

SAFETY DATA SHEET

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

1.1. Product identifier

Trade name

Graffiti Remover Red N

Product no.

156

Unique formula identifier (UFI)

4DAA-SDVU-490V-U5JV

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

Relevant identified uses of the substance or mixture

Graffiti Removal

Uses advised against

No special

1.3. Details of the supplier of the safety data sheet

Company and address

Blue & Green AB

Stenorsvägen 52

261 44 Landskrona

Sweden

+46 418 399000

www.blueandgreen.se

E-mail

info@blueandgreen.se

Revision

22-02-2022

SDS Version

1.0

1.4. Emergency telephone number

Contact The National Poisons Information Service (dial 111, 24 h service).

See section 4 "First aid measures".

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Acute Tox. 4; H302, Harmful if swallowed.

Skin Corr. 1B; H314, Causes severe skin burns and eye damage.

Eye Dam. 1; H318, Causes serious eye damage.

Acute Tox. 4; H332, Harmful if inhaled.

2.2. Label elements

Hazard pictogram(s)



Signal word

Danger

Hazard statement(s)

Harmful if swallowed or if inhaled. (H302+H332)

Causes severe skin burns and eye damage. (H314)

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Safety statement(s)

General

-

Prevention

Do not breathe vapour/mist. (P260)

Wear eye protection/protective gloves/protective clothing. (P280)

[In case of inadequate ventilation] wear respiratory protection. (P284)

Response

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water .
(P303+P361+P353)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338)

Storage

-

Disposal

Dispose of contents/container to an approved waste disposal plant. (P501)

Hazardous substances

1-butylpyrrolidin-2-one

2-butoxyethanol

benzyl alcohol

potassium hydroxide

2.3. Other hazards

Additional labelling

Not applicable

Additional warnings

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Product/substance	Identifiers	% w/w	Classification	Note
1-butylpyrrolidin-2-one	CAS No.: 3470-98-2 EC No.: 222-437-8 REACH: 01-2120062728-48 Index No.:	25-40%	Acute Tox. 4, H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319	
2-butoxyethanol	CAS No.: 111-76-2 EC No.: 203-905-0 REACH: Index No.: 603-014-00-0	25-40%	Acute Tox. 4, H302 Skin Irrit. 2, H315 Acute Tox. 4, H332 Eye Irrit. 2, H319	[1]
benzyl alcohol	CAS No.: 100-51-6 EC No.: 202-859-9 REACH: Index No.: 603-057-00-5	25-40%	Acute Tox. 4, H302 Acute Tox. 4, H332 Eye Irrit. 2, H319	

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

potassium hydroxide	CAS No.: 1310-58-3	1-3%	Met. Corr. 1, H290 Acute Tox. 4, H302 Skin Corr. 1A, H314
	EC No.: 215-181-3		
	REACH:		
	Index No.: 019-002-00-8		

See full text of H-phrases in section 16. Occupational exposure limits are listed in section 8, if these are available.

Other information

[1] European occupational exposure limit

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In the case of accident: Contact a doctor or casualty department – take the label or this safety data sheet. Contact a doctor if in doubt about the injured person's condition or if the symptoms persist. Never give an unconscious person water or other drink.

Inhalation

Upon breathing difficulties or irritation of the respiratory tract: Bring the injured person into fresh air. Make sure the injured person is continuously monitored. Prevent shock by keeping the injured person warm and calm. If breathing ceases, give mouth-to-mouth resuscitation. If unconscious, roll the injured person into recovery position. Call an ambulance.

Skin contact

Remove contaminated clothing and shoes immediately. Ensure to wash exposed skin thoroughly with water and soap.

If skin irritation occurs: Get medical advice/attention.

Eye contact

Upon irritation of the eye: Remove contact lenses. Flush eyes with plenty of water or salt water (20-30°C) for at least 15 minutes and continue until irritation stops. Make sure you flush under the upper and lower eyelids. Seek medical assistance immediately and continue flushing during transport.

Ingestion

In the case of ingestion, contact a doctor immediately. If the person is conscious, give them water. DO NOT try to induce vomiting, unless this is recommended by a doctor. Hold head facing down to prevent vomit returning mouth and throat. Prevent shock by keeping the injured person warm and calm. Initiate immediate resuscitation if breathing stops. If unconscious, roll the injured person into recovery position. Call an ambulance.

