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

1.1. Product identifier

Trade name

O 33 Aktiv LW

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

Use of the substance/mixture

Disinfectant

1.3. Details of the supplier of the safety data sheet

Address/Manufacturer

BÜFA Cleaning GmbH & Co. KG
August-Hanken-Str. 30
26125 Oldenburg

Telephone no.	+49 441 9317 0
Fax no.	+49 441 9317 100
Information provided by / telephone	Department product safety / +49 441 9317 108
E-Mail	sds-cleaning@buefa.de

1.4. Emergency telephone number

Poison Information Center Goettingen: +49 551 19240

SECTION 2: Hazards identification ***

2.1. Classification of the substance or mixture

Classification (Regulation (EC) No. 1272/2008)

Org. Perox. F	H242
Met. Corr. 1	H290
Acute Tox. 4	H302
Acute Tox. 4	H332
Skin Corr. 1A	H314
Aquatic Chronic 1	H410

The product is classified and labelled in accordance with Regulation (EC) No 1272/2008
For explanation of abbreviations see section 16.

2.2. Label elements

Labelling according to regulation (EC) No 1272/2008

Hazard pictograms

Signal word

Danger

Hazard statements ***

H242	Heating may cause a fire.
H290	May be corrosive to metals.
H302+H332	Harmful if swallowed or if inhaled.
H314	Causes severe skin burns and eye damage.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements ***

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P234	Keep only in original packaging.
P260.3	Do not breathe mist/vapours/spray.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor.
P403	Store in a well-ventilated place.
P411.1	Store at temperatures not exceeding 30°C.

Hazardous component(s) to be indicated on label (Regulation (EC) No. 1272/2008)

contains Peroxyacetic acid; Hydrogen peroxide; Sulphuric acid

Sensitising substances

Supplemental information

EUH071 Corrosive to the respiratory tract.

2.3. Other hazards

The product contains no PBT substances. The product contains no vPvB substances. This product does not contain a substance that has endocrine disrupting properties with respect to human. The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients

hydrogen peroxide solution… %

CAS No.	7722-84-1				
EINECS no.	231-765-0				
Registration no.	01-2119485845-22-XXXX				
Concentration	>=	10	<	25	%
Ox. Liq. 1	H271				
Acute Tox. 4	H332				
Acute Tox. 4	H302				
Skin Corr. 1A	H314				

Concentration limits (Regulation (EC) No. 1272/2008)

Eye Dam. 1	H318	>= 8 < 50 %
Eye Irrit. 2	H319	>= 5 < 8 %
Ox. Liq. 1	H271	>= 70 %
Ox. Liq. 2	H272	>= 50 < 70 %
Skin Corr. 1A	H314	>= 70 %
Skin Corr. 1B	H314	>= 50 < 70 %
Skin Irrit. 2	H315	>= 35 < 50 %
STOT SE 3	H335	>= 35 %

ATE oral 416

Additional remarks:

CLP Regulation (EC) No 1272/2008, Annex VI, Note B

sulphuric acid … %

CAS No.	7664-93-9				
EINECS no.	231-639-5				
Registration no.	01-2119458838-20-XXXX				
Concentration	>=	10	<	25	%

Skin Corr. 1A H314

Concentration limits (Regulation (EC) No. 1272/2008)

Eye Irrit. 2	H319	>= 5 < 15 %
Skin Corr. 1A	H314	>= 15 %
Skin Irrit. 2	H315	>= 5 < 15 %

Additional remarks:
CLP Regulation (EC) No 1272/2008, Annex VI, Note B

acetic acid … %

CAS No. 64-19-7
EINECS no. 200-580-7
Registration no. 01-2119475328-30-XXXX
Concentration >= 2,5 < 10 %
Flam. Liq. 3 H226
Skin Corr. 1A H314

Concentration limits (Regulation (EC) No. 1272/2008)

Eye Irrit. 2	H319	>= 10 < 25 %
Skin Corr. 1A	H314	>= 90 %
Skin Corr. 1B	H314	>= 25 < 90 %
Skin Irrit. 2	H315	>= 10 < 25 %

