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Page 1 of 24
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 19.11.2018 / 0004
Replacing version dated / version: 09.05.2017 / 0003
Valid from: 19.11.2018
PDF print date: 19.11.2018
Hand protection gel 250 ml
Art.: 219326

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

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

1.1 Product identifier

Hand protection gel 250 ml
Art.: 219326

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

Relevant identified uses of the substance or mixture:

Cosmetic preparation
Skin cleaning and protection

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

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Albert Berner Deutschland GmbH, Bernerstrasse 4, 74653 Künzelsau, Germany
Phone: +49 79 40 12 10, Fax: +49 79 40 12 13 00
info@berner.de, www.berner.de

Details of the supplier of the safety data sheet see section 16 of this safety data sheet.

Qualified person's e-mail address: Productsafety.Chemicals@berner-group.com Please DO
NOT use for requesting Safety Data Sheets.

1.4 Emergency telephone number

Emergency information services / official advisory body:

Telephone number of the company in case of emergencies:

+49 (0) 221 80260 889 (09:00 – 17:00)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) 1272/2008 (CLP)

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 19.11.2018 / 0004
 Replacing version dated / version: 09.05.2017 / 0003
 Valid from: 19.11.2018
 PDF print date: 19.11.2018
 Hand protection gel 250 ml
 Art.: 219326

Hazard class	Hazard category	Hazard statement
Flam. Liq.	2	H225-Highly flammable liquid and vapour.

2.2 Label elements

Labeling according to Regulation (EC) 1272/2008 (CLP)

Cosmetics regulations are to be applied.



Danger

H225-Highly flammable liquid and vapour.

P210-Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 P233-Keep container tightly closed.

2.3 Other hazards

The mixture does not contain any vPvB substance (vPvB = very persistent, very bioaccumulative) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

The mixture does not contain any PBT substance (PBT = persistent, bioaccumulative, toxic) or is not included under XIII of the regulation (EC) 1907/2006 (< 0,1 %).

SECTION 3: Composition/information on ingredients

3.1 Substance

n.a.

3.2 Mixture

Ethanol	Substance with specific conc. limit(s) acc. to REACH-registration
Registration number (REACH)	01-2119457610-43-XXXX
Index	603-002-00-5
EINECS, ELINCS, NLP	200-578-6
CAS	64-17-5
content %	50-70
Classification according to Regulation (EC) 1272/2008 (CLP)	Flam. Liq. 2, H225 Eye Irrit. 2, H319

GB

Page 3 of 24
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 19.11.2018 / 0004
 Replacing version dated / version: 09.05.2017 / 0003
 Valid from: 19.11.2018
 PDF print date: 19.11.2018
 Hand protection gel 250 ml
 Art.: 219326

Propan-2-ol	
Registration number (REACH)	---
Index	603-117-00-0
EINECS, ELINCS, NLP	200-661-7
CAS	67-63-0
content %	1-10
Classification according to Regulation (EC) 1272/2008 (CLP)	Flam. Liq. 2, H225 Eye Irrit. 2, H319 STOT SE 3, H336

(l)-alpha-bisabolol	
Registration number (REACH)	---
Index	---
EINECS, ELINCS, NLP	245-423-3
CAS	23089-26-1
content %	0,1-<1
Classification according to Regulation (EC) 1272/2008 (CLP)	Aquatic Chronic 2, H411

For the text of the H-phrases and classification codes (GHS/CLP), see Section 16.
 The substances named in this section are given with their actual, appropriate classification!
 For substances that are listed in appendix VI, table 3.1 of the regulation (EC) no. 1272/2008 (CLP regulation) this means that all notes that may be given here for the named classification have been taken into account.

SECTION 4: First aid measures

4.1 Description of first aid measures

First-aiders should ensure they are protected!
 Never pour anything into the mouth of an unconscious person!

Inhalation

Supply person with fresh air and consult doctor according to symptoms.

Skin contact

Wash in water.

Eye contact

Remove contact lenses.

Wash thoroughly for several minutes using copious water. Seek medical help if necessary.

Ingestion

Rinse the mouth thoroughly with water.

Give copious water to drink - consult doctor immediately.

4.2 Most important symptoms and effects, both acute and delayed

If applicable delayed symptoms and effects can be found in section 11 and the absorption route in section 4.1.

In certain cases, the symptoms of poisoning may only appear after an extended period / after several hours.

4.3 Indication of any immediate medical attention and special treatment needed

n.c.