Burns

Not applicable

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

Tissue-damaging effects: This product contains substances with skin corrosive properties. Inhaled vapour or aerosols may produce adverse effects to lungs, -irritations and burns in the respiratory organs -as well as coughing. Dermal contact and contact with the eye cause irreversible effects.

This product contains substances, which may cause irritation upon exposure to skin, eyes or lungs. Exposure may result in an increased absorption potential of other hazardous substances at the area of exposure.

This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: headache, dizziness, ringing in ears, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

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

IF exposed or concerned:

Get immediate medical advice/attention.

Information to medics

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Bring this safety data sheet or the label from this product.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media: Alcohol-resistant foam, carbon dioxide, powder, water mist.

5.2. Special hazards arising from the substance or mixture

Fire will result in dense smoke. Exposure to combustion products may harm your health. Closed containers, which are exposed to fire, should be cooled with water. Do not allow fire-extinguishing water to enter the sewage system and nearby surface waters.

If the product is exposed to high temperatures, e.g. in the event of fire, dangerous decomposition compounds are produced. These are:

Carbon oxides (CO / CO₂).

Some metal oxides.

5.3. Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact. Upon direct exposure contact The National Poisons Information Service (dial 111, 24 h service) in order to obtain further advice.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid direct contact with spilled substances.

Avoid inhalation of vapours from spilled material.

6.2. Environmental precautions

Avoid discharge to lakes, streams, sewers, etc.

6.3. Methods and material for containment and cleaning up

Limit spillage and collect using granular absorbent or similar materials, and dispose of it in accordance with the regulations on dangerous waste.

Use sand, earth, vermiculite, diatomaceous earth to contain and collect non-combustible absorbent materials and place in container for disposal, according to local regulations.

To the extent possible cleaning is performed with normal cleaning agents. Avoid use of solvents.

6.4. Reference to other sections

See section 13 on "Disposal considerations" in regard of handling of waste.

See section 8 "Exposure controls/personal protection" for protective measures.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

The product should be tested for peroxides before distillation or evaporation and tested for peroxide formation or discarded after 1 year.

Peroxide formation may be present anywhere in the container, including the sides, bottom, exterior and threaded cap. Peroxide formation in ppm concentrations may not be visually observable and must be identified through the use of appropriate testing procedures. If any of the following conditions exist, the material may be explosively unstable and will require stabilization prior to use:

1. Material appears to be degraded and or contaminated.
2. Material appears to be discolored.
3. Deterioration or distortion of storage container.
4. Thermal shock (sunlight).
5. Age of material exceeds recommended storage time.

Avoid direct contact with the product.

Smoking, drinking and consumption of food is not allowed in the work area.

See section 8 "Exposure controls/personal protection" for information on personal protection.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed containers and store protected from moisture and light. Containers should be dated when opened and tested periodically for the presence of peroxides. Do not exceed storage time limits.

Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

Recommended storage material

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Always store in containers of the same material as the original container.

Storage temperature

Room temperature 18 to 23°C

Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

7.3. Specific end use(s)

This product should only be used for applications quoted in section 1.2

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

—
2-butoxyethanol
Long term exposure limit (8 hours) (ppm): 25
Long term exposure limit (8 hours) (mg/m³): 123
Short term exposure limit (15 minutes) (ppm): 50
Short term exposure limit (15 minutes) (mg/m³): 246

Annotations:

BMVG = Biological Monitoring Guidance Value exists

Sk = Can be absorbed through the skin and lead to systemic toxicity.

—
potassium hydroxide
Short term exposure limit (15 minutes) (mg/m³): 2

The Control of Substances Hazardous to Health Regulations 2002. SI 2002/2677 The Stationery Office 2002.
EH40/2005 Workplace exposure limits (Fourth Edition 2020).

