

GB

Page 1 of 23
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 05.08.2016 / 0011
Replacing version dated / version: 12.06.2015 / 0010
Valid from: 05.08.2016
PDF print date: 05.12.2018
Cleanstar Winter Fresh 1 I
Art.: 28924

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

Cleanstar Winter Fresh 1 I
Art.: 28924

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

Relevant identified uses of the substance or mixture:

Window cleaner

Sector of use [SU]:

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

Chemical product category [PC]:

PC35 - Washing and cleaning products

Process category [PROC]:

PROC 8b - Transfer of substance or mixture (charging and discharging) at dedicated facilities

Article Categories [AC]:

AC99 - Not required.

Environmental Release Category [ERC]:

ERC99 - Not required.

Uses advised against:

No information available at present.

1.3 Details of the supplier of the safety data sheet

GB

Berner Produkten b.v., Vogelzankweg 175, 6374 AC Landgraaf, Netherlands

Phone: +31 45 53 39 133, Fax: +31 45 53 14 588

info@berner.nl, www.berner.nl

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

Qualified person's e-mail address: info@chemical-check.de, k.schnurbusch@chemical-check.de Please DO NOT use for requesting Safety Data Sheets.

1.4 Emergency telephone number

Emergency information services / official advisory body:

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

Revision date / version: 05.08.2016 / 0011

Replacing version dated / version: 12.06.2015 / 0010

Valid from: 05.08.2016

PDF print date: 05.12.2018

Cleanstar Winter Fresh 1 l

Art.: 28924

Telephone number of the company in case of emergencies:

+49 (0) 700 / 24 112 112 (BRC)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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

Hazard class Hazard category Hazard statement

Flam. Liq. 3 H226-Flammable liquid and vapour.

Eye Irrit. 2 H319-Causes serious eye irritation.

2.2 Label elements

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



Warning

H226-Flammable liquid and vapour. H319-Causes serious eye irritation.

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

P280-Wear eye protection.

P337+P313-If eye irritation persists: Get medical advice / attention.

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

GB

Page 3 of 23
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 05.08.2016 / 0011
 Replacing version dated / version: 12.06.2015 / 0010
 Valid from: 05.08.2016
 PDF print date: 05.12.2018
 Cleanstar Winter Fresh 1 l
 Art.: 28924

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

Ethanediol	Substance for which an EU exposure limit value applies.
Registration number (REACH)	01-2119456816-28-XXXX
Index	603-027-00-1
EINECS, ELINCS, NLP	203-473-3
CAS	107-21-1
content %	1-10
Classification according to Regulation (EC) 1272/2008 (CLP)	Acute Tox. 4, H302 STOT RE 2, H373 (kidneys) (oral)

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

Remove person from danger area.
 Supply person with fresh air and consult doctor according to symptoms.
 If the person is unconscious, place in a stable side position and consult a doctor.

Skin contact

Remove polluted, soaked clothing immediately, wash thoroughly with plenty of water and soap, in case of irritation of the skin (flare), consult a doctor.
 Unsuitable cleaning product:

Solvent

Thinners

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.
 Do not induce vomiting - 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.

Page 4 of 23

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

Revision date / version: 05.08.2016 / 0011

Replacing version dated / version: 12.06.2015 / 0010

Valid from: 05.08.2016

PDF print date: 05.12.2018

Cleanstar Winter Fresh 1 l

Art.: 28924

The following may occur:

Irritation of the eyes

drying of the skin.

Irritation of the respiratory tract

Headaches

Dizziness

Nausea

Vomiting

Effect on the central nervous system

Coordination disorders

Liver and kidney damage

Blood count modifications

increased blood pressure

Heart/circulatory disorders

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

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

Oxides of sulphur

Oxides of nitrogen

Toxic gases

Explosive vapour/air or gas/air mixtures.

Dangerous vapours heavier than air.

In case of spreading near the ground, flashback to distance sources of ignition is possible.

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.

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

Revision date / version: 05.08.2016 / 0011

Replacing version dated / version: 12.06.2015 / 0010

Valid from: 05.08.2016

PDF print date: 05.12.2018

Cleanstar Winter Fresh 1 I

Art.: 28924

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.

Prevent from entering drainage system.

If accidental entry into drainage system occurs, inform responsible authorities.

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.

Use no flammable substances.

Fill the absorbed material into lockable containers.

Flush residue using copious water.