SECTION 5: Firefighting measures

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 19.11.2018 / 0004

Replacing version dated / version: 09.05.2017 / 0003

Valid from: 19.11.2018

PDF print date: 19.11.2018

Hand protection gel 250 ml

Art.: 219326

5.1 Extinguishing media

Suitable extinguishing media

Water jet spray / alcohol resistant foam / CO₂ / dry extinguisher

Unsuitable extinguishing media

High volume water jet

5.2 Special hazards arising from the substance or mixture

In case of fire the following can develop:

Oxides of carbon

Toxic gases

Explosive vapour/air or gas/air mixtures.

5.3 Advice for firefighters

In case of fire and/or explosion do not breathe fumes.

Protective respirator with independent air supply.

According to size of fire

Full protection, if necessary.

Cool container at risk with water.

Dispose of contaminated extinction water according to official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure sufficient supply of air.

Remove possible causes of ignition - do not smoke.

Avoid contact with eyes or skin.

If applicable, caution - risk of slipping.

6.2 Environmental precautions

If leakage occurs, dam up.

Resolve leaks if this possible without risk.

Prevent surface and ground-water infiltration, as well as ground penetration.

Do not pour down the drain undiluted.

6.3 Methods and material for containment and cleaning up

Soak up with absorbent material (e.g. universal binding agent, sand, diatomaceous earth, sawdust) and dispose of according to Section 13.

Flush residue using copious water.

6.4 Reference to other sections

For personal protective equipment see Section 8 and for disposal instructions see Section 13.

SECTION 7: Handling and storage

In addition to information given in this section, relevant information can also be found in section 8 and 6.1.

7.1 Precautions for safe handling

7.1.1 General recommendations

Avoid contact with eyes.

Keep away from sources of ignition - Do not smoke.

Eating, drinking, smoking, as well as food-storage, is prohibited in work-room.

Observe directions on label and instructions for use.

Use working methods according to operating instructions.

Ⓢ

Page 5 of 24

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 19.11.2018 / 0004
 Replacing version dated / version: 09.05.2017 / 0003
 Valid from: 19.11.2018
 PDF print date: 19.11.2018
 Hand protection gel 250 ml
 Art.: 219326

7.1.2 Notes on general hygiene measures at the workplace

General hygiene measures for the handling of chemicals are applicable.
 Wash hands before breaks and at end of work.
 Keep away from food, drink and animal feedingstuffs.
 Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

7.2 Conditions for safe storage, including any incompatibilities

Keep out of access to unauthorised individuals.
 Not to be stored in gangways or stair wells.
 Store product closed and only in original packing.
 Do not store with flammable or self-igniting materials.
 Observe special storage conditions.
 Protect from direct sunlight and warming.
 Store in a well-ventilated place.
 Store in a dry place.

7.3 Specific end use(s)

No information available at present.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Ⓢ	Chemical Name	Ethanol	Content %:50-70
	WEL-TWA:	1000 ppm (1920 mg/m3)	WEL-STEL: ---
	Monitoring procedures:	- Compur - KITA-104 SA (549 210) - Draeger - Alcohol 25/a Ethanol (81 01 631) DFG (D) (Lösungsmittelgemische), Methode Nr. 6 DFG (E) (Solvent mixtures) - 1998, 2002 - EU project - BC/CEN/ENTR/000/2002-16 card 63-2 (2004)	
	BMGV:	---	Other information: ---
Ⓢ	Chemical Name	Propan-2-ol	Content %:1-10
	WEL-TWA:	400 ppm (999 mg/m3)	WEL-STEL: 500 ppm (1250 mg/m3)
	Monitoring procedures:	- Compur - KITA-122 SA(C) (549 277) - Compur - KITA-150 U (550 382) - Draeger - Alcohol 25/a i-Propanol (81 01 631) DFG (D) (Lösungsmittelgemische), DFG (E) (Solvent mixtures 6) - 1998, 2002 - EU project BC/CEN/ENTR/000/2002-16 card 66-3 (2004) - Draeger - Alcohol 100/a (CH 29 701)	
	BMGV:	---	Other information: ---
Ⓢ	Chemical Name	Glycerine	Content %:
	WEL-TWA:	10 mg/m3 (mist)	WEL-STEL: ---
	Monitoring procedures:	---	
	BMGV:	---	Other information: ---

Ⓢ WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period) EH40. AGW = "Arbeitsplatzgrenzwert" (workplace limit value, Germany). (8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU,

Page 6 of 24

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 19.11.2018 / 0004

Replacing version dated / version: 09.05.2017 / 0003

Valid from: 19.11.2018

PDF print date: 19.11.2018

Hand protection gel 250 ml

Art.: 219326

2017/2398/EU). | WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period).

(8) = Inhalable fraction (2017/164/EU, 2017/2398/EU). (9) = Respirable fraction (2017/164/EU, 2017/2398/EU). (10) = Short-term exposure limit value in relation to a reference period of 1 minute (2017/164/EU). | BMGV = Biological monitoring guidance value EH40. BGW = "Biologischer Grenzwert" (biological limit value, Germany) | Other information: Sen = Capable of causing occupational asthma. Sk = Can be absorbed through skin. Carc = Capable of causing cancer and/or heritable genetic damage.