DNEL

Product/substance	1-butylpyrrolidin-2-one
DNEL	24.1 mg/m ³
Route of exposure	Inhalation
Duration	Long term – Systemic effects - Workers

Product/substance	1-butylpyrrolidin-2-one
DNEL	10 mg/kg
Route of exposure	Dermal
Duration	Long term – Systemic effects - Workers

Product/substance	1-butylpyrrolidin-2-one
DNEL	4.29 mg/m ³
Route of exposure	Inhalation
Duration	Long term – Systemic effects - General population

Product/substance	1-butylpyrrolidin-2-one
DNEL	5 mg/kg
Route of exposure	Dermal
Duration	Long term – Systemic effects - General population

Product/substance	1-butylpyrrolidin-2-one
DNEL	4 mg/kg
Route of exposure	Oral
Duration	Short term – Systemic effects - General population

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Product/substance	1-butylpyrrolidin-2-one
DNEL	4 mg/kg
Route of exposure	Oral
Duration	Long term – Systemic effects - General population
Product/substance	2-butoxyethanol
DNEL	98 mg/m ³
Route of exposure	Inhalation
Duration	Long term – Systemic effects - Workers
Product/substance	2-butoxyethanol
DNEL	1 091 mg/m ³
Route of exposure	Inhalation
Duration	Short term – Systemic effects - Workers
Product/substance	2-butoxyethanol
DNEL	246 mg/m ³
Route of exposure	Inhalation
Duration	Short term – Local effects - Workers
Product/substance	2-butoxyethanol
DNEL	59 mg/m ³
Route of exposure	Inhalation
Duration	Long term – Systemic effects - General population
Product/substance	2-butoxyethanol
DNEL	426 mg/m ³
Route of exposure	Inhalation
Duration	Short term – Systemic effects - General population
Product/substance	2-butoxyethanol
DNEL	147 mg/m ³
Route of exposure	Inhalation
Duration	Short term – Local effects - General population
Product/substance	2-butoxyethanol
DNEL	6.3 mg/kg bw/day
Route of exposure	Oral
Duration	Long term – Systemic effects - General population
Product/substance	2-butoxyethanol
DNEL	26.7 mg/kg bw/day
Route of exposure	Oral
Duration	Short term – Systemic effects - General population
Product/substance	benzyl alcohol
DNEL	22 mg/m ³
Route of exposure	Inhalation
Duration	Long term – Systemic effects - Workers

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Product/substance	benzyl alcohol
DNEL	110 mg/m ³
Route of exposure	Inhalation
Duration	Short term – Systemic effects - Workers
Product/substance	benzyl alcohol
DNEL	8 mg/kg bw/day
Route of exposure	Dermal
Duration	Long term – Systemic effects - Workers
Product/substance	benzyl alcohol
DNEL	40 mg/kg bw/day
Route of exposure	Dermal
Duration	Short term – Systemic effects - Workers
Product/substance	benzyl alcohol
DNEL	5.4 mg/m ³
Route of exposure	Inhalation
Duration	Long term – Systemic effects - General population
Product/substance	benzyl alcohol
DNEL	27 mg/m ³
Route of exposure	Inhalation
Duration	Short term – Systemic effects - General population
Product/substance	benzyl alcohol
DNEL	4 mg/kg bw/day
Route of exposure	Dermal
Duration	Long term – Systemic effects - General population
Product/substance	benzyl alcohol
DNEL	20 mg/kg bw/day
Route of exposure	Dermal
Duration	Short term – Systemic effects - General population
Product/substance	benzyl alcohol
DNEL	20 mg/kg bw/d
Route of exposure	Oral
Duration	Short term – Systemic effects - General population
Product/substance	benzyl alcohol
DNEL	4 mg/kg bw/d
Route of exposure	Oral
Duration	Long term – Systemic effects - General population
Product/substance	potassium hydroxide
DNEL	1 mg/m ³
Route of exposure	Inhalation
Duration	Long term – Local effects - Workers

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Product/substance	potassium hydroxide
DNEL	1mg/m ³
Route of exposure	Inhalation
Duration	Long term – Local effects - General population

PNEC

Product/substance	1-butylpyrrolidin-2-one
PNEC	3.57 mg/kg
Route of exposure	Soil
Duration of Exposure	

Product/substance	1-butylpyrrolidin-2-one
PNEC	2.96 mg/kg
Route of exposure	Marine water sediment
Duration of Exposure	

Product/substance	1-butylpyrrolidin-2-one
PNEC	29.6 mg/kg
Route of exposure	Freshwater sediment
Duration of Exposure	