Additional remarks:
CLP Regulation (EC) No 1272/2008, Annex VI, Note B

peroxyacetic acid … %

CAS No. 79-21-0
EINECS no. 201-186-8
Registration no. 01-2119531330-56-XXXX
Concentration >= 2,5 < 10 %
Flam. Liq. 3 H226
Skin Corr. 1A H314
Acute Tox. 4 H302
Acute Tox. 4 H312
Org. Perox. D H242
Acute Tox. 4 H332
Aquatic Acute 1 H400
Aquatic Chronic 1 H410

Concentration limits (Regulation (EC) No. 1272/2008)

STOT SE 3	H335	>= 1 %
ATE oral	100	
ATE dermal	1100	
ATE inhalative	76	

Additional remarks:
CLP Regulation (EC) No 1272/2008, Annex VI, Note B, D

For explanation of abbreviations see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

After inhalation

Ensure supply of fresh air. Summon a doctor immediately.

After skin contact

Wash off immediately with soap and water.

After eye contact

In case of contact with the eyes rinse thoroughly with plenty of water or with an eye-cleaning solution. Seek medical advice immediately.

After ingestion

Do not induce vomiting. Call in a physician immediately and show him the Safety Data Sheet.

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

There is no further relevant information available

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

There is no further relevant information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Water spray jet, Dry powder, Extinguishing measures to suit surroundings

Non suitable extinguishing media

Full water jet, organic compounds

5.2. Special hazards arising from the substance or mixture

In the event of fire the following can be released: Reacts with base metals forming hydrogen. Carbon monoxide (CO); Carbon dioxide (CO2); Sulphur oxides

5.3. Advice for firefighters

Use self-contained breathing apparatus.
Cool endangered containers with water spray jet.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Keep people away and stay on the upwind side. Use breathing apparatus if exposed to vapours/dust/aerosol. Use personal protective clothing.

6.2. Environmental precautions

Do not allow to enter drains or waterways.

6.3. Methods and material for containment and cleaning up

Take up with absorbent material (eg sand, kieselguhr, universal binder). When picked up, treat material as prescribed under Section 13 "Disposal".

6.4. Reference to other sections

Refer to protective measures listed in Sections 7 and 8.

SECTION 7: Handling and storage ***

7.1. Precautions for safe handling

Provide good ventilation of working area (local exhaust ventilation if necessary). Do not return rest to the storage containers.
Keep away from sources of ignition - No smoking. The product is not combustible, however it supports combustion.

7.2. Conditions for safe storage, including any incompatibilities

Recommended storage temperature	>	5	<	30	°C

*
*
*

Keep only in original packaging. Provide ventilation of containers.
Do not store with combustible materials. Do not store together with textiles. Do not store together with:

Reducing agents, Alkalis
Protect from heat and direct sunlight.

7.3. Specific end use(s)

No information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limit values

acetic acid … %

List	EH40			
Type	WEL			
Value	25	mg/m³	10	ppm(V)
Short term exposure limit	50	mg/m³	20	ppm(V)

acetic acid … %

List	IOELV			
Type	IOELV			
Value	25	mg/m³	10	ppm(V)
Short term exposure limit	50	mg/m³	20	ppm(V)

sulphuric acid … %

List	IOELV			
Type	IOELV			
Value	0,05	mg/m³		

hydrogen peroxide solution… %

List	EH40			
Type	WEL			
Value	1.4	mg/m³	1	ppm(V)
Short term exposure limit	2.8	mg/m³	2	ppm(V)