** = The exposure limit for this substance is repealed through the TRGS 900 (Germany) of January 2006 with the goal of revision.

8.2 Exposure controls

Ethanol						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,96	mg/l	
	Environment - marine		PNEC	0,79	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	2,75	mg/l	
	Environment - sewage treatment plant		PNEC	580	mg/l	
	Environment - sediment, freshwater		PNEC	3,6	mg/kg	
	Environment - soil		PNEC	0,63	mg/kg dry weight	
	Environment - oral (animal feed)		PNEC	0,72	mg/kg feed	
	Environment - sediment, marine		PNEC	2,9	mg/kg dry weight	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	950	mg/m ³	
Consumer	Human - dermal	Short term, local effects	DNEL	950	mg/m ³	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	114	mg/m ³	
Consumer	Human - oral	Long term, systemic effects	DNEL	87	mg/kg	
Consumer	Human - dermal	Long term, systemic effects	DNEL	206	mg/kg bw/d	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	1900	mg/m ³	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	950	mg/m ³	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	343	mg/kg bw/d	

GB

Page 7 of 24
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 19.11.2018 / 0004
 Replacing version dated / version: 09.05.2017 / 0003
 Valid from: 19.11.2018
 PDF print date: 19.11.2018
 Hand protection gel 250 ml
 Art.: 219326

Propan-2-ol						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	140,9	mg/l	
	Environment - marine		PNEC	140,9	mg/l	
	Environment - sediment, freshwater		PNEC	552	mg/kg	
	Environment - sediment, marine		PNEC	552	mg/kg	
	Environment - soil		PNEC	28	mg/kg	
	Environment - sewage treatment plant		PNEC	2251	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	140,9	mg/l	
Consumer	Human - dermal	Long term	DNEL	319	mg/kg	(1 d)
Consumer	Human - inhalation	Long term	DNEL	89	mg/m ³	
Consumer	Human - oral	Long term	DNEL	26	mg/kg	(1 d)
Workers / employees	Human - dermal	Long term	DNEL	888	mg/kg	(1 d)
Workers / employees	Human - inhalation	Long term	DNEL	500	mg/m ³	

Glycerine						
Area of application	Exposure route / Environmental compartment	Effect on health	Descriptor	Value	Unit	Note
	Environment - freshwater		PNEC	0,885	mg/l	
	Environment - marine		PNEC	0,088	mg/l	
	Environment - sewage treatment plant		PNEC	1000	mg/l	
	Environment - sediment, freshwater		PNEC	3,3	mg/kg dw	
	Environment - sediment, marine		PNEC	0,33	mg/kg dw	
	Environment - soil		PNEC	0,141	mg/kg dw	
Consumer	Human - inhalation	Long term, local effects	DNEL	33	mg/m ³	
Consumer	Human - oral	Long term, systemic effects	DNEL	229	mg/kg bw/day	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	56	mg/m ³	

8.2.1 Appropriate engineering controls

Ensure good ventilation. This can be achieved by local suction or general air extraction.

Page 8 of 24
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 19.11.2018 / 0004
Replacing version dated / version: 09.05.2017 / 0003
Valid from: 19.11.2018
PDF print date: 19.11.2018
Hand protection gel 250 ml
Art.: 219326

If this is insufficient to maintain the concentration under the WEL or AGW values, suitable breathing protection should be worn.
Applies only if maximum permissible exposure values are listed here.
Suitable assessment methods for reviewing the effectiveness of protection measures adopted include metrological and non-metrological investigative techniques.
These are specified by e.g. BS EN 14042.
BS EN 14042 "Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents".

8.2.2 Individual protection measures, such as personal protective equipment

General hygiene measures for the handling of chemicals are applicable.
Wash hands before breaks and at end of work.
Keep away from food, drink and animal feedingstuffs.
Remove contaminated clothing and protective equipment before entering areas in which food is consumed.

Eye/face protection:
Normally not necessary.

Skin protection - Hand protection:
Normally not necessary.

Skin protection - Other:
Normally not necessary.

Respiratory protection:
Normally not necessary.

Thermal hazards:
Not applicable

Additional information on hand protection - No tests have been performed.
In the case of mixtures, the selection has been made according to the knowledge available and the information about the contents.
Selection of materials derived from glove manufacturer's indications.
Final selection of glove material must be made taking the breakthrough times, permeation rates and degradation into account.
Selection of a suitable glove depends not only on the material but also on other quality characteristics and varies from manufacturer to manufacturer.
In the case of mixtures, the resistance of glove materials cannot be predicted and must therefore be tested before use.
The exact breakthrough time of the glove material can be requested from the protective glove manufacturer and must be observed.