Product/substance	1-butylpyrrolidin-2-one
PNEC	30.62 mg/L
Route of exposure	Sewage treatment plant
Duration of Exposure	

Product/substance	1-butylpyrrolidin-2-one
PNEC	0.4 mg/L
Route of exposure	Marine water
Duration of Exposure	

Product/substance	1-butylpyrrolidin-2-one
PNEC	4 mg/L
Route of exposure	Freshwater
Duration of Exposure	

Product/substance	2-butoxyethanol
PNEC	8.8 mg/L
Route of exposure	Freshwater
Duration of Exposure	

Product/substance	2-butoxyethanol
PNEC	0.88 mg/L
Route of exposure	Marine water
Duration of Exposure	

Product/substance	2-butoxyethanol
PNEC	463 mg/L
Route of exposure	Sewage treatment plant

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Duration of Exposure	
Product/substance	2-butoxyethanol
PNEC	34.6 mg/kg
Route of exposure	Freshwater sediment
Duration of Exposure	
Product/substance	2-butoxyethanol
PNEC	3.46 mg/kg
Route of exposure	Marine water sediment
Duration of Exposure	
Product/substance	2-butoxyethanol
PNEC	2.33 mg/kg
Route of exposure	Soil
Duration of Exposure	
Product/substance	2-butoxyethanol
PNEC	26.4 mg/L
Route of exposure	Intermittent release
Duration of Exposure	
Product/substance	benzyl alcohol
PNEC	0.527 mg/kg
Route of exposure	Marine water sediment
Duration of Exposure	
Product/substance	benzyl alcohol
PNEC	1 mg/L
Route of exposure	Freshwater
Duration of Exposure	
Product/substance	benzyl alcohol
PNEC	2.3 mg/L
Route of exposure	Intermittent release
Duration of Exposure	
Product/substance	benzyl alcohol
PNEC	0.456 mg/kg
Route of exposure	Soil
Duration of Exposure	
Product/substance	benzyl alcohol
PNEC	0.1 mg/L
Route of exposure	Marine water
Duration of Exposure	
Product/substance	benzyl alcohol
PNEC	5.27 mg/kg
Route of exposure	Freshwater sediment

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Duration of Exposure

Product/substance	benzyl alcohol
PNEC	39 mg/L
Route of exposure	Sewage treatment plant
Duration of Exposure	

8.2. Exposure controls

Compliance with the given occupational exposure limits values should be controlled on a regular basis.

General recommendations

Smoking, drinking and consumption of food is not allowed in the work area.

Exposure scenarios

There are no exposure scenarios implemented for this product.

Exposure limits

Professional users are subjected to the legally set maximum concentrations for occupational exposure. See occupational hygiene limit values above.

Appropriate technical measures

The formation of vapours must be kept at a minimum and below current limit values (see above). Installation of a local exhaust system if normal air flow in the work room is not sufficient is recommended. Ensure emergency eyewash and -showers are clearly marked.

Hygiene measures

In between use of the product and at the end of the working day all exposed areas of the body must be washed thoroughly. Always wash hands, forearms and face.

Measures to avoid environmental exposure


Keep damming materials near the workplace. If possible, collect spillage during work.

Individual protection measures, such as personal protective equipment


Generally

Use only CE marked protective equipment.


Respiratory Equipment

Work situation	Type	Class	Colour	Standards	
When grinding or application by spray	Combination filter A2P2	Class 2	Brown/White	EN14387	

Skin protection

Recommended	Type/Category	Standards	
Dedicated work clothing should be worn. Wear a protective suit in the event of prolonged periods of work with the product.	-	-	

Hand protection

Material	Glove thickness (mm)	Breakthrough time (min.)	Standards	
Nitrile	-	> 480	EN374-2, EN374-3, EN388	

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Eye protection

Type	Standards
Safety glasses with side shields.	EN166



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state

Liquid

Colour

Red

Odour / Odour threshold

Characteristic

pH

13

Density (g/cm³)

1.1

Kinematic viscosity

Testing not relevant or not possible due to nature of the product.

Particle characteristics

Does not apply to liquids.

Phase changes

Melting point/Freezing point (°C)

Testing not relevant or not possible due to nature of the product.

Softening point/range (waxes and pastes) (°C)

Does not apply to liquids.