Derived No/Minimal Effect Levels (DNEL/DMEL)

hydrogen peroxide solution… %

Reference substance	hydrogen peroxide solution… %			
DNEL				
Conditions	Worker	Acute	inhalative	Local effects
Concentration	3	mg/m³		

	hydrogen peroxide solution… %			
DNEL				
Conditions	Worker	Long term	inhalative	Systemic effects
Concentration	1,4	mg/m³		

peroxyacetic acid … %

Reference substance	peroxyacetic acid … %			
DNEL				
Conditions	General Population	Acute	oral	Systemic effects
Concentration	1,25	mg/kg/d		

	peroxyacetic acid … %			
DNEL				
Conditions	General Population	Long term	oral	Systemic effects
Concentration	1,25	mg/kg/d		

	peroxyacetic acid … %
DNEL	

Conditions	Worker	Long term	inhalative	Systemic effects
Concentration	0,560	mg/m³		

peroxyacetic acid … %

DNEL				
Conditions	Worker	Acute	inhalative	Local effects
Concentration	0,560	mg/m³		

sulphuric acid … %

Reference substance	sulphuric acid … %			
DNEL				
Conditions	Worker	Acute	inhalative	Local effects
Concentration	0,1	mg/m³		

sulphuric acid … %

DNEL				
Conditions	Worker	Long term	inhalative	Local effects
Concentration	0,05	mg/m³		

acetic acid … %

Reference substance	acetic acid … %			
DNEL				
Conditions	Worker	Acute	inhalative	Local effects
Concentration	25	mg/m³		

acetic acid … %

DNEL				
Conditions	Worker	Long term	inhalative	Local effects
Concentration	25	mg/m³		

Predicted No Effect Concentration (PNEC)

hydrogen peroxide solution… %

Reference substance	hydrogen peroxide solution… %			
Type of value	PNEC			
Type	Water			
Concentration	0,0126	to		mg/l

hydrogen peroxide solution… %

Type of value	PNEC			
Type	Sewage treatment plant (STP)			
Concentration	4,66	to		mg/l

peroxyacetic acid … %

Reference substance	peroxyacetic acid … %			
Type of value	PNEC			
Type	Water			
Conditions	Intermittend			
Concentration	0,0016	to		mg/l

peroxyacetic acid … %

Type of value	PNEC			
Type	Soil			
Concentration	0,282	to	0,320	mg/kg

peroxyacetic acid … %

Type of value	PNEC
Type	Sewage treatment plant (STP)

Concentration		0,051	to	mg/l

sulphuric acid … %

Reference substance	sulphuric acid … %			
Type of value	PNEC			
Type	Water			
Concentration		0,25	to	mg/l
	sulphuric acid … %			
Type of value	PNEC			
Type	Sediment			
Concentration		0,002	to	mg/kg
	sulphuric acid … %			
Type of value	PNEC			
Type	Sewage treatment plant (STP)			
Concentration		8,8	to	mg/l

acetic acid … %

Reference substance	acetic acid … %			
Type of value	PNEC			
Type	Water			
Conditions	Intermittend			
Concentration		3,058	to	mg/l
	acetic acid … %			
Type of value	PNEC			
Type	Sediment			
Concentration		11,36	to	mg/kg/d
	acetic acid … %			
Type of value	PNEC			
Type	Sewage treatment plant (STP)			
Concentration		85	to	mg/l

8.2. Exposure controls

General protective and hygiene measures

Observe the usual precautions for handling chemicals. Personal protective equipment must comply with the Regulation (EC) No 2016/425 and the resulting CEN standards. The following information on personal protective equipment (PPE) is to be understood as a suggestion. The selection of the necessary PPE must be considered by the employer depending on the activities to be carried out and the local conditions. If it is determined during the on-site risk assessment that there is no danger to the employee, there is no need to wear PPE or the scope of the PPE to be used can be adjusted accordingly.

Respiratory protection

If workplace limits are exceeded, a respiratory protection approved for this particular job must be worn. Self-contained breathing apparatus. Short term: filter apparatus, Filter B

Hand protection

Chemical resistant gloves

Appropriate Material	nitrile		
Material thickness	>	0,7	mm
Breakthrough time	>	480	min

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leaktightness/impermeability prior to use. In the case of wanting to use the gloves again, clean them before taking off and air them well. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

Eye protection

Tightly fitting safety glasses; Eye protection must comply with EN 166.