8.2.3 Environmental exposure controls

No information available at present.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state:	Gel, Viscous
Colour:	Transparent
Odour:	Characteristic

GE

Page 9 of 24

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 19.11.2018 / 0004

Replacing version dated / version: 09.05.2017 / 0003

Valid from: 19.11.2018

PDF print date: 19.11.2018

Hand protection gel 250 ml

Art.: 219326

Odour threshold:	Not determined
pH-value:	6,5-7,5
Melting point/freezing point:	-117 °C (Ethanol)
Initial boiling point and boiling range:	~80 °C
Flash point:	<21 °C (Pensky-Martens, closed cup)
Evaporation rate:	Not determined
Flammability (solid, gas):	n.a.
Lower explosive limit:	3,5 Vol-% (Ethanol)
Upper explosive limit:	15 Vol-% (Ethanol)
Vapour pressure:	~5,7 kPa (Ethanol)
Vapour density (air = 1):	Not determined
Density:	0,88 g/ml
Bulk density:	n.a.
Solubility(ies):	Not determined
Water solubility:	Soluble
Partition coefficient (n-octanol/water):	-0,31 (Ethanol)
Auto-ignition temperature:	Not determined
Decomposition temperature:	Not determined
Viscosity:	4500 mPas
Explosive properties:	Product is not explosive. Possible build up of explosive/highly flammable vapour/air mixture.
Oxidising properties:	No
9.2 Other information	
Miscibility:	Not determined
Fat solubility / solvent:	Not determined
Conductivity:	Not determined
Surface tension:	Not determined
Solvents content:	60 %

SECTION 10: Stability and reactivity

10.1 Reactivity

Not to be expected

10.2 Chemical stability

Stable with proper storage and handling.

10.3 Possibility of hazardous reactions

No dangerous reactions are known.

10.4 Conditions to avoid

Heating, open flame, ignition sources

10.5 Incompatible materials

Avoid contact with strong oxidizing agents.

Avoid contact with strong acids.

10.6 Hazardous decomposition products

See also section 5.2

No decomposition when used as directed.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

GB

Page 10 of 24
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 19.11.2018 / 0004
 Replacing version dated / version: 09.05.2017 / 0003
 Valid from: 19.11.2018
 PDF print date: 19.11.2018
 Hand protection gel 250 ml
 Art.: 219326

Possibly more information on health effects, see Section 2.1 (classification).

Hand protection gel 250 ml
Art.: 219326

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:						n.d.a.
Acute toxicity, by dermal route:						n.d.a.
Acute toxicity, by inhalation:						n.d.a.
Skin corrosion/irritation:						n.d.a.
Serious eye damage/irritation:						n.d.a.
Respiratory or skin sensitisation:						n.d.a.
Germ cell mutagenicity:						n.d.a.
Carcinogenicity:						n.d.a.
Reproductive toxicity:						n.d.a.
Specific target organ toxicity - single exposure (STOT-SE):						n.d.a.
Specific target organ toxicity - repeated exposure (STOT-RE):						n.d.a.
Aspiration hazard:						n.d.a.
Symptoms:						n.d.a.
Other information:						Classification according to calculation procedure.

Ethanol

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	10470	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	>2000	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	124,7	mg/l/4 h	Rat	OECD 403 (Acute Inhalation Toxicity)	
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Irritant

GB

Page 11 of 24
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 19.11.2018 / 0004
 Replacing version dated / version: 09.05.2017 / 0003
 Valid from: 19.11.2018
 PDF print date: 19.11.2018
 Hand protection gel 250 ml
 Art.: 219326

Respiratory or skin sensitisation:				Mouse	OECD 429 (Skin Sensitisation - Local Lymph Node Assay)	No (skin contact)
Germ cell mutagenicity:				Salmonella typhimurium	OECD 471 (Bacterial Reverse Mutation Test)	Negative
Germ cell mutagenicity:				Mouse	OECD 476 (In Vitro Mammalian Cell Gene Mutation Test)	Negative
Germ cell mutagenicity:					OECD 473 (In Vitro Mammalian Chromosome Aberration Test)	Negative
Germ cell mutagenicity:					OECD 475 (Mammalian Bone Marrow Chromosome Aberration Test)	Negative
Carcinogenicity:	NOAEL	>3000	mg/kg	Rat	OECD 451 (Carcinogenicity Studies)	24 mon
Reproductive toxicity:	NOAEL	5200	mg/kg bw/d	Rat		
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAL	>20	mg/l	Rat	OECD 403 (Acute Inhalation Toxicity)	Male
Specific target organ toxicity - repeated exposure (STOT-RE):	NOAEL	1730	mg/kg/d	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	Female
Aspiration hazard:				Human being		No indications of such an effect.