Unsuitable cleaning product:

Solvent

Thinners

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

Ensure good ventilation.

Avoid inhalation of the vapours.

Keep away from sources of ignition - Do not smoke.

Take measures against electrostatic charging, if appropriate.

Take explosion-prevention measures if applicable.

Avoid contact with eyes or skin.

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.

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.

Store product closed and only in original packing.

Not to be stored in gangways or stair wells.

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.

Suitable material:

Stainless steel (alloy steel)

Aluminium

Plastic

GB

Page 6 of 23

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

Revision date / version: 05.08.2016 / 0011

Replacing version dated / version: 12.06.2015 / 0010

Valid from: 05.08.2016

PDF print date: 05.12.2018

Cleanstar Winter Fresh 1 I

Art.: 28924

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/m ³)	WEL-STEL: ---	---
Monitoring procedures:	<ul style="list-style-type: none"> - 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	Ethanediol	Content %: 1-10
WEL-TWA: 10 mg/m ³ (particulate), 52 mg/m ³ (vapour) (WEL), 20 ppm (52 mg/m ³) (EU)	WEL-STEL: 104 mg/m ³ (vapour) (WEL), 40 ppm (104 mg/m ³) (EU)	---
Monitoring procedures:	<ul style="list-style-type: none"> - Compur - KITA-232 SA (502 342) - Compur - KITA-232 SB (550 267) - Draeger - Ethylene Glycol 10 (5) (81 01 351) - NIOSH 5523 (Glycols) - 1996 - OSHA PV2024 (Ethylene glycol) - 1999 - EU project - BC/CEN/ENTR/000/2002-16 card 11-2 (2004) 	
BMGV: ---	Other information: Sk (particulate, vapour)	

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	

GB

Page 7 of 23

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

Revision date / version: 05.08.2016 / 0011

Replacing version dated / version: 12.06.2015 / 0010

Valid from: 05.08.2016

PDF print date: 05.12.2018

Cleanstar Winter Fresh 1 I

Art.: 28924

	Environment - oral (animal feed)		PNEC	0,72	mg/kg feed	
	Environment - sediment, marine		PNEC	2,9	mg/kg dry weight	
Consumer	Human - dermal	Short term, local effects	DNEL	950	mg/m3	
Consumer	Human - inhalation	Long term, systemic effects	DNEL	114	mg/m3	
Consumer	Human - oral	Long term, systemic effects	DNEL	87	mg/kg	
Consumer	Human - dermal	Long term, systemic effects	DNEL	206	mg/kg bw/d	
Consumer	Human - inhalation	Short term, local effects	DNEL	950	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	343	mg/kg bw/d	
Workers / employees	Human - inhalation	Long term, systemic effects	DNEL	950	mg/m3	
Workers / employees	Human - inhalation	Short term, local effects	DNEL	1900	mg/m3	

Ethanediol

Area of application	Exposure route / Environmental compartment	Effect on health	Descrip tor	Value	Unit	Note
	Environment - freshwater		PNEC	10	mg/l	
	Environment - marine		PNEC	1	mg/l	
	Environment - sediment		PNEC	20,9	mg/kg	
	Environment - soil		PNEC	1,53	mg/kg	
	Environment - sewage treatment plant		PNEC	199,5	mg/l	
	Environment - water, sporadic (intermittent) release		PNEC	10	mg/l	
	Environment - sediment, freshwater		PNEC	37	mg/kg dry weight	
	Environment - sediment, marine		PNEC	3,7	mg/kg dry weight	
Consumer	Human - inhalation	Long term, local effects	DNEL	7	mg/m3	
Consumer	Human - dermal	Long term, systemic effects	DNEL	53	mg/kg	
Workers / employees	Human - inhalation	Long term, local effects	DNEL	35	mg/m3	
Workers / employees	Human - dermal	Long term, systemic effects	DNEL	106	mg/kg	



Page 8 of 23

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

Revision date / version: 05.08.2016 / 0011

Replacing version dated / version: 12.06.2015 / 0010

Valid from: 05.08.2016

PDF print date: 05.12.2018

Cleanstar Winter Fresh 1 I

Art.: 28924

Ⓢ 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, 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

8.2.1 Appropriate engineering controls

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

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:

Tight fitting protective goggles with side protection (EN 166).

Skin protection - Hand protection:

Chemical resistant protective gloves (EN 374).

