SAFETY DATA SHEET

In accordance with 1907/2006 annex II and 1272/2008
(All references to EU regulations and directives are abbreviated into only the numeric term)
Amendment date 2022-03-07
Replaces SDS issued 2021-12-20
Revision date 2021-12-20
Version number 7.1

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

1.1. Product identifier

Trade name	LifeClean
Other names or synonyms	LifeClean Desinfektion
	LifeClean Agri

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

Identified uses	Disinfection and cleaning of surfaces
Uses that are advised against	All other use is prohibited unless specifically permitted

1.3. Details of the supplier of the safety data sheet

Company	LifeClean International AB Kärranäsvägen 24 451 76 UDDEVALLA Sweden
Telephone	0522-104 04
E-mail	info@lifeclean.se
Website	www.lifeclean.se

1.4. Emergency telephone number

Phone number for emergencies: 999 or 112. The numbers are available 24/7.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Upon assessment, this mixture is not classified as hazardous according to 1272/2008

2.2. Label elements

Hazard pictogram	Not applicable
Signal word	Not applicable
Hazard statement	Not applicable
Precautionary statement	
P102	Keep out of reach of children

2.3. Other hazards

This product does not contain any substances that are assessed to be a PBT or a vPvB

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Note that the table shows known hazards of the ingredients in pure form. These hazards are reduced or eliminated when mixed or diluted, see Section 16d.

Constituent	Classification	Concentration
CHLORINE DIOXIDE ...%		
CAS No: 10049-04-4 EC No: 233-162-8 Index No: 017-026-01-0	Acute Tox. 3, Skin Corr. 1B, Aquatic Acute 1, M = 10; H301, H314, H400	<0.2 %
DODECYLDIMETHYLAMINE OXIDE		
CAS No: 1643-20-5 EC No: 216-700-6	Skin Irrit. 2, Eye Dam. 1; H315, H318	<0.2 %

Explanations to the classification and labelling of the ingredients are given in Section 16e. Official abbreviations are printed in normal font. Text in italics are specifications and/or complements used in the calculation of the classification of this mixture, see Section 16b.

SECTION 4: First aid measures

4.1. Description of first aid measures

Generally

In case of concern, or if symptoms occur, call a doctor/physician.

Upon breathing in

Fresh air and rest. If symptoms persist seek medical advice.

Upon eye contact

Rinse the eye for several minutes with lukewarm water. If irritation persists call a doctor/ophthalmologist.

Upon skin contact

Normal washing of the skin is considered sufficient; If nevertheless symptoms do occur, contact a physician.
Remove contaminated clothing since prolonged exposure can cause skin irritation.

Upon ingestion

First rinse the mouth thoroughly with water and SPIT OUT the rinse water. Then drink at least half a litre of water and contact a doctor if complaints persist. DO NOT induce VOMITING.

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

Upon breathing in

Inhalation of heated product may cause airway irritation.

Upon eye contact

Splashes in eyes may cause burning pain.

Upon ingestion

Ingestion may cause discomfort or reduced general condition.

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

Symptomatic treatment.
When contacting a physician, take this SDS with you.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Extinguish with materials intended for the surrounding fire.

5.2. Special hazards arising from the substance or mixture

The product is not hazardous in the flammable sense.
Gases detrimental to health (carbon monoxide and carbon dioxide) can be spread in case of fire.

5.3. Advice for firefighters

In case of fire use proper breathing apparatus.
Wear full protective clothing.
Protective measures should be taken regarding other material at the site of the fire.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Avoid contact with skin and eyes.
Ensure good ventilation.
Note that there is a risk of slipping if product is leaking/spilling.

6.2. Environmental precautions

No specific measures need to be taken in the event of normal use.
Avoid emissions into soil, water or air.

6.3. Methods and material for containment and cleaning up

Smaller spills, clean up with cloth or similar and wash with water. For larger spills cover potential drains and wall in with absorbent inert material such as sand, dirt, vermiculite or diatomaceous earth.
Collect in appropriate containers.

6.4. Reference to other sections

See section 8 and 13 for personal protection equipment and disposal considerations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Work in order to avoid spillage. If spillage does occur, address it immediately in accordance with the directions specified in Section 6 of this safety data sheet.
The usual precautions for handling chemicals should be observed.
Handle between 4 - 40 °C.

7.2. Conditions for safe storage, including any incompatibilities

Keep out of reach for children.
Store in a ventilated space.
Store only in the original package.
Must not be frozen.
Do not store in direct sunlight.
Do not store above normal room temperature.
Shelf life: See label.

7.3. Specific end use(s)

Liquid disinfectant for surface disinfection and cleaning.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
8.1.1. National limit values
CHLORINE DIOXIDE ...%
United Kingdom (EH40/2005)

Time-weighted-average exposure limit (TWA) 0.1 ppm / 0.28 mg/m^3
Short term exposure limit (STEL) 0.3 ppm / 0.84 mg/m^3

DNEL

No data available.

PNEC

No data available.

