric solids	Not applicable.
* Self-heating substances and mixtures	Not applicable.
* Substances and mixtures, which emit flammable gases in contact with water	Not applicable.

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* Oxidising liquids	Not applicable.
* Oxidising solids	Not applicable.
* Organic peroxides	Not applicable.
* Corrosive to metals	Not applicable.
* Desensitised explosives	Not applicable.

SECTION 10: Stability and reactivity

* **10.1 Reactivity** See section 10.3: Possibility of hazardous reactions * **10.2 Chemical stability**

* **Thermal decomposition / conditions to be avoided:**

No decomposition if used and stored according to specifications. * **10.3 Possibility of hazardous reactions**

Flammable

Reacts with oxidizing agents

* **10.4 Conditions to avoid**

Do not get in eyes, on skin, or on clothing.

See section 10.3: Possibility of hazardous reactions

* **10.5 Incompatible materials:** See section 10.3: Possibility of hazardous reactions

* **10.6 Hazardous decomposition products:** No dangerous decomposition products known

SECTION 11: Toxicological information

* **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**

* **Acute toxicity**

* **LD/LC50 values that are relevant for classification:**

CAS: 112-34-5 2-(2-butoxyethoxy)ethanol

Oral	LD50	2,410 mg/kg (Mice) (OECD 401) 3,305 mg/kg (rat)
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Dermal	LD50	2,764 mg/kg (Rabbit)
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CAS: 90622-57-4 Hydrocarbons, C11-C12, isoalkanes, <2% aromatics

Oral	OECD 401: Acute Oral Toxicity	>5,000 mg/kg (rat) (Based on test data from similar products)
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Dermal	OECD 402: Acute Dermal Toxicity	>5,000 mg/kg (Rabbit) (Based on test data from similar products)
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Inhalative	OECD 403: Acute Inhalation Toxicity	>5,000 mg/l (rat) (Based on test data from similar products)
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CAS: 90622-58-5 Hydrocarbons, C11-C13, isoalkanes, <2% aromatics

Oral	LD50	>10,000 mg/kg (-)
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Dermal	LD50	>3,160 mg/kg (-)
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CAS: 3470-98-2 1-butylpyrrolidin-2-one

Oral	LD50	2,000 mg/kg (rat)
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Dermal	LD50	>2,000 mg/kg (Rabbit)
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CAS: 34590-94-8 Dipropylene glycol monomethyl ether

Oral	LD50	>5,000 mg/kg (rat)
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Dermal	LD50	19,020 mg/kg (Rabbit)
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*** Skin corrosion/irritation***** Test Data:****CAS: 90622-57-4 Hydrocarbons, C11-C12, isoalkanes, <2% aromatics**

Irritation of skin | OECD 404: Acute Dermal Irritation/corrosion | (-) (Slight skin irritation)

*** Serious eye damage/irritation** Causes serious eye irritation.*** Test data:****CAS: 90622-57-4 Hydrocarbons, C11-C12, isoalkanes, <2% aromatics**

Irritation of eyes | OECD 405: Acute Eye Irritation/Corrosion | (-) (slight eye irritation)

*** Test data:****CAS: 90622-57-4 Hydrocarbons, C11-C12, isoalkanes, <2% aromatics**

Sensitisation | OECD 406: Skin Sensitisation | (-) (Not sensitizing)

*** Germ cell mutagenicity** Based on available data, the classification criteria are not met.*** Additional information:****CAS: 112-34-5 2-(2-butoxyethoxy)ethanol**

OECD 471: Bacterial Reverse Mutation Test (AMES) | (bac) (Negative)

CAS: 90622-57-4 Hydrocarbons, C11-C12, isoalkanes, <2% aromatics

Oral	OECD 414: Prenatal Development Tox. Study (o)	mg/kg bw/day (-) (Negative)
	OECD 421: Reproduction/Developmental Tox Screening	mg/kg (-) (Negative)
	OECD 422: Repr/Developl Tox Screening systemic	mg/kg/day (-) (Negative)
	OECD 471: Bacterial Reverse Mutation Test (AMES)	(-) (Negative)
	OECD 473: In Vitro Mammalian Chromosome Aberration	(-) (Negative)
	OECD 474: Mammalian Erythrocyte Micronucleus Test	(-) (Negative)
	OECD 476: In vitro Mammalian Cell Gene Mutation	(-) (Negative)
	OECD 478: Rodent Dominant Lethal Assay	(-) (Negative)
	OECD 479: In vitro Sister Chromatid Exchange Assay	(-) (Negative)

*** Aspiration hazard** May be fatal if swallowed and enters airways.*** Additional toxicological information:***** IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

*** Acute effects (acute toxicity, irritation and corrosivity)**

May be fatal if swallowed and enters airways.