Body protection

Impermeable protective clothing; Personal protective clothing must comply with the relevant CEN standards.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	liquid			
Colour	colourless			
Odour	Product specific			
Melting point				
Remarks	not determined			
Boiling point				
Value		105		°C
Flammability				
evaluation	not determined			
Explosion limits				
Remarks	not determined			
Flash point				
Value		98		°C
Method	DIN EN 22719 / ISO 2719			
Ignition temperature				
Remarks	Not applicable			
Thermal decomposition				
Remarks	not determined			
Self Accelerating Decomposition / Polymerization Temperature (SADT/SAPT)				
Value	>	45		°C
pH value				
Value	appr.	1,7		
Viscosity				
kinematic				
Value		1,525		mm²/s
Temperature		20	°C	
Solubility in other solvents				
		not determined		
Octanol/water partition coefficient (log Pow)				
Remarks	Not relevant			
Vapour pressure				
Remarks	not determined			
Density				
Value	appr.	1,20		kg/l
Temperature		20	°C	
Vapour density				
Remarks	not determined			
Particle characteristics				
Remarks	Not relevant			

9.2. Other information

Odour threshold
Remarks No data available

Solubility in water
Remarks Completely miscible

Oxidising properties
evaluation oxidizing

SECTION 10: Stability and reactivity

10.1. Reactivity
Gaseous decomposition products cause pressure to build up in tightly sealed vessels.

10.2. Chemical stability
Protect from heat/overheating.

10.3. Possibility of hazardous reactions
Corrosive to metals. Reactions with alkalies. Reactions with metals, with evolution of hydrogen.

10.4. Conditions to avoid
Do not keep the container sealed.

Thermal decomposition
Remarks not determined

10.5. Incompatible materials
Reactions with impurities. Contact with incompatible materials such as acids, alkalies, heavy metals and reducing agents will result in hazardous decomposition. Reactions with combustible substances.

10.6. Hazardous decomposition products
sulphurous oxides (SOx), Oxygen, Toxic gases/vapours, Oxygen, Toxic gases/vapours

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute oral toxicity

ATE		959	mg/kg
Method	calculated value (Regulation (EC) No. 1272/2008)		

The classification criteria are met.

Acute oral toxicity (Components)

peroxyacetic acid … %

acetic acid … %

Species	Rats (male/female)		
LD50		3310	mg/kg

hydrogen peroxide solution… %

Acute dermal toxicity

ATE	>	10.000	mg/kg
Method	calculated value (Regulation (EC) No. 1272/2008)		

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

Acute dermal toxicity (Components)

peroxyacetic acid … %

Acute inhalational toxicity

ATE		39,43	mg/l
Administration/Form	Vapors		
Method	calculated value (Regulation (EC) No. 1272/2008)		
ATE		5,38	mg/l
Administration/Form	Dust/Mist		

Method calculated value (Regulation (EC) No. 1272/2008)
Based on available data, the classification criteria are not met.

Acute inhalative toxicity (Components)

peroxyacetic acid … %

acetic acid … %

Skin corrosion/irritation

evaluation corrosive
The classification criteria are met.

Serious eye damage/irritation

evaluation corrosive
The classification criteria are met.

Sensitization

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

Sensitization (Components)

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

Mutagenicity

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

Reproductive toxicity

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

Carcinogenicity

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

Specific Target Organ Toxicity (STOT)

Single exposure

The classification criteria are met.
evaluation May cause respiratory irritation.