Recommended

Protective Viton® / fluoroelastomer gloves (EN 374)

Protective gloves in butyl rubber (EN 374).

Minimum layer thickness in mm:

0,7

Permeation time (penetration time) in minutes:

> 480

The breakthrough times determined in accordance with EN 16523-1 were not obtained under practical conditions.

The recommended maximum wearing time is 50% of breakthrough time.

Protective hand cream recommended.

Skin protection - Other:

Protective working garments (e.g. safety shoes EN ISO 20345, long-sleeved protective working garments).

Page 9 of 23

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

Revision date / version: 05.08.2016 / 0011

Replacing version dated / version: 12.06.2015 / 0010

Valid from: 05.08.2016

PDF print date: 05.12.2018

Cleanstar Winter Fresh 1 I

Art.: 28924

Respiratory protection:

If OES or MEL is exceeded.

Gas mask filter A (EN 14387), code colour brown

Observe wearing time limitations for respiratory protection equipment.

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:	Liquid
Colour:	Blue
Odour:	Alcoholic, Lemon
Odour threshold:	Not determined
pH-value:	Not determined
Melting point/freezing point:	Not determined
Initial boiling point and boiling range:	>75 °C
Flash point:	>23 °C
Evaporation rate:	Not determined
Flammability (solid, gas):	n.a.
Lower explosive limit:	Not determined
Upper explosive limit:	Not determined
Vapour pressure:	Not determined
Vapour density (air = 1):	Not determined
Density:	0,9 g/cm ³
Bulk density:	n.a.
Solubility(ies):	Not determined
Water solubility:	Mixable
Partition coefficient (n-octanol/water):	Not determined
Auto-ignition temperature:	No
Decomposition temperature:	Not determined
Viscosity:	Not determined
Explosive properties:	Product is not explosive. When using: development of explosive vapour/air mixture possible.

GB

Page 10 of 23
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 05.08.2016 / 0011
 Replacing version dated / version: 12.06.2015 / 0010
 Valid from: 05.08.2016
 PDF print date: 05.12.2018
 Cleanstar Winter Fresh 1 I
 Art.: 28924

Oxidising properties:	No
9.2 Other information	
Miscibility:	Not determined
Fat solubility / solvent:	Not determined
Conductivity:	Not determined
Surface tension:	Not determined
Solvents content:	Not determined

SECTION 10: Stability and reactivity

10.1 Reactivity

The product has not been tested.

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

See also section 7.

Heating, open flame, ignition sources

10.5 Incompatible materials

See also section 7.

Avoid contact with strong oxidizing agents.

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

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

Cleanstar Winter Fresh 1 I

Art.: 28924

Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	ATE	>2000	mg/kg			calculated value
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.

GB

Page 11 of 23
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 05.08.2016 / 0011
 Replacing version dated / version: 12.06.2015 / 0010
 Valid from: 05.08.2016
 PDF print date: 05.12.2018
 Cleanstar Winter Fresh 1 l
 Art.: 28924

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
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

GB

Page 12 of 23
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 05.08.2016 / 0011
 Replacing version dated / version: 12.06.2015 / 0010
 Valid from: 05.08.2016
 PDF print date: 05.12.2018
 Cleanstar Winter Fresh 1 l
 Art.: 28924

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.
Symptoms:						respiratory distress, drowsiness, unconscious ness, drop in blood pressure, vomiting, coughing, headaches, intoxication, drowsiness, mucous membrane irritation, dizziness, nausea

GB

Page 13 of 23
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 05.08.2016 / 0011
 Replacing version dated / version: 12.06.2015 / 0010
 Valid from: 05.08.2016
 PDF print date: 05.12.2018
 Cleanstar Winter Fresh 1 l
 Art.: 28924

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.
------------------------	--	--	--	--	--	--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------

Ethanediol						
Toxicity / effect	Endpoint	Value	Unit	Organism	Test method	Notes
Acute toxicity, by oral route:	LD50	1600	mg/kg	Human being		
Acute toxicity, by dermal route:	LD50	9530	mg/kg	Rabbit		
Acute toxicity, by dermal route:	LD50	>3500	mg/kg	Mouse		
Skin corrosion/irritation:				Rabbit		Slightly irritant
Serious eye damage/irritation:				Rabbit		Slightly irritant
Respiratory or skin sensitisation:				Human being	(Patch-Test)	Negative
Germ cell mutagenicity:					OECD 471 (Bacterial Reverse Mutation Test)	Negative
Symptoms:						ataxia, breathing difficulties, unconsciousness, cramps, fatigue