For acute effects. Check Chapter 4.2.

*** Test data:****CAS: 90622-57-4 Hydrocarbons, C11-C12, isoalkanes, <2% aromatics**

Oral | OECD 408: Repeated Dose 90-Day Oral Toxicity Study | mg/kg bw/day (-) (Negative)

Inhalative | OECD 413: Subchronic Inhalation Toxicity: 90-days | (-) (Negative)

*** 11.2 Information on other hazards***** Endocrine disrupting properties**

None of the ingredients is listed.

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SECTION 12: Ecological information*** 12.1 Toxicity***** Aquatic toxicity:****CAS: 112-34-5 2-(2-butoxyethoxy)ethanol**

EC50/96h	>100 mg/l (Algae (<i>Scenedesmus subspicatus</i>))
LC50/96h	1,300 mg/l (Fish (<i>Lepomis macrochirus</i>)) 2,000 mg/l (Fish (<i>Menidia beryllina</i>))
OECD 201: Growth Inhibition Test (@72h) (static)	>100 mg/l (Algae (<i>Scenedesmus subspicatus</i>))
OECD 202 (PART I): <i>Daphnia</i> sp. Acute Imm. Test	>100 mg/l (Crustacea (<i>Daphnia magna</i>)) (EC50/48h)
OECD 203: Fish, Acute Toxicity Test (@96h)	1,300 mg/l (Fish (<i>lepomis macrochirus</i>))
EC50/48h	>100 mg/l (Crustacea (<i>Daphnia magna</i>))
EC50	255 mg/l (Bacteria)

CAS: 90622-57-4 Hydrocarbons, C11-C12, isoalkanes, <2% aromatics

LC50/96h	1,000 mg/l (Fish (<i>Oncorhynchus mykiss</i>))
EC50/48h	1,000 mg/l (Crustacea (<i>Daphnia magna</i>))
EC50/72h	1,000 mg/l (Algae (<i>Pseudokirchneriella subcapitata</i>))
NOEC (21d)	≥1 mg/l (Crustacea (<i>Daphnia magna</i>))
NOEC (72h)	1,000 mg/l (Algae (<i>Pseudokirchneriella subcapitata</i>))

CAS: 3470-98-2 1-butylpyrrolidin-2-one

LC50/96h	>100 mg/l (Fish (<i>Oncorhynchus mykiss</i>))
EC50/48h	>100 mg/l (Crustacea (<i>Daphnia magna</i>))
EC50/72h	>160 mg/l (Algae)

CAS: 34590-94-8 Dipropylene glycol monomethyl ether

LC50/96h	10,000 mg/l (Fish)
EC50/48h	1,919 mg/l (Crustacea (<i>Daphnia magna</i>))
EC50/72h	6,999 mg/l (Algae (<i>Scenedesmus subspicatus</i>))

*** 12.2 Persistence and degradability** No further relevant information available.*** Degree of elimination:****CAS: 112-34-5 2-(2-butoxyethoxy)ethanol**

OECD 301C: MITI (I)	89-93 % (-) (28d)
OECD 302B: (Elimination) Zahn-Wellens	100 % (Bacteria) (28d)
COD (Chemical Oxygen Demand)	2.07 g O2/g (-)

CAS: 90622-57-4 Hydrocarbons, C11-C12, isoalkanes, <2% aromatics

Biodegradation	31.3 % (-) (28d)
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CAS: 34590-94-8 Dipropylene glycol monomethyl ether

Biodegradation	75 % (Bacteria) (@28 d)
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*** 12.3 Bioaccumulative potential** No further relevant information available.

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*** Test data:****CAS: 112-34-5 2-(2-butoxyethoxy)ethanol**

OECD 107: Log Pow 1 (-)

BCF Bioaccumulation <100 (-)

CAS: 90622-57-4 Hydrocarbons, C11-C12, isoalkanes, <2% aromatics

OECD 117 (et.al) Log Pow >4 (-)

CAS: 3470-98-2 1-butylpyrrolidin-2-one

OECD 117 (et.al) Log Pow 1.265 (-)

CAS: 34590-94-8 Dipropylene glycol monomethyl ether

OECD 107: Log Pow 0.0043 (-)

*** 12.4 Mobility in soil****CAS: 34590-94-8 Dipropylene glycol monomethyl****ether** Koc 0.28 (Soil)*** 12.5 Results of PBT and vPvB assessment***** PBT:** Based on available data, the classification criteria are not met.*** vPvB:** Based on available data, the classification criteria are not met.*** 12.6 Endocrine disrupting properties**

The product does not contain substances with endocrine disrupting properties.