GB

Page 12 of 24
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 19.11.2018 / 0004
 Replacing version dated / version: 09.05.2017 / 0003
 Valid from: 19.11.2018
 PDF print date: 19.11.2018
 Hand protection gel 250 ml
 Art.: 219326

Symptoms:						respiratory distress, drowsiness, unconsciousness, drop in blood pressure, vomiting, coughing, headaches, intoxication, drowsiness, mucous membrane irritation, dizziness, nausea
Experiences in humans:						Excessive alcohol consumption during pregnancy induces the foetus alcohol syndrome (reduced weight at birth, physical and mental disorders)., There is no sign that this syndrome is also caused by dermal or inhalative absorption.

Propan-2-ol						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	4570-5840	mg/kg	Rat	OECD 401 (Acute Oral Toxicity)	
Acute toxicity, by dermal route:	LD50	13900	mg/kg	Rabbit	OECD 402 (Acute Dermal Toxicity)	
Acute toxicity, by inhalation:	LC50	30	mg/l/4 h	Rat		

GB

Page 13 of 24
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 19.11.2018 / 0004
 Replacing version dated / version: 09.05.2017 / 0003
 Valid from: 19.11.2018
 PDF print date: 19.11.2018
 Hand protection gel 250 ml
 Art.: 219326

Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Eye Irrit. 2
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Not sensitizing
Germ cell mutagenicity:				Salmonella typhimurium	(Ames-Test)	Negative
Carcinogenicity:						Negative
Reproductive toxicity:						Negative
Specific target organ toxicity - repeated exposure (STOT-RE):						Target organ(s): liver
Aspiration hazard:						No
Symptoms:						breathing difficulties, unconsciousness, vomiting, headaches, fatigue, dizziness, nausea
Specific target organ toxicity - repeated exposure (STOT-RE), oral:	NOAEL	900	mg/kg	Rat	OECD 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents)	

(l)-alpha-bisabolol

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	>5000	mg/kg	Rat		
Skin corrosion/irritation:				Rabbit	OECD 404 (Acute Dermal Irritation/Corrosion)	Not irritant
Serious eye damage/irritation:				Rabbit	OECD 405 (Acute Eye Irritation/Corrosion)	Not irritant
Respiratory or skin sensitisation:				Guinea pig	OECD 406 (Skin Sensitisation)	Not sensitizing

Glycerine

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
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CE

Page 15 of 24
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 19.11.2018 / 0004
 Replacing version dated / version: 09.05.2017 / 0003
 Valid from: 19.11.2018
 PDF print date: 19.11.2018
 Hand protection gel 250 ml
 Art.: 219326

12.5. Results of PBT and vPvB assessment							n.d.a.
12.6. Other adverse effects:							n.d.a.

Ethanol							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.3. Bioaccumulative potential:	Log Pow		-0,32				Bioaccumulation is unlikely (LogPow < 1).
12.1. Toxicity to daphnia:	NOEC/NOEL	10d	9,6	mg/l	Ceriodaphnia spec.		
12.1. Toxicity to fish:	LC50	96h	13000	mg/l	Oncorhynchus mykiss	OECD 203 (Fish, Acute Toxicity Test)	
12.1. Toxicity to daphnia:	LC50	48h	12340	mg/l	Daphnia magna		
12.2. Persistence and degradability:			97	%		OECD 301 B (Ready Biodegradability - Co2 Evolution Test)	Readily biodegradable
12.3. Bioaccumulative potential:	BCF		0,66 - 3,2				
12.1. Toxicity to algae:	EC50	72h	275	mg/l	Chlorella vulgaris	OECD 201 (Alga, Growth Inhibition Test)	
Other organisms:	NOEC/NOEL		280	mg/l	Lemna gibba	OECD 201 (Alga, Growth Inhibition Test)	
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
12.4. Mobility in soil:	H (Henry)		0,000138				
Toxicity to bacteria:			440	mg/l			
Other information:	COD		1,9	g/g			
Other information:	BOD5		1	g/g			

Propan-2-ol							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes

GB

Page 16 of 24
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 19.11.2018 / 0004
 Replacing version dated / version: 09.05.2017 / 0003
 Valid from: 19.11.2018
 PDF print date: 19.11.2018
 Hand protection gel 250 ml
 Art.: 219326