SECTION 12: Ecological information

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

Revision date / version: 05.08.2016 / 0011

Replacing version dated / version: 12.06.2015 / 0010

Valid from: 05.08.2016

PDF print date: 05.12.2018

Cleanstar Winter Fresh 1 I

Art.: 28924

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

Cleanstar Winter Fresh 1 I

Art.: 28924

Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.1. Toxicity to fish:							n.d.a.
12.1. Toxicity to daphnia:							n.d.a.
12.1. Toxicity to algae:							n.d.a.
12.2. Persistence and degradability:							The surfactant(s) contained in this mixture 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.

GB

Page 15 of 23
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 05.08.2016 / 0011
 Replacing version dated / version: 12.06.2015 / 0010
 Valid from: 05.08.2016
 PDF print date: 05.12.2018
 Cleanstar Winter Fresh 1 l
 Art.: 28924

12.3. Bioaccumulative potential:							n.d.a.
12.4. Mobility in soil:							n.d.a.
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)		0,000 138				
Toxicity to bacteria:			440	mg/l			
Other information:	COD		1,9	g/g			

GB

Page 16 of 23
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 05.08.2016 / 0011
 Replacing version dated / version: 12.06.2015 / 0010
 Valid from: 05.08.2016
 PDF print date: 05.12.2018
 Cleanstar Winter Fresh 1 l
 Art.: 28924

Other information:	BOD5		1	g/g		
--------------------	------	--	---	-----	--	--

Ethanediol							
Toxicity / effect	Endpoint	Time	Value	Unit	Organism	Test method	Notes
12.2. Persistence and degradability:		10h	90-100	%		OECD 301 A (Ready Biodegradability - DOC Die-Away Test)	
Toxicity to bacteria:	EC20	30min	>1995	mg/l	activated sludge	OECD 209 (Activated Sludge, Respiration Inhibition Test (Carbon and Ammonium Oxidation))	
12.1. Toxicity to fish:	LC50	96h	>10000	mg/l	Pimephales promelas	IUCLID Chem. Data Sheet (ESIS)	
12.1. Toxicity to fish:	NOEC/NOEL	7d	15380	mg/l	Pimephales promelas	U.S. EPA ECOTOX Database	
12.1. Toxicity to daphnia:	EC50	48h	>100	mg/l	Daphnia magna	OECD 202 (Daphnia sp. Acute Immobilisation Test)	
12.1. Toxicity to daphnia:	NOEC/NOEL		8590	mg/l	Daphnia magna	U.S. EPA ECOTOX Database	
12.1. Toxicity to algae:	EC50	96h	6500-7500	mg/l	Pseudokirchneriella subcapitata		
12.1. Toxicity to algae:	IC5	7d	>10000	mg/l	Scenedesmus quadricauda		
12.2. Persistence and degradability:		28d	56	%		OECD 301 C (Ready Biodegradability - Modified MITI Test (I))	
12.3. Bioaccumulative potential:	Log Pow		-1,36				Not to be expected
Toxicity to bacteria:	EC50	16h	>10000	mg/l	Pseudomonas putida	IUCLID Chem. Data Sheet (ESIS)	

SECTION 13: Disposal considerations

Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 05.08.2016 / 0011
 Replacing version dated / version: 12.06.2015 / 0010
 Valid from: 05.08.2016
 PDF print date: 05.12.2018
 Cleanstar Winter Fresh 1 l
 Art.: 28924

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

20 01 29 detergents containing hazardous substances

Recommendation:

Sewage disposal shall be discouraged.

Pay attention to local and national official regulations.

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.