Boiling point (°C)

Testing not relevant or not possible due to nature of the product.

Vapour pressure

Testing not relevant or not possible due to nature of the product.

Relative vapour density

Testing not relevant or not possible due to nature of the product.

Decomposition temperature (°C)

Testing not relevant or not possible due to nature of the product.

Data on fire and explosion hazards

Flash point (°C)

90

Ignition (°C)

Testing not relevant or not possible due to nature of the product.

Auto flammability (°C)

Testing not relevant or not possible due to nature of the product.

Lower and upper explosion limit (% v/v)

Testing not relevant or not possible due to nature of the product.

Solubility

Solubility in water

Insoluble

n-octanol/water coefficient

Testing not relevant or not possible due to nature of the product.

Solubility in fat (g/L)

Testing not relevant or not possible due to nature of the product.

9.2. Other information

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Other physical and chemical parameters

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No data available

10.2. Chemical stability

The product is stable under the conditions, noted in section 7 "Handling and storage".

10.3. Possibility of hazardous reactions

No special

10.4. Conditions to avoid

Do not expose to any forms of heat (e.g. solar radiation). May lead to excess pressure.

10.5. Incompatible materials

Strong acids, strong bases, strong oxidizing agents, and strong reducing agents.

10.6. Hazardous decomposition products

The product is not degraded when used as specified in section 1.

SECTION 11: Toxicological information

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

Acute toxicity

Product/substance	1-butylpyrrolidin-2-one
Test method	
Species	Rat
Route of exposure	Oral
Test	LD50
Result	300-2000mg/kg ·
Other information	

Product/substance	1-butylpyrrolidin-2-one
Test method	
Species	Rabbit
Route of exposure	Dermal
Test	LD50
Result	>2000mg/kg ·
Other information	

Product/substance	2-butoxyethanol
Test method	
Species	Guinea pig
Route of exposure	Oral
Test	LD50
Result	1414 mg/kg
Other information	

Product/substance	2-butoxyethanol
Test method	
Species	Guinea pig, female
Route of exposure	Inhalation
Test	LC0
Result	>3.1 mg/L
Other information	

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Product/substance 2-butoxyethanol
 Test method
 Species Rat
 Route of exposure Oral
 Test LD50
 Result 1300 mg/kg
 Other information

Product/substance 2-butoxyethanol
 Test method
 Species Guinea pig
 Route of exposure Dermal
 Test LD0
 Result >2000 mg/kg
 Other information

Product/substance benzyl alcohol
 Test method
 Species Rat
 Route of exposure Oral
 Test LD50
 Result 1620 mg/kg
 Other information

Product/substance benzyl alcohol
 Test method
 Species Rat
 Route of exposure Inhalation
 Test LC50 (4 hours)
 Result >4178 mg/m³
 Other information

Product/substance benzyl alcohol
 Test method
 Species Rabbit
 Route of exposure Dermal
 Test LD50
 Result >2000 mg/kg mg/kg
 Other information

Product/substance potassium hydroxide
 Test method
 Species Rat
 Route of exposure Oral
 Test LD50
 Result 333.0 mg/kg
 Other information

Harmful if swallowed.
 Harmful if inhaled.

Skin corrosion/irritation

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Causes severe skin burns and eye damage.

Serious eye damage/irritation

Causes serious eye damage.

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

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

Carcinogenicity

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

Reproductive toxicity

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

STOT-single exposure

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

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.

11.2. Information on other hazards

Long term effects

Tissue-damaging effects: This product contains substances with skin corrosive properties. Inhaled vapour or aerosols may produce adverse effects to lungs, -irritations and burns in the respiratory organs -as well as coughing. Dermal contact and contact with the eye cause irreversible effects.

This product contains organic solvents, which may cause adverse effects to the nervous system. Symptoms of neurotoxicity include: headache, dizziness, ringing in ears, tiredness, etc. Repeated exposure to solvents can result in the breaking down of the skin's natural fat layer and may result in an increased absorption potential of other hazardous substances at the area of exposure.

Endocrine disrupting properties

No special

Other information

2-butoxyethanol has been classified by IARC as a group 3 carcinogen.

SECTION 12: Ecological information

12.1. Toxicity

Product/substance	1-butylpyrrolidin-2-one
Test method	
Species	Fish, <i>Oncorhynchus mykiss</i>
Compartment	
Duration	96 hours
Test	LC50
Result	>100 mg/L
Other information	

Product/substance	1-butylpyrrolidin-2-one
Test method	
Species	Algae, <i>Pseudokirchneriella subcapitata</i>
Compartment	
Duration	72 hours
Test	EC50
Result	130 mg/L
Other information	

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Product/substance	1-butylpyrrolidin-2-one
Test method	
Species	Daphnia, Daphnia magna
Compartment	
Duration	48 hours
Test	EC50
Result	>100 mg/L
Other information	

Product/substance	2-butoxyethanol
Test method	
Species	Algae, Pseudokirchneriella subcapitata
Compartment	
Duration	72 hours
Test	EC50
Result	1840 mg/L
Other information	

Product/substance	2-butoxyethanol
Test method	
Species	Fish, Oncorhynchus mykiss
Compartment	
Duration	96 hours
Test	LC50
Result	1474 mg/L
Other information	

Product/substance	2-butoxyethanol
Test method	
Species	Daphnia, Daphnia magna
Compartment	
Duration	48 hours
Test	EC50
Result	1550 mg/L
Other information	

Product/substance	2-butoxyethanol
Test method	
Species	Fish, Danio rerio
Compartment	
Duration	21 days
Test	NOEC
Result	100 mg/L
Other information	

Product/substance	2-butoxyethanol
Test method	
Species	Daphnia, Daphnia magna
Compartment	
Duration	21 days

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Test	NOEC
Result	100 mg/L
Other information	
Product/substance	benzyl alcohol
Test method	
Species	Algae, Pseudokirchneriella subcapitata
Compartment	
Duration	72 hours
Test	EC50
Result	770 mg/L
Other information	
Product/substance	benzyl alcohol
Test method	
Species	Daphnia, Daphnia magna
Compartment	
Duration	48 hours
Test	EC50
Result	230 mg/L
Other information	
Product/substance	benzyl alcohol
Test method	
Species	Fish
Compartment	
Duration	96 hours
Test	LC50
Result	460 mg/L
Other information	
Product/substance	potassium hydroxide
Test method	
Species	Fish
Compartment	
Duration	96 hours
Test	LC50
Result	80 mg/L
Other information	
Product/substance	potassium hydroxide
Test method	
Species	Daphnia, Daphnia magna
Compartment	
Duration	48 hours
Test	EC50
Result	40-240 mg/L
Other information	

12.2. Persistence and degradability

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

Product/substance	1-butylpyrrolidin-2-one
Biodegradable	Yes
Test method	
Result	

Product/substance	2-butoxyethanol
Biodegradable	Yes
Test method	OECD 301 B
Result	90,4%

Product/substance	benzyl alcohol
Biodegradable	Yes
Test method	
Result	

12.3. Bioaccumulative potential

Product/substance	1-butylpyrrolidin-2-one
Test method	
Potential bioaccumulation	No
LogPow	1.2650
BCF	No data available
Other information	

Product/substance	2-butoxyethanol
Test method	
Potential bioaccumulation	No
LogPow	0.8100
BCF	No data available
Other information	

Product/substance	benzyl alcohol
Test method	
Potential bioaccumulation	No
LogPow	No data available
BCF	No data available
Other information	

Product/substance	potassium hydroxide
Test method	
Potential bioaccumulation	No
LogPow	No data available
BCF	No data available
Other information	

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

This mixture/product does not contain any substances considered to meet the criteria classifying them as PBT and/or vPvB.

12.6. Endocrine disrupting properties

No special

12.7. Other adverse effects

No special

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product is covered by the regulations on hazardous waste.

To the extent the material has not been subject to regular tests of peroxide formation the waste shall be treated as explosive waste.

HP 6 - Acute toxicity

HP 8 - Corrosive

Dispose of contents/container to an approved waste disposal plant.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste.

EWC code

07 06 04* Other organic solvents, washing liquids and mother liquors

Specific labelling

Not applicable

Contaminated packing

Packaging containing residues of the product must be disposed of similarly to the product.

SECTION 14: Transport information

14.1. - 14.4.