Repeated exposure

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

Aspiration hazard

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

SECTION 12: Ecological information

12.1. Toxicity

Fish toxicity

peroxyacetic acid … %

Species	rainbow trout (Oncorhynchus mykiss)			
LC50	0,9	to	2,0	mg/l
Duration of exposure	96	h		

acetic acid … %

Species	rainbow trout (Oncorhynchus mykiss)			
LC50	> 300,82			mg/l
Duration of exposure	96	h		

sulphuric acid … %

Reference substance	sulphuric acid … %			
Species	sun perch			
LC50	16	to	28	mg/l
Duration of exposure	96	h		

hydrogen peroxide solution… %

Reference substance	hydrogen peroxide solution… %			
Species	Fathead minnow (Pimephales promelas)			
LC50	16,4			mg/l
Duration of exposure	96	h		

Daphnia toxicity

peroxyacetic acid … %

Species	Daphnia magna			
EC50	0,5	to	1,0	mg/l
Duration of exposure	48	h		

acetic acid … %

Species	Daphnia magna			
EC50	> 300,82			mg/l
Duration of exposure	48	h		

sulphuric acid … %

Reference substance	sulphuric acid … %			
Species	Daphnia magna			
EC50	> 100			mg/l
Duration of exposure	48	h		
Method	OECD 202			

hydrogen peroxide solution… %

Reference substance	hydrogen peroxide solution… %			
Species	Daphnia pulex			
EC50	2,4			mg/l
Duration of exposure	48	h		

Algae toxicity

peroxyacetic acid … %

Species	Pseudokirchneriella subcapitata			
EC50	0,18	to	1,0	mg/l
Duration of exposure	48	h		

acetic acid … %

Species	Skeletonema costatum			
EC50	> 300,82			mg/l
Duration of exposure	72	h		

sulphuric acid … %

Reference substance	sulphuric acid … %			
Species	Desmodesmus subspicatus			
IC50	> 100			mg/l
Duration of exposure	72	h		
Method	OECD 201			

hydrogen peroxide solution… %

Reference substance	hydrogen peroxide solution… %			
Species	Chlorella vulgaris			
IC50	2,5			mg/l
Duration of exposure	72	h		

Bacteria toxicity

hydrogen peroxide solution… %

Reference substance	hydrogen peroxide solution… %			
Species	Pseudomonas putida			
EC10	11			mg/l
Duration of exposure	16	h		

12.2. Persistence and degradability

Do not discharge product unmonitored into the environment.

Biodegradability

acetic acid … %

evaluation	readily degradable

12.3. Bioaccumulative potential

For this subsection there is no ecotoxicological data available on the product as such.

Octanol/water partition coefficient (log Pow)

Remarks Not relevant

12.4. Mobility in soil

For this subsection there is no ecotoxicological data available on the product as such.

12.5. Results of PBT and vPvB assessment

Results of PBT and vPvB assessment

The product contains no PBT substances. The product contains no vPvB substances.

12.6 Endocrine disrupting properties

Endocrine disrupting properties with respect to the envrionment

The product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms.

12.7. Other adverse effects

For this subsection there is no ecotoxicological data available on the product as such.

Behaviour in sewers [waste treatment plants]

The product is an acid. Neutralization is normally necessary before a waste water is discharged into sewage treatment plants.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations for the product

Allocation of a waste code number, according to the European Waste Catalogue (EWC), should be carried out in agreement with the regional waste disposal company.

Disposal recommendations for packaging

Completely emptied packagings can be given for recycling.

SECTION 14: Transport information

	Land transport ADR/RID	Marine transport IMDG/GGVSee
14.1. UN number	3109	3109
14.2. UN proper shipping name	ORGANIC PEROXIDE TYPE F, LIQUID (Peroxyacetic acid)	ORGANIC PEROXIDE TYPE F, LIQUID (Peroxyacetic acid)
14.3. Transport hazard class(es)	5.2	5.2
Subsidiary risk	8	
Label		
14.5. Environmental hazards	 ENVIRONMENTALLY HAZARDOUS	 ENVIRONMENTALLY HAZARDOUS
Marine Pollutant		Marine Pollutant
Limited Quantity	125 ml	125 ml
Transport category	2	
Tunnel restriction code	D	
Hazard id. no.	539	
EmS		F-J, S-R

Information for all modes of transport

14.6. Special precautions for user

Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Other information

14.7 Maritime transport in bulk according to IMO instruments

Not relevant

SECTION 15: Regulatory information ***

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

Major-accident categories acc. 2012/18/EU

Category	P6b	SELF-REACTIVE SUBSTANCES AND MIXTURES and ORGANIC PEROXIDES
Category	E1	Hazardous to the Aquatic Environment