Recommended cleaner:

Water

15 01 10 packaging containing residues of or contaminated by hazardous substances

SECTION 14: Transport information

General statements

14.1. UN number: 1170

Transport by road/by rail (ADR/RID),

14.2. UN proper shipping name:

UN 1170 ETHANOL SOLUTION

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:

D/E

Transport by sea (IMDG-code)

14.2. UN proper shipping name:

ETHANOL SOLUTION

14.3. Transport hazard class(es):

3



14.4. Packing group:

III

EmS:

F-E, S-D

Marine Pollutant:

n.a

14.5. Environmental hazards:

Not applicable

Transport by air (IATA)

14.2. UN proper shipping name:

Ethanol solution

14.3. Transport hazard class(es):

3



14.4. Packing group:

III

14.5. Environmental hazards:

Not applicable

14.6. Special precautions for user

GB

Page 18 of 23
 Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
 Revision date / version: 05.08.2016 / 0011
 Replacing version dated / version: 12.06.2015 / 0010
 Valid from: 05.08.2016
 PDF print date: 05.12.2018
 Cleanstar Winter Fresh 1 I
 Art.: 28924

Persons employed in transporting dangerous goods must be trained.
 All persons involved in transporting must observe safety regulations.
 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 national regulations/laws governing maternity protection (national implementation of the Directive 92/85/EEC)!
 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): ~ 57 %

REGULATION (EC) No 648/2004

less than 5 %
 anionic surfactants

perfumes
 LIMONENE
 BENZISOTHIAZOLINONE
 METHYLISOTHIAZOLINONE

15.2 Chemical safety assessment

A chemical safety assessment is not provided for mixtures.

SECTION 16: Other information

Revised sections: 1
 Employee training in handling dangerous goods is required.
 These details refer to the product as it is delivered.

Page 19 of 23
Safety data sheet according to Regulation (EC) No 1907/2006, Annex II
Revision date / version: 05.08.2016 / 0011
Replacing version dated / version: 12.06.2015 / 0010
Valid from: 05.08.2016
PDF print date: 05.12.2018
Cleanstar Winter Fresh 1 I
Art.: 28924

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. 3, H226	Classification based on test data.
Eye Irrit. 2, H319	Classification according to calculation procedure.

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.

H373 May cause damage to organs through prolonged or repeated exposure if swallowed.

H302 Harmful if swallowed.

H319 Causes serious eye irritation.

Flam. Liq. — Flammable liquid

Eye Irrit. — Eye irritation

Acute Tox. — Acute toxicity - oral

STOT RE — Specific target organ toxicity - repeated exposure

Albert Berner Deutschland GmbH
Bernerstrasse 4
D - 74653 Künzelsau
Tel +49 79 40 12 10
Fax +49 79 40 12 13 00
info@berner.de
www.berner.de

Berner Gesellschaft m.b.H.
Industriezeile 36
A - 5280 Braunau / Inn
Tel +43 77 22 800 508
Fax +43 77 22 800 184
berner@berner.co.at
www.berner.co.at

Berner Belgien NV/SA
Bernerstraat 1
B - 3620 Lanaken
Tel +31 45 533 93 133(8.00h-16.00h)
Tel +31 6 290 27 464 (16.00h-8.00h)
Fax +31 455 33 92 43
info@berner.be
www.berner.be

Montagetechnik Berner AG
Kägenstraße 8
CH - 4153 Reinach / Bl. 1
Tel +41 61 71 59 222
Fax +41 61 71 59 333
berner-ag@berner-ag.ch
www.berner-ag.ch

Berner A/S
Stenholm 2
DK - 9400 Nørresundby
Tel +45 99 36 15 00
Fax +45 98 19 24 14
info@berner.dk
www.berner.dk

Berner Montaje y Fijación, S.L.
P.I. "La Rosa VI"
C/Albert Berner, 2
E - 18330 Chauchina-Granada-España
Tel +34 90 21 03 504
Fax +34 90 21 13 190
berner-spain@berner.es
www.berner.es

Page 20 of 23

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

Revision date / version: 05.08.2016 / 0011

Replacing version dated / version: 12.06.2015 / 0010

Valid from: 05.08.2016

PDF print date: 05.12.2018

Cleanstar Winter Fresh 1 I

Art.: 28924

Berner Kft.
Gubacsi út 6/b
H - 1097 Budapest
Tel +36 (1) 347 1059
Fax +36 (1) 347 1045
info@berner.hu
www.berner.hu

Frimann-Berner AS
Holmaveien 25
N - 1339 Vøyenenga
Tel +47 66 76 55 80
Fax +47 66 76 55 81
info@berner.no
www.berner.no

Berner Succ. Luxembourg
105, Rue des Bruyères
L - 1274 Howald
Tel +31 45 533 93 133 (8.00h-
16.00h)
Tel +31 6 290 27 464 (16.00h-
8.00h)
Fax +31 455 33 92 43
info@berner.lu
www.berner.lu