12.1. Toxicity to fish:	LC50	96h	>100	mg/l	Leuciscus idus		
12.1. Toxicity to daphnia:	EC50	48h	2285	mg/l	Daphnia magna		
12.1. Toxicity to algae:	EC50	72h	>100	mg/l	Desmodesmus subspicatus		
12.2. Persistence and degradability:		21d	95	%		OECD 301 E (Ready Biodegradability - Modified OECD Screening Test)	
12.2. Persistence and degradability:			99,9	%		OECD 303 A (Simulation Test - Aerobic Sewage Treatment - Activated Sludge Units)	
12.3. Bioaccumulative potential:	Log Pow		0,05			OECD 107 (Partition Coefficient (n-octanol/water) - Shake Flask Method)	
12.5. Results of PBT and vPvB assessment							No PBT substance, No vPvB substance
12.4. Mobility in soil:	Koc		1,1				Expert judgement
Toxicity to bacteria:	EC50		>1000	mg/l	activated sludge		
Other information:	ThOD		2,4	g/g			
Other information:	BOD5		53	%			
Other information:	COD		96	%			References
Other information:	BOD		1171	mg/g			

(l)-alpha-bisabolol

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	>4,6- <10	mg/l	Leuciscus idus		
12.1. Toxicity to daphnia:	EC50	48h	1,3	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	

CE

Page 17 of 24
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 19.11.2018 / 0004
 Replacing version dated / version: 09.05.2017 / 0003
 Valid from: 19.11.2018
 PDF print date: 19.11.2018
 Hand protection gel 250 ml
 Art.: 219326

12.2. Persistence and degradability:		28d	70-80	%		OECD 301 F (Ready Biodegradability - Manometric Respirometry Test)	Readily biodegradable
--------------------------------------	--	-----	-------	---	--	--	-----------------------

Glycerine							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:	LC50	96h	> 5000	mg/l	Carassius auratus		
12.1. Toxicity to daphnia:	EC50	48h	>10000	mg/l	Daphnia magna		
12.1. Toxicity to daphnia:	EC5	72h	3200	mg/l			Entosiphon sulcatum
12.1. Toxicity to algae:	EC50		2900	mg/l	Chlorella vulgaris		
12.2. Persistence and degradability:		14d	63	%		OECD 301 C (Ready Biodegradability - Modified MITI Test (I))	
12.2. Persistence and degradability:	BOD/COD		>60	%			
12.2. Persistence and degradability:	BOD5/COD		> 50	%			
12.2. Persistence and degradability:	DOC		>70	%			Readily biodegradable
12.3. Bioaccumulative potential:	Log Pow		-1,76				A notable biological accumulation potential is not to be expected (LogPow 1-3).
12.5. Results of PBT and vPvB assessment							n.a.
Toxicity to bacteria:	EC5	16h	> 10000	mg/l	Pseudomonas putida		
Other information:	BOD5		0,87	g/g			
Other information:	COD		1,16	g/g			
Other information:	ThOD		1,217	g/g			Readily biodegradable

SECTION 13: Disposal considerations

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 19.11.2018 / 0004
 Replacing version dated / version: 09.05.2017 / 0003
 Valid from: 19.11.2018
 PDF print date: 19.11.2018
 Hand protection gel 250 ml
 Art.: 219326

13.1 Waste treatment methods For the substance / mixture / residual amounts

EC disposal code no.:

The waste codes are recommendations based on the scheduled use of this product.
 Owing to the user's specific conditions for use and disposal, other waste codes may be allocated under certain circumstances. (2014/955/EU)
 07 06 01 aqueous washing liquids and mother liquors

Recommendation:

Sewage disposal shall be discouraged.
 Pay attention to local and national official regulations.
 E.g. dispose at suitable refuse site.
 E.g. suitable incineration plant.

For contaminated packing material

Pay attention to local and national official regulations.
 Empty container completely.
 Uncontaminated packaging can be recycled.
 Dispose of packaging that cannot be cleaned in the same manner as the substance.
 Residues may present a risk of explosion.

SECTION 14: Transport information

General statements

14.1. UN number: 1993

Transport by road/by rail (ADR/RID)

14.2. UN proper shipping name:
 UN 1993 FLAMMABLE LIQUID, N.O.S. (ETHANOL,ISOPROPYL ALCOHOL)

14.3. Transport hazard class(es): 3
 14.4. Packing group: III
 Classification code: F1
 LQ: 5 L
 14.5. Environmental hazards: Not applicable
 Tunnel restriction code: E



Transport by sea (IMDG-code)

14.2. UN proper shipping name:
 FLAMMABLE LIQUID, N.O.S. (ETHANOL,ISOPROPYL ALCOHOL)
 14.3. Transport hazard class(es): 3
 14.4. Packing group: III
 EmS: F-E, S-E
 Marine Pollutant: n.a.
 14.5. Environmental hazards: Not applicable



Transport by air (IATA)

14.2. UN proper shipping name:
 Flammable liquid, n.o.s. (ETHANOL,ISOPROPYL ALCOHOL)
 14.3. Transport hazard class(es): 3
 14.4. Packing group: III
 14.5. Environmental hazards: Not applicable



14.6. Special precautions for user

Persons employed in transporting dangerous goods must be trained.
 All persons involved in transporting must observe safety regulations.