8.2. Exposure controls

In terms of minimizing risks, no special attention is needed for this product besides the general obligations that follow EU directive 89/391 and national occupational legislation.

8.2.1. Appropriate engineering controls

Handle in premises which have modern ventilation standards.

Eye/face protection

Eye protection should be worn if there is any danger of direct exposure or splashing.

Skin protection

Protective gloves are normally not needed due to the properties of this product, but may be necessary for other reasons, e.g. mechanical risks, temperature conditions or microbiological risks.

Respiratory protection

Respiratory protection is not normally required. In case of inadequate ventilation, full or half mask with filter B (gray for inorganic gases and vapors) should be used.

8.2.3. Environmental exposure controls

For limiting environmental exposure, see section 12.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

(a) Physical state	liquid Form: liquid
(b) Colour	light yellow
(c) Odour	weak smell
(d) Melting point/freezing point	Not indicated
(e) Boiling point or initial boiling point and boiling range	100 °C
(f) Flammability	Not indicated
(g) Lower and upper explosion limit	Not indicated
(h) Flash point	Not indicated
(i) Auto-ignition temperature	Not indicated
(j) Decomposition temperature	Not indicated
(k) pH	When supplied, pH is: >2
(l) Kinematic viscosity	1 mm^2/s
(m) Solubility	Not indicated
(n) Partition coefficient n-octanol/water (log value)	Not indicated
(o) Vapour pressure	0.01 kPa
(p) Density and/or relative density	1.000 kg/L
(q) Relative vapour density	Not indicated
(r) Particle characteristics	Not indicated

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Not indicated

9.2.2. Other safety characteristics

Not indicated

SECTION 10: Stability and reactivity

10.1. Reactivity

The product contains no substances which can lead to hazardous reactions at normal use.

10.2. Chemical stability

Chlorine dioxide slowly decomposes in aqueous solution to among other things hydrochloric acid and chloric acid.

10.3. Possibility of hazardous reactions

No hazardous reactions known during normal use.

10.4. Conditions to avoid

Protect from heat and direct sunlight.
Avoid exposure to non-noble metallic materials longer than what is necessary for exterior disinfection.
Avoid frost.

10.5. Incompatible materials

Avoid contact with alkaline products.
Avoid contact with sulfur compounds.
Avoid contact with oxidizers and reducing agents.

10.6. Hazardous decomposition products

Chlorite.
Chlorate.

SECTION 11: Toxicological information

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

Ingestion of larger quantities of product may cause discomfort or it may impact the general health condition.

Acute toxicity

The product is not classified as acutely toxic.

CHLORINE DIOXIDE ...%

LD50 rat 24h: 292 mg/kg Orally
LC50 rat 2h: 0.73 mg/L Inhalation

DODECYLDIMETHYLAMINE OXIDE

LC50 rat 4h: 76 mg/l Inhalation
LD50 rat 24h: 5800 mg/kg Orally

Skin corrosion/irritation

The product is neither corrosive nor irritant.

Serious eye damage/irritation

The product is not classified as irritant to the eyes.

Respiratory or skin sensitisation

The product does not contain any known allergens.

Germ cell mutagenicity

No mutagenic effects have been reported for the substance in this mixture.

Carcinogenicity

No carcinogenic effects have been reported for the substances in this product.

Reproductive toxicity

No toxic effects to reproduction have been reported for the substances in this mixture.

STOT-single exposure

The criteria for classification cannot be considered fulfilled based on available data.
Irritation of the mouth, pharynx, and / or respiratory system may occur through inhalation or ingestion.

STOT-repeated exposure

No known hazards for repeated exposure.

Aspiration hazard

The product is not classified as being toxic for aspiration.

11.2. Information on other hazards

11.2.1. Endocrine disrupting properties

Not indicated.

11.2.2. Other information

Not indicated.

SECTION 12: Ecological information

12.1. Toxicity

The product is not classified as an environmental hazard according to current regulations, but it does contain environmentally hazardous substances in quantities below the labelling limit.
Avoid larger spills in soil, water and drains.

CHLORINE DIOXIDE ...%

LC50 fathead minnow (Pimephales promelas) 96h: 0.02 mg/L
EC50 Water flea (Daphnia pulex) 48h: 1.8 mg/L
IC50 Algae 72h: 1.31 mg/L

12.2. Persistence and degradability

The surfactants used in this product comply with the criteria for biodegradability under Regulation 648/2004.
The product degrades easily in the natural environment.

12.3. Bioaccumulative potential

This product or its ingredients do probably not accumulate in nature.

12.4. Mobility in soil

The product is miscible with water and is therefore variable in soil and water.

12.5. Results of PBT and vPvB assessment

This product does not contain any substances that are assessed to be a PBT or a vPvB.

12.6. Endocrine disrupting properties

Not indicated.

12.7. Other adverse effects

This product degrades rapidly but large emission within a short period of time may be harmful to the local environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste handling of the product

The product is not classified as hazardous waste.

Empty, rinsed packaging is sent for recycling where practicable.