Berner spol. s r.o.
Jinonická 80
CZ - 158 00 Praha 5
Tel +420 225 390 666
Fax +420 225 390 660
berner@berner.cz
www.berner.cz

Berner,S.A.
Av. Amália Rodrigues,3510
Manique de Baixo
P - 2785-738 São Domingos de Rana
Tel ++351 21 448 90 60
Fax ++351 21 448 90 69
marketing.pt@berner.pt
www.berner.pt

Berner Polska Sp. z o.o.
Ul. Puzkarska 7J
30-644 Kraków
Tel +48 12 297 62 40
Fax +48 12 297 62 02
office@berner.pl
www.berner.pl

Albert Berner UAB
Kalvarijø 29B, LT09313,
Vilnius, Lithuania
Tel +370-52104355
Fax +370-52350020
info@berner.lt

Berner SK
Berner s r.o.
Jesenského 1
SK - 962 12 Detva
Tel (+421) 45 5410 245
Fax (+421) 45 5410 255
berner@berner.sk
www.berner.sk

Albert Berner Montagetechnik AB
Elektravägen 53
S - 126 30 Hägersten
Tel +46 85 78 77 800
Fax +46 85 78 77 805
info@berner.se
www.berner.se

Berner Pultti Oy
Volltikatu 6
FI - 70700 Kuopio
Tel +358-207-590 220
Fax +358-207-590 221
kuopio@berner-pultti.com
www.berner-pultti.com

Mitras d.o.o
Brdnikova ulica 34e
SL-1000 Ljubljana
Tel +386-1-256-62-46
Fax +386-1-256-62-45
mitras@siol.com

BERNER d.o.o
CPM Savëca Šanci
Trgovačka 2
HR - 10000 Zagreb
Tel +38512 499 470
Fax +38512 499 480
e-mail: safetydata-hr@berner.co.at

Berner Endüstriyel Ürünler
Sanayi ve Ticaret A.Ş.
Ferhatpaşa Mah. G 7 Sok. 31/2
TR - 34858 Kartal-Samandıra /
ÝSTANBUL
Tel +90 (0) 216-4713077
Fax +90 (0) 216-4719625
info@berner.com.tr
www.berner.com.tr

Berner S.p.A.
Via dell 'Elettronica 15
I - 37139 Verona
Tel +39 04 58 67 01 11
Fax +39 04 58 67 01 34
info@berner.it
www.berner.it

Albert Berner srl
Str. Vrancei Nr. 51 - 55
RO - 310315 Arad
Tel +40 257 212291
Fax +40 257 250460
office@berner-romania.ro
www.berner-romania.ro

Page 21 of 23

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

Revision date / version: 05.08.2016 / 0011

Replacing version dated / version: 12.06.2015 / 0010

Valid from: 05.08.2016

PDF print date: 05.12.2018

Cleanstar Winter Fresh 1 I

Art.: 28924

Berner Produkten b.v.

Vogelzankweg 175

NL - 6374 AC Landgraaf

+31 45 53 39 133 (8.00h-16.00h)

+31 6 290 27 464 (16.00h-8.00h)

info@berner.nl

Berner s.a.r.l.

ZI Les Manteaux

F - 89331 Saint-Julien-du-Sault

Cedex

Tel +33 38 69 94 400

Fax +33 38 69 94 444

Albert Berner SIA

Liliju 20, Marupe, Mārupes

novads,

LV-2167, Latvija

Tel +37167840007

Fax +371678440008

(c) COPYRIGHT 1987 - 2050 ALL
RIGHTS RESERVED

Any abbreviations and acronyms used in this document:

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

Page 22 of 23

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

Revision date / version: 05.08.2016 / 0011

Replacing version dated / version: 12.06.2015 / 0010

Valid from: 05.08.2016

PDF print date: 05.12.2018

Cleanstar Winter Fresh 1 I

Art.: 28924

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

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

Page 23 of 23

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

Revision date / version: 05.08.2016 / 0011

Replacing version dated / version: 12.06.2015 / 0010

Valid from: 05.08.2016

PDF print date: 05.12.2018

Cleanstar Winter Fresh 1 l

Art.: 28924

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)

REACH-IT List-No. 9xx-xxx-x No. is automatically assigned, e.g. to pre-registrations without a CAS No. or other numerical identifier. List Numbers do not have any legal significance, rather they are purely technical identifiers for processing a submission via REACH-IT.

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.