



1 - IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1	Product identifiers Trade Name or designation	DP1038 BioClean Aqua
1.2	Identification of Uses Uses advised against	Water Sanitizer No specific uses are advised against
1.3	Supplier Telephone No. Fax No. Email	Biolink Limited. Halifax Way Pocklington Ind. Est Pocklington York YO42 1NR +44 (0) 1759 303444 +44 (0) 1759 303158 info@biolinklimited.co.uk
1.4	Emergency Phone	+44 (0) 1280 738605 (office hours only)

2 - HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification according to 67/548/EEC or 1999/45/EEC as amended

Xn, Xi, R22, R37/38, R41

Classification in accordance to EC 1272/2008 as amended

PHYSICAL HAZARDS

Not Classified

HEALTH HAZARDS

Acute Toxicity Oral	Category 4	H302 Harmful if swallowed
Skin Irritation	Category 2	H15 Causes skin irritation
Eye Damage	Category 1	H318 Causes serious eye damage
Specific organ toxicity Single exposure	Category 3	H335 May cause respiratory irritation

ENVIRONMENTAL HAZARDS

Not classified

Hazard summary

Physical hazards

Not Classified

Health hazards

Harmful if swallowed. Causes skin irritation. Causes serious eye damage. May cause respiratory irritation

Environmental hazards

Not Classified

Specific hazards

Not known

Main symptoms

Harmful if swallowed. Symptoms may include nausea and discomfort. Burning pain and severe corrosive skin damage. Rash. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation. Symptoms may include difficulty breathing, discomfort in chest and upper respiratory tract.

2.2 Label elements**Label in accordance with EC 1272/2008 as amended**

Contains HYDROGEN PEROXIDE

Hazard pictograms

Signal word

Danger

Hazard statements

H302 Harmful if swallowed
H15 Causes skin irritation
H318 Causes serious eye damage
H335 May cause respiratory irritation

Precautionary statements**Prevention**

P280 Wear protective gloves/protective clothing/eye protection/face protection.
P261 Avoid breathing dust/fume/gas/mist/vapours/ spray

Response

P301+312 IF SWALLOWED: Call a POISON CENTER or doctor / physician if you feel unwell
P302 + P352 IF ON SKIN: Wash with plenty of water/soap
P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Storage

P405 Store Locked up.

Disposal

P501 Dispose of contents/container in accordance with local regulations.

Supplemental label information

Not applicable

2.3 Other hazards

Not known

3 - COMPOSITION/INFORMATION ON INGREDIENTS

3.2 Mixtures

HYDROGEN PEROXIDE		49.5 – 49.9 %	
CAS-No.: 7722-84-1	EC No.: 231-765-0	EC Index No.: 008-003-00-9	Reach No.: 01-2119485845-22
Classification (67/548/EEC) O, C, Xn, R8, R35, R20/22		Classification (EC 1272/2008) Ox. Liq.1 - H271 Acute Tox. 4 - H332 Acute Tox. 4 - -H302 Skin Corr. 1A -H314	

The Full Text for all R-Phrases and Hazard Statements are Displayed in Section 16.

4 - FIRST AID MEASURES

General Information

First aiders should wear suitable protective clothing.

4.1 Description of first aid measures**Inhalation**

Move the exposed person to fresh air at once. Get medical attention. Provide rest, warmth and fresh air. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen.

Ingestion

Move the exposed person to fresh air at once. Get medical attention. Provide rest, warmth and fresh air. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen.

Skin contact

Remove contaminated clothing. Wash off with plenty of water. Consult a doctor if symptoms persist.

Eye contact

Remove contaminated clothing. Wash off with plenty of water. Consult a physician if symptoms persist.

4.2 Most important symptoms and effects, both acute and delayed

Burning and discomfort. Corrosive damage to the eyes, skin, nose, throat or gastrointestinal tract.

4.3 Indication of any immediate medical attention and special treatment needed

Rinse eye immediately with sterile saline solution.

Seek medical attention in case of ingