

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

1.1. Product identifier

Product form : Mixture
 Product name : REMOVE
 Product code : 102
 Type of product : Detergent
 Product group : Mixture

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

1.2.1. Relevant identified uses

Industrial/Professional use spec : Industrial
 For professional use only
 Use of the substance/mixture : Cleaning/washing agents and additives

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Clover Chemicals Ltd
 Clover House
 Macclesfield Road
 SK23 7DQ Whaley Bridge - United Kingdom
 T 01663 733114 - F 01663 733115
info@cloverchemicals.com - www.cloverchemicals.com

1.4. Emergency telephone number

Country	Official advisory body	Address	Emergency number	Comment
Ireland	National Poisons Information Centre Beaumont Hospital	PO Box 1297 Beaumont Road 9 Dublin	+353 1 809 2566 (Healthcare professionals- 24/7) +353 1 809 2166 (public, 8am - 10pm, 7/7)	
United Kingdom	National Poisons Information Service (Birmingham Centre) City Hospital	Dudley Road B18 7QH Birmingham	0344 892 0111	

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Skin Corr. 1 H314
 Aquatic Chronic 3 H412
 Full text of hazard classes and H-statements : see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05

CLP Signal word

: Danger

Hazard statements (CLP)

: H314 - Causes severe skin burns and eye damage.
 H412 - Harmful to aquatic life with long lasting effects.

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Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Precautionary statements (CLP)	: P102 - Keep out of reach of children. P262 - Do not get in eyes, on skin, or on clothing. P264 - Wash hands thoroughly after handling. P280 - Wear protective gloves, eye protection. P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P333+P313 - If skin irritation or rash occurs: Get medical advice/attention. 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.
EUH-statements	: EUH208 - Contains D-LIMONENE. May produce an allergic reaction.

2.3. Other hazards

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2-butoxyethanol	(CAS-no) 111-76-2 (Einecs nr) 203-905-0 (EG annex nr) 603-014-00-0 (REACH-no) 01-2119475108-36	1 – 3	Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319
Sodium hydroxide	(CAS-no) 1310-73-2 (Einecs nr) 215-185-5 (EG annex nr) 011-002-00-6 (REACH-no) 01-2119457892-27	1 – 3	Skin Corr. 1A, H314 Eye Dam. 1, H318 Met. Corr. 1, H290
Isotridecanol, ethoxylated	(CAS-no) 69011-36-5 (REACH-no) polymer	1 – 3	Acute Tox. 4 (Oral), H302 Eye Dam. 1, H318
Potassium hydroxide	(CAS-no) 1310-58-3 (Einecs nr) 215-181-3 (EG annex nr) 019-002-00-8 (REACH-no) 01-2119487136-33	0.1 – 1	Acute Tox. 4 (Oral), H302 Skin Corr. 1A, H314 Eye Dam. 1, H318 Met. Corr. 1, H290
D-LIMONENE	(CAS-no) 5989-27-5 (Einecs nr) 227-813-5 (EG annex nr) 601-029-00-7 (REACH-no) 01-2119529223-47	0.1 – 1	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410

Specific concentration limits:

Name	Product identifier	Specific concentration limits
Sodium hydroxide	(CAS-no) 1310-73-2 (Einecs nr) 215-185-5 (EG annex nr) 011-002-00-6 (REACH-no) 01-2119457892-27	(0.5 ≤C < 2) Eye Irrit. 2, H319 (0.5 ≤C < 2) Skin Irrit. 2, H315 (2 ≤C < 5) Skin Corr. 1B, H314 (5 ≤C < 100) Skin Corr. 1A, H314
Potassium hydroxide	(CAS-no) 1310-58-3 (Einecs nr) 215-181-3 (EG annex nr) 019-002-00-8 (REACH-no) 01-2119487136-33	(0.5 ≤C < 2) Eye Irrit. 2, H319 (0.5 ≤C < 2) Skin Irrit. 2, H315 (2 ≤C < 5) Skin Corr. 1B, H314 (5 ≤C < 100) Skin Corr. 1A, H314

Full text of H-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

General advice	: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).
Inhalation	: Allow affected person to breathe fresh air. Allow the victim to rest.
Skin contact	: Remove affected clothing and wash all exposed skin area with mild soap and water, followed by warm water rinse.

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Eye contact : Rinse immediately with plenty of water. Obtain medical attention if pain, blinking or redness persists.

Ingestion : Rinse mouth. Do NOT induce vomiting. Obtain emergency medical attention.

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

Acute effects inhalation : Inhalation may cause irritation, cough, shortness of breath.

Acute effects skin : May cause moderate irritation. Red skin.

Acute effects eyes : Causes serious eye damage. Redness.

Acute effects oral route : Burns or irritation of the linings of the mouth, throat, and gastrointestinal tract. Abdominal pain, nausea.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released. Carbon dioxide. Carbon monoxide.

5.3. Advice for firefighters

Firefighting instructions : Use water spray or fog for cooling exposed containers. Exercise caution when fighting any chemical fire. Prevent fire fighting water from entering the environment.

Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Evacuate unnecessary personnel.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters. Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store away from other materials.

6.4. Reference to other sections

See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapour.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed.

Incompatible products : Strong acids.

Incompatible materials : Direct sunlight.

Packaging materials : polyethylene. stainless steel.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Potassium hydroxide (1310-58-3)	
Ireland - Occupational Exposure Limits	
Local name	Potassium hydroxide
OEL (15 min ref) (mg/m ³)	2 mg/m ³
Regulatory reference	Chemical Agents Code of Practice 2020
United Kingdom - Occupational Exposure Limits	
Local name	Potassium hydroxide

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Potassium hydroxide (1310-58-3)

WEL STEL (mg/m ³)	2 mg/m ³
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

Sodium hydroxide (1310-73-2)

Ireland - Occupational Exposure Limits

Local name	Sodium hydroxide
OEL (15 min ref) (mg/m ³)	2 mg/m ³
Regulatory reference	Chemical Agents Code of Practice 2020

United Kingdom - Occupational Exposure Limits

Local name	Sodium hydroxide
WEL STEL (mg/m ³)	2 mg/m ³
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

2-butoxyethanol (111-76-2)

EU - Occupational Exposure Limits

Local name	2-Butoxyethanol
IOELV TWA (mg/m ³)	98 mg/m ³
IOELV TWA (ppm)	20 ppm
IOELV STEL (mg/m ³)	246 mg/m ³
IOELV STEL (ppm)	50 ppm
Notes	Skin
Regulatory reference	COMMISSION DIRECTIVE 2000/39/EC

Ireland - Occupational Exposure Limits

Local name	2-Butoxyethanol (EGBE) [Ethylene glycol monobutyl ether]
OEL (8 hours ref) (mg/m ³)	98 mg/m ³
OEL (8 hours ref) (ppm)	20 ppm
OEL (15 min ref) (mg/m ³)	246 mg/m ³
OEL (15 min ref) (ppm)	50 ppm
Notes (IE)	Sk (Substances which have the capacity to penetrate intact skin when they come in contact with it, and be absorbed into the body), IOELV (Indicative Occupational Exposure Limit Values)
Regulatory reference	Chemical Agents Code of Practice 2020

United Kingdom - Occupational Exposure Limits

Local name	2-Butoxyethanol
WEL TWA (mg/m ³)	123 mg/m ³
WEL TWA (ppm)	25 ppm
WEL STEL (mg/m ³)	246 mg/m ³
WEL STEL (OEL STEL) [ppm]	50 ppm
Remark (WEL)	Sk (Can be absorbed through the skin. The assigned substances are those for which there are concerns that dermal absorption will lead to systemic toxicity), BMGV (Biological monitoring guidance values are listed in Table 2)
Regulatory reference	EH40/2005 (Fourth edition, 2020). HSE

United Kingdom - Biological limit values

Local name	2-Butoxyethanol
United Kingdom (BEI)	240 mmol/mol Creatinine Parameter: butoxyacetic acid - Medium: urine - Sampling time: Post shift

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

2-butoxyethanol (111-76-2)

Regulatory reference

EH40/2005 (Fourth edition, 2020). HSE

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Personal protective equipment:

Avoid all unnecessary exposure.

Hand protection:

Wear protective gloves.

Eye protection:

Chemical goggles or safety glasses

Personal protective equipment symbol(s):



Other information:

Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Physical state/form	: Liquid.
Colour	: red.
Odour	: Characteristic. Citrus fruits.
Odour threshold	: No data available
pH	: 12.9 – 13.9
Relative evaporation rate (butylacetate=1)	: No data available
Melting point/range	: 0 °C
Freezing point	: No data available
Boiling point/Boiling range	: 100 °C
Flash point	: No data available
Autoignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Non flammable.
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: 1.03
Solubility	: Soluble in water.
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

VOC content : 36.5 g/l

SECTION 10: Stability and reactivity

10.1. Reactivity

No additional information available

10.2. Chemical stability

Stable under normal conditions.

REMOVE

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures.

10.5. Incompatible materials

Strong acids.