*** 12.7 Other adverse effects***** Additional ecological information:***** General notes:** Not known to be hazardous to water.**SECTION 13: Disposal considerations***** 13.1 Waste treatment methods***** Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

After prior treatment product has to be disposed of in an incinerator for hazardous waste adhering to the regulations pertaining to the disposal of particularly hazardous waste.

*** European waste catalogue**

The EC waste catalog number (EAC) can only be determined after the type of use by the end-user is known for this product.

*** Uncleaned packagings:***** Recommendation:**

Disposal must be made according to official regulations.

Dispose of packaging according to regulations on the disposal of packagings.

SECTION 14: Transport information*** 14.1 UN number or ID number***** ADR/RID/ADN, ADN, IMDG, IATA**

Not applicable.

*** 14.2 UN proper shipping name***** ADR/RID/ADN, ADN, IMDG, IATA**

Not applicable.

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* 14.3 Transport hazard class(es)	
* ADR/RID/ADN, ADN, IMDG, IATA	
* Class	Not applicable.
* 14.4 Packing group	
* ADR/RID/ADN, IMDG, IATA	Not applicable.
* 14.5 Environmental hazards:	Not applicable.
* 14.6 Special precautions for user	Not applicable.
* 14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
* UN "Model Regulation":	Not applicable.

SECTION 15: Regulatory information

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

* **Chemical Inventory Status**

* **Canadian Domestic Substances List (DSL): (Substances not listed)**

CAS: 90622-58-5 Hydrocarbons, C11-C13, isoalkanes, <2% aromatics

CAS: 3470-98-2 1-butylpyrrolidin-2-one

* **Directive 2012/18/EU**

* **Named dangerous substances - ANNEX I** geen der bestanddelen staat op de lijst.

* **National regulations**

* **Information about limitation of use:**

Employment restrictions concerning young persons must be observed. Source: 94/33/EC

* **"Australia Group Common Control List" (2009) - <http://www.australiagroup.net/en/precursors.html>**

None of the ingredients is listed.

* **Chemical Weapons Convention Annex 1 - www.opcw.org (2011)** None of the ingredients is listed.

* **Chemical Weapons Convention Annex 2 - www.opcw.org (2011)** None of the ingredients is listed.

* **Chemical Weapons Convention Annex 3 - www.opcw.org (2011)** None of the ingredients is listed.

* **INFCIRC254 Rev. 10 (06/2011) - www.nuclearsuppliersgroup.org** None of the ingredients is listed.

* **"Wassenaar Arrangement" Munitions list Ver.10 (2010) - www.wassenaar.org** None of the ingredients is listed.

* **Missile Technology Control Regime List (04/2011) - www.mtcr.info** None of the ingredients is listed.

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* **2455/2001/EC list of priority substances in the field of water policy** None of the ingredients is listed.

* **UN International Narcotics Control Board (01/2011) "Red List" - www.incb.org** None of the ingredients is listed.

* **UN International Narcotics Control Board (05/2010) "Green List" - www.incb.org** None of the ingredients is listed.

* **UN International Narcotics Control Board (12/2010) "Yellow List" - www.incb.org** None of the ingredients is listed.

* **REACH - Pre-registered substances: (Substances not listed)**

CAS: 90622-57-4 Hydrocarbons, C11-C12, isoalkanes, <2% aromatics

* **RoHS 2015/863/EU**

None of the ingredients is listed.

* **Aerospace and Defence Declarable Substances List (AD-DSL)**

CAS: 3470-98-2 1-butylpyrrolidin-2-one

R1; R2; D1

* **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

* **Relevant phrases**

H226 Flammable liquid and vapour.

H302 Harmful if swallowed.

H304 May be fatal if swallowed and enters airways.

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H413 May cause long lasting harmful effects to aquatic life.

* **Department issuing SDS:** Product Safety Department

* **Contact:** Contact information can be found in chapter 1: Supplier information

* **Abbreviations and acronyms:**

To the best of our knowledge, the information contained herein is accurate. However, neither the above supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

SVHC: Substances of Very High Concern

vPvB: very Persistent and very Bioaccumulative

Flam. Liq. 3: Flammable liquids – Category 3

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Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Asp. Tox. 1: Aspiration hazard – Category 1

Aquatic Chronic 4: Hazardous to the aquatic environment - long-term aquatic hazard – Category 4

**** Data compared to the previous version altered.**

EU