Avoid larger spills of undiluted product in drains. Smaller quantities of undiluted product can be washed into drains.

Observe local regulations.

See directive 2008/98/EC on waste. Observe national or regional provisions on waste management.

Classification according to 2008/98/EC

Recommended LoW-code: 07 06 99 Wastes not otherwise specified

SECTION 14: Transport information

Where not otherwise stated the information applies to all of the UN Model Regulations, i.e. ADR (road), RID (railway), ADN (inland waterways), IMDG (sea), and ICAO (IATA) (air).

14.1. UN number or ID number

Not classified as dangerous goods

14.2. UN proper shipping name

Not applicable

14.3. Transport hazard class(es)

Not applicable

14.4. Packing group

Not applicable

14.5. Environmental hazards

Not applicable

14.6. Special precautions for user

Not applicable

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

14.8 Other transport information

Not applicable

SECTION 15: Regulatory information

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

REGULATION (EU) No 528/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 22 May 2012 concerning the making available on the market and use of biocidal products.

15.2. Chemical safety assessment

Assessment and chemical safety report in accordance with 1907/2006 Annex I has not yet been performed.

SECTION 16: Other information

16a. Indication of where changes have been made to the previous version of the safety data sheet
Revisions of this document

Earlier versions

2021-12-20 Revisions of this document has, where not otherwise stated, been caused by changes in the regulations

16b. Legend to abbreviations and acronyms used in the safety data sheet
Full texts for Hazard Class and Category Code mentioned in section 3

Acute Tox. 3	Acute toxicity (oral), Hazard Category 3 - Acute Tox. 3, H301 - Toxic if swallowed
Skin Corr. 1B	Skin corrosion/irritation, Hazard Category 1B - Skin Corr. 1B, H314 - Causes severe skin burns and eye damage
Aquatic Acute 1, M = 10	Hazardous to the aquatic environment — Acute Hazard, Category 1 - Aquatic Acute 1, M = 10, H400 - Very toxic to aquatic life
Skin Irrit. 2	Skin corrosion/irritation, Hazard Category 2 - Skin Irrit. 2, H315 - Causes skin irritation
Eye Dam. 1	Serious eye damage/eye irritation, Hazard Category 1 - Eye Dam. 1, H318 - Causes serious eye damage

Explanations of the abbreviations in Section 14

ADR	European Agreement concerning the International Transport of Dangerous Goods by Road
RID	Regulations concerning the International Transport of Dangerous Goods by Rail
IMDG	International Maritime Dangerous Goods Code
ICAO	International Civil Aviation Organization (ICAO, 999 University Street, Montreal, Quebec H3C 5H7, Canada)
IATA	The International Air Transport Association

16c. Key literature references and sources for data
Sources for data

Primary data for the calculation of the hazards has preferentially been taken from the official European classification list, 1272/2008 Annex I , as updated to 2022-03-07.

Where such data was not available, alternative documentation used to establish the official classification was used, e.g. IUCLID (International Uniform Chemical Information Database). As a second alternative, information was used from reputable international chemical industries, and as a third alternative other available information was used, e.g. material safety data sheets from other suppliers or information from non-profit associations, where reliability of the source was assessed by expert opinion. If, in spite of this, reliable information could not be sourced, the hazards were assessed by expert opinions based on the known hazards of similar substances, and according to the principles in 1907/2006 and 1272/2008.

Full texts for Regulations mentioned in this Safety Data Sheet

1907/2006	REGULATION (EC) No 1907/2006 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC
1272/2008	REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006
89/391	COUNCIL DIRECTIVE (89/391/EEC of 12 June 1989 on the introduction of measures to encourage improvements in the safety and health of workers at work
648/2004	REGULATION (EC) No 648/2004 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 31 March 2004 on detergents
2008/98/EC	DIRECTIVE 2008/98/EC OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 19 November 2008 on waste and repealing certain Directives

16d. Methods of evaluating information referred to in 1272/2008 Article 9 which was used for the purpose of classification

Hazard calculation for this mixture has been performed as a cumulative assessment with the aid of expert assessments in accordance with 1272/2008 Annex I , where all available information which may be significant to establishing the hazards of the mixture was assessed together, and in accordance with 1907/2006 Annex XI .

16e. List of relevant hazard statements and/or precautionary statements
Full texts for hazard statements mentioned in section 3

H301 Toxic if swallowed
H314 Causes severe skin burns and eye damage
H400 Very toxic to aquatic life

H315 Causes skin irritation
H318 Causes serious eye damage

16f. Advice on any training appropriate for workers to ensure protection of human health and the environment
Warning for misuse

This product is not expected to cause severe harm to humans or the environment. The manufacturer, the distributor or the supplier are not responsible for adverse effects if the product is not handled in accordance with the directions for use.

Other relevant information

Not indicated

Editorial information

This material safety data sheet has been prepared and checked by KemRisk®, KemRisk Sweden AB, Platensgatan 8, SE-582 20 Linköping, Sweden, www.kemrisk.se