10.6. Hazardous decomposition products

fume. Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Not classified

Potassium hydroxide (1310-58-3)

LD50 oral rat	333 mg/kg
ATE CLP (oral)	333 mg/kg bodyweight

Sodium hydroxide (1310-73-2)

ATE CLP (oral)	2000 mg/kg bodyweight
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2-butoxyethanol (111-76-2)

LD50 oral rat	1300 mg/kg
LD50 dermal rat	1100 mg/kg
LC50 Inhalation - Rat [ppm]	4500
LC50 Inhalation - Rat (Dust/Mist)	1.5 mg/l
LC50 Inhalation - Rat (Vapours)	11 mg/l/4h
ATE CLP (oral)	1300 mg/kg bodyweight
ATE CLP (dermal)	1100 mg/kg bodyweight
ATE CLP (gases)	4500 ppmv/4h
ATE CLP (vapours)	11 mg/l/4h
ATE CLP (dust,mist)	1.5 mg/l/4h

Isotridecanol, ethoxylated (69011-36-5)

ATE CLP (oral)	500 mg/kg bodyweight
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Skin corrosion/irritation	: Causes severe skin burns. pH: 12.9 – 13.9
Additional information	: Based on available data, the classification criteria are not met
Serious eye damage/irritation	: Assumed to cause serious eye damage pH: 12.9 – 13.9
Additional information	: Based on available data, the classification criteria are not met
Respiratory or skin sensitisation	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Germ cell mutagenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met
Carcinogenicity	: Not classified
Additional information	: Based on available data, the classification criteria are not met

2-butoxyethanol (111-76-2)

IARC group	3 - Not classifiable
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REMOVE

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

D-LIMONENE (5989-27-5)

IARC group	3 - Not classifiable
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Reproductive toxicity : Not classified
Additional information : Based on available data, the classification criteria are not met

STOT-single exposure : Not classified
Additional information : Based on available data, the classification criteria are not met

STOT-repeated exposure : Not classified
Additional information : Based on available data, the classification criteria are not met

Aspiration hazard : Not classified
Additional information : Based on available data, the classification criteria are not met

Potential adverse human health effects and symptoms : Based on available data, the classification criteria are not met.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - water : Harmful to aquatic life with long lasting effects.

Hazardous to the aquatic environment, short-term (acute) : Not classified

Hazardous to the aquatic environment, long-term (chronic) : Harmful to aquatic life with long lasting effects.

Potassium hydroxide (1310-58-3)

LC50 fish 1	80 mg/l
EC50 Daphnia 1	30 – 1000 mg/l (OECD 202)

Sodium hydroxide (1310-73-2)

LC50 fish 1	> 35 mg/l
EC50 Daphnia 1	40.4 mg/l (Ceriodaphnia)
EC50 other aquatic organisms 1	> 33 mg/l waterflea

2-butoxyethanol (111-76-2)

LC50 fish 1	1474 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 Daphnia 1	1550 mg/l Daphnia magna
EC50 72h algae (1)	1840 mg/l
NOEC (chronic)	100 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC chronic crustacea	100 mg/l Daphnia magna
NOEC chronic algae	130 mg/l

12.2. Persistence and degradability

REMOVE

Persistence and degradability	Biodegradable. The surfactant(s) contained in this preparation 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.
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Sodium hydroxide (1310-73-2)

Persistence and degradability	Not applicable.
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REMOVE

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

2-butoxyethanol (111-76-2)

Persistence and degradability	Biodegradable.
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12.3. Bioaccumulative potential

REMOVE

Bioaccumulative potential	No bioaccumulation.
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Potassium hydroxide (1310-58-3)

Log Pow	0.75
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Sodium hydroxide (1310-73-2)

Log Pow	-3.88
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Bioaccumulative potential	No bioaccumulation.
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2-butoxyethanol (111-76-2)

Log Pow	0.8
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12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

REMOVE

This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII

This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII

Component

Isotridecanol, ethoxylated (69011-36-5)	This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII
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12.6. Other adverse effects

Additional information : Avoid release to the environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product/Packaging disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

Waste / unused products : Avoid release to the environment.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

ADR	IMDG	IATA
14.1. UN number		
Not regulated	Not regulated	Not regulated
14.2. UN proper shipping name		
Not regulated	Not regulated	Not regulated
14.3. Transport hazard class(es)		
Not regulated	Not regulated	Not regulated
14.4. Packing group		
Not regulated	Not regulated	Not regulated
14.5. Environmental hazards		
Not regulated	Not regulated	Not regulated
No supplementary information available		

REMOVE

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

14.6. Special precautions for user

Overland transport

Not regulated

Transport by sea

Not regulated

Air transport

Not regulated

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

VOC content : 36.5 g/l

Allergenic fragrances > 0,01%:

D-LIMONENE

Detergent Regulation (648/2004/EC): Labelling of contents:

Component	%
phosphonates, non-ionic surfactants	<5%

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Data sources : 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, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H- and EUH-statements:

Acute Tox. 4 (Dermal)	Acute toxicity (dermal), Category 4
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Met. Corr. 1	Corrosive to metals, Category 1
Skin Corr. 1	Skin corrosion/irritation, Category 1

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according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
H226	Flammable liquid and vapour.
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
EUH208	Contains D-LIMONENE. May produce an allergic reaction.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Skin Corr. 1	H314	On basis of test data
Aquatic Chronic 3	H412	Calculation method

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.