GB

Page 19 of 24
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 19.11.2018 / 0004
 Replacing version dated / version: 09.05.2017 / 0003
 Valid from: 19.11.2018
 PDF print date: 19.11.2018
 Hand protection gel 250 ml
 Art.: 219326

Precautions must be taken to prevent damage.

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

Freighted as packaged goods rather than in bulk, therefore not applicable.

Minimum amount regulations have not been taken into account.

Danger code and packing code on request.

Comply with special provisions.

SECTION 15: Regulatory information

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

Observe restrictions:

Comply with trade association/occupational health regulations.

Directive 2012/18/EU ("Seveso III"), Annex I, Part 1 - The following categories apply to this product (others may also need to be considered according to storage, handling etc.):

Hazard categories	Notes to Annex I	Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Lower-tier requirements	Qualifying quantity (tonnes) of dangerous substances as referred to in Article 3(10) for the application of - Upper-tier requirements
P5c		5000	50000

The Notes to Annex 1 of Directive 2012/18/EU, in particular those named in the tables here and notes 1-6, must be taken into account when assigning categories and qualifying quantities.

Directive 2010/75/EU (VOC): ~ 70,2 %

Directive 2010/75/EU (VOC): 617,8 g/l

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections:

8

Employee training in handling dangerous goods is required.

These details refer to the product as it is delivered.

Employee instruction/training in handling hazardous materials is required.

Classification and processes used to derive the classification of the mixture in accordance with the ordinance (EG) 1272/2008 (CLP):

Classification in accordance with regulation (EC) No. 1272/2008 (CLP)	Evaluation method used
Flam. Liq. 2, H225	Classification based on test data.

GB

Page 20 of 24

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 19.11.2018 / 0004

Replacing version dated / version: 09.05.2017 / 0003

Valid from: 19.11.2018

PDF print date: 19.11.2018

Hand protection gel 250 ml

Art.: 219326

The following phrases represent the posted Hazard Class and Risk Category Code (GHS/CLP) of the product and the constituents (specified in Section 2 and 3).

H225 Highly flammable liquid and vapour.

H319 Causes serious eye irritation.

H336 May cause drowsiness or dizziness.

H411 Toxic to aquatic life with long lasting effects.

Flam. Liq. — Flammable liquid

Eye Irrit. — Eye irritation

STOT SE — Specific target organ toxicity - single exposure - narcotic effects

Aquatic Chronic — Hazardous to the aquatic environment - chronic

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Page 21 of 24

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 19.11.2018 / 0004

Replacing version dated / version: 09.05.2017 / 0003

Valid from: 19.11.2018

PDF print date: 19.11.2018

Hand protection gel 250 ml

Art.: 219326

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Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 19.11.2018 / 0004

Replacing version dated / version: 09.05.2017 / 0003

Valid from: 19.11.2018

PDF print date: 19.11.2018

Hand protection gel 250 ml

Art.: 219326

AC Article Categories

acc., acc. to according, according to

ACGIH American Conference of Governmental Industrial Hygienists

ADR Accord européen relatif au transport international des marchandises Dangereuses par Route (= European Agreement concerning the International Carriage of Dangerous Goods by Road)

AOEL Acceptable Operator Exposure Level

AOX Adsorbable organic halogen compounds

approx. approximately

Art., Art. no. Article number

ATE Acute Toxicity Estimate according to Regulation (EC) 1272/2008 (CLP)

BAM Bundesanstalt für Materialforschung und -prüfung (Federal Institute for Materials Research and Testing, Germany)

BAuA Bundesanstalt für Arbeitsschutz und Arbeitsmedizin (= Federal Institute for Occupational Health and Safety, Germany)

BCF Bioconcentration factor

BGV Berufsgenossenschaftliche Vorschrift (= Accident Prevention Regulation)

BHT Butylhydroxytoluol (= 2,6-Di-*t*-butyl-4-methyl-phenol)

BMGV Biological monitoring guidance value (EH40, UK)

BOD Biochemical oxygen demand

BSEF Bromine Science and Environmental Forum

bw body weight

CAS Chemical Abstracts Service

CEC Coordinating European Council for the Development of Performance Tests for Fuels, Lubricants and Other Fluids

CESIO Comité Européen des Agents de Surface et de leurs Intermédiaires Organiques

CIPAC Collaborative International Pesticides Analytical Council

CLP Classification, Labelling and Packaging (REGULATION (EC) No 1272/2008 on classification, labelling and packaging of substances and mixtures)

CMR carcinogenic, mutagenic, reproductive toxic

COD Chemical oxygen demand

CTFA Cosmetic, Toiletry, and Fragrance Association

DMEL Derived Minimum Effect Level

DNEL Derived No Effect Level

DOC Dissolved organic carbon

DT50 Dwell Time - 50% reduction of start concentration

DVS Deutscher Verband für Schweißen und verwandte Verfahren e.V. (= German Association for Welding and Allied Processes)

dw dry weight

e.g. for example (abbreviation of Latin 'exempli gratia'), for instance

EC European Community

ECHA European Chemicals Agency

EEA European Economic Area

EEC European Economic Community

EINECS European Inventory of Existing Commercial Chemical Substances

ELINCS European List of Notified Chemical Substances

EN European Norms

EPA United States Environmental Protection Agency (United States of America)

ERC Environmental Release Categories

ES Exposure scenario

Page 23 of 24
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 19.11.2018 / 0004
Replacing version dated / version: 09.05.2017 / 0003
Valid from: 19.11.2018
PDF print date: 19.11.2018
Hand protection gel 250 ml
Art.: 219326

etc. et cetera
EU European Union
EWC European Waste Catalogue
Fax. Fax number
gen. general
GHS Globally Harmonized System of Classification and Labelling of Chemicals
GWP Global warming potential
HET-CAM Hen's Egg Test - Chorionallantoic Membrane
HGWP Halocarbon Global Warming Potential
IARC International Agency for Research on Cancer
IATA International Air Transport Association
IBC Intermediate Bulk Container
IBC (Code) International Bulk Chemical (Code)
IC Inhibitory concentration
IMDG-code International Maritime Code for Dangerous Goods
incl. including, inclusive
IUCLID International Uniform Chemical Information Database
LC lethal concentration
LC50 lethal concentration 50 percent kill
LCLo lowest published lethal concentration
LD Lethal Dose of a chemical
LD50 Lethal Dose, 50% kill
LDLo Lethal Dose Low
LOAEL Lowest Observed Adverse Effect Level
LOEC Lowest Observed Effect Concentration
LOEL Lowest Observed Effect Level
LQ Limited Quantities
MARPOL International Convention for the Prevention of Marine Pollution from Ships
n.a. not applicable
n.av. not available
n.c. not checked
n.d.a. no data available
NIOSH National Institute of Occupational Safety and Health (United States of America)
NOAEC No Observed Adverse Effective Concentration
NOAEL No Observed Adverse Effect Level
NOEC No Observed Effect Concentration
NOEL No Observed Effect Level
ODP Ozone Depletion Potential
OECD Organisation for Economic Co-operation and Development
org. organic
PAH polycyclic aromatic hydrocarbon
PBT persistent, bioaccumulative and toxic
PC Chemical product category
PE Polyethylene
PNEC Predicted No Effect Concentration
POCP Photochemical ozone creation potential
ppm parts per million
PROC Process category
PTFE Polytetrafluorethylene
REACH Registration, Evaluation, Authorisation and Restriction of Chemicals (REGULATION (EC) No 1907/2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals)

©

Page 24 of 24

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II

Revision date / version: 19.11.2018 / 0004

Replacing version dated / version: 09.05.2017 / 0003

Valid from: 19.11.2018

PDF print date: 19.11.2018

Hand protection gel 250 ml

Art.: 219326

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RID Règlement concernant le transport International ferroviaire de marchandises Dangereuses (= Regulation concerning the International Carriage of Dangerous Goods by Rail)

SADT Self-Accelerating Decomposition Temperature

SAR Structure Activity Relationship

SU Sector of use

SVHC Substances of Very High Concern

Tel. Telephone

ThOD Theoretical oxygen demand

TOC Total organic carbon

TRGS Technische Regeln für Gefahrstoffe (=Technical Regulations for Hazardous Substances)

UN RTDG United Nations Recommendations on the Transport of Dangerous Goods

VbF Verordnung über brennbare Flüssigkeiten (= Regulation for flammable liquids (Austria))

VOC Volatile organic compounds

vPvB very persistent and very bioaccumulative

WEL-TWA, WEL-STEL WEL-TWA = Workplace Exposure Limit - Long-term exposure limit (8-hour TWA (= time weighted average) reference period), WEL-STEL = Workplace Exposure Limit - Short-term exposure limit (15-minute reference period) (EH40, UK).

WHO World Health Organization

wwt wet weight

The statements made here should describe the product with regard to the necessary safety precautions - they are not meant to guarantee definite characteristics - but they are based on our present up-to-date knowledge. No responsibility.