This product is within scope of the regulations of transport of dangerous goods.

ADR/RID

UN- or ID number	UN proper shipping name	Labels	Packing group	Tunnel restriction code
UN1760	CORROSIVE LIQUID, N.O.S. (potassium hydroxide)	8	III	3(E)

IMDG

UN- or ID number	UN proper shipping name	Labels	Packing group	EmS
UN1760	CORROSIVE LIQUID, N.O.S. (potassium hydroxide)	8	III	F-A, S-B

MARINE POLLUTANT

No

IATA

UN- or ID number	UN proper shipping name	Labels	Packing group
UN1760	CORROSIVE LIQUID, N.O.S. (potassium hydroxide)	8	III

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Not applicable

14.7. Maritime transport in bulk according to IMO instruments

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

No data available

SECTION 15: Regulatory information

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

Restrictions for application

Restricted to professional users.

People under the age of 18 shall not be exposed to this product.

Pregnant women and women breastfeeding must not be exposed to this product. The risk, and possible technical precautions or design of the workplace needed to eliminate exposure, must be considered.

Demands for specific education

No specific requirements

SEVESO - Categories / dangerous substances

Not applicable

Additional information

Not applicable

Sources

The Management of Health and Safety at Work Regulations 1999

The Health and Safety at Work etc. Act 1974 Regulations 2013.

Regulation (EC) No 648/2004 of the European Parliament and of the Council of 31 March 2004 on detergents.

Regulation (EU) No 1357/2014 of 18 December 2014 on waste.

CLP Regulation (EC) No 1272/2008, as retained and amended in UK law.

EC-Regulation 1907/2006 (REACH), as amended by UK REACH Regulations SI 2019/758

15.2. Chemical safety assessment

No

SECTION 16: Other information

Full text of H-phrases as mentioned in section 3

H290, May be corrosive to metals.

H302, Harmful if swallowed.

H314, Causes severe skin burns and eye damage.

H315, Causes skin irritation.

H319, Causes serious eye irritation.

H332, Harmful if inhaled.

Abbreviations and acronyms

ADN = European Provisions concerning the International Carriage of Dangerous Goods by Inland Waterway

ADR = The European Agreement concerning the International Carriage of Dangerous Goods by Road

ATE = Acute Toxicity Estimate

BCF = Bioconcentration Factor

CAS = Chemical Abstracts Service

CE = Conformité Européenne

CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]

CSA = Chemical Safety Assessment

CSR = Chemical Safety Report

DMEL = Derived Minimal Effect Level

DNEL = Derived No Effect Level

EINECS = European Inventory of Existing Commercial chemical Substances

ES = Exposure Scenario

EUH statement = CLP-specific Hazard statement

EWC = European Waste Catalogue

GHS = Globally Harmonized System of Classification and Labelling of Chemicals

IARC = International Agency for Research on Cancer (IARC)

IATA = International Air Transport Association

IBC = Intermediate Bulk Container

IMDG = International Maritime Dangerous Goods

According to EC-Regulation 1907/2006 (REACH), annex II, including changes implemented by EC-Regulation 2020/878

LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
OECD = Organisation for Economic Co-operation and Development
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RID = The Regulations concerning the International Carriage of Dangerous Goods by Rail
RRN = REACH Registration Number
SCL = A specific concentration limit.
SVHC = Substances of Very High Concern
STOT-RE = Specific Target Organ Toxicity - Repeated Exposure
STOT-SE = Specific Target Organ Toxicity - Single Exposure
TWA = Time weighted average
UN = United Nations
UVCB = Complex hydrocarbon substance
VOC = Volatile Organic Compound
vPvB = Very Persistent and Very Bioaccumulative

Additional information

The classification of the substance/mixture in regard of health hazards are in accordance with the calculation methods given by Regulation (EC) No. 1272/2008 (CLP)

The safety data sheet is validated by

Åsa Möller

Other

A change (in proportion to the last essential change (first cipher in SDS version, see section 1)) is marked with a blue triangle.

The information in this safety data sheet applies only to this specific product (mentioned in section 1) and is not necessarily correct for use with other chemicals/products.

It is recommended to hand over this safety data sheet to the actual user of the product. Information in this safety data sheet cannot be used as a product specification.

Country-language: GB-en