Ingredients (Regulation (EC) No 648/2004)

15 % or over but less than 30 %:
oxygen-based bleaching agents

less than 5 %:
phosphonates

VOC

VOC (EU)	<	15	%

Other information ***

Acquisition, introduction, possession or use of this product by the general public is restricted by Regulation (EU) 2019/1148. All suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.
The product does not contain substances according to: Annex XIV of Regulation (EC) No. 1907/2006 (REACH)

15.2. Chemical safety assessment

For this preparation a chemical safety assessment has not been carried out.

SECTION 16: Other information

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

Org. Perox. F	H242	On basis of test data
Met. Corr. 1	H290	On basis of test data
Acute Tox. 4	H302	Calculation method
Acute Tox. 4	H332	Calculation method
Skin Corr. 1A	H314	Calculation method
Aquatic Chronic 1	H410	Calculation method

Hazard statements listed in Chapter 2/3

H226	Flammable liquid and vapour.
H242	Heating may cause a fire.
H271	May cause fire or explosion; strong oxidizer.
H290	May be corrosive to metals.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H332	Harmful if inhaled.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

CLP categories listed in Chapter 2/3

Acute Tox. 4	Acute toxicity, Category 4
Aquatic Acute 1	Hazardous to the aquatic environment, acute, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic, Category 1
Flam. Liq. 3	Flammable liquid, Category 3
Met. Corr. 1	Substance or mixture corrosive to metals, Category 1
Org. Perox. D	Organic peroxide, Type D
Org. Perox. F	Organic peroxide, Type F
Ox. Liq. 1	Oxidising liquid, Category 1
Skin Corr. 1A	Skin corrosion, Category 1A

Abbreviations

ADR: Accord européen relatif au transport international des marchandises Dangereuses par Route
RID: Règlement concernant le transport international ferroviaire de marchandises dangereuses
GGVSee: Gefahrgutverordnung See
IMDG: International Maritime Code for Dangerous Goods
CAS: Chemical Abstracts Service
EAK: Europäischer Abfallkatalog
EINECS: European Inventory of Existing Commercial Chemical Substances
VOC: Volatile Organic Compound

GefStoffV: Gefahrstoffverordnung
TA Luft: Technische Anleitung zur Reinhaltung der Luft
INCI: International Nomenclature of Cosmetic Ingredients
n.a.g.: nicht anders genannt
MAK: Maximale Arbeitsplatz-Konzentration
AGW: Arbeitsplatzgrenzwert
BGW: Biologischer Grenzwert
TRGS: Technische Regeln für Gefahrstoffe
OEL: Occupational exposure limit
SUVA: Schweizerische Unfallversicherungsanstalt
WEL: Workplace exposure limit
MAC: Maximale aanvaarde concentratie (Netherlands)
MEL: Maximum exposure limits
NOEL: No observable effect level
NOEC: No observable effect concentration
LD: Lethal dose
LC: Lethal concentration
LLC: Lowest lethal concentration
PBT: Persistent, Bioaccumulative and Toxic
vPvB: Very persistent and very bioaccumulative
SVHC: Substances of very high concern
DNEL: Derived no effect level
DMEL: Derived minimal effect level
PNEC: Predicted no effect concentration
PEC: Predicted environmental concentration
GHS: Globally Harmonized System of classification and Labelling of Chemicals
REACH: Registration, Evaluation, Autohorisation and Restriction of Chemicals
UN: United Nations
EG: Europäische Gemeinschaft
EWG: Europäische Wirtschaftsgemeinschaft
EU: European Union
HSNO: Hazardous Substances and New Organisms Act (New Zealand)
ATE: Acute Toxicity Estimate
STOT: Specific Target Organ Toxicity
IOELV: Indicative Occupational Exposure Limit Values

Supplemental information

Relevant changes compared with the previous version of the safety data sheet are marked with: ***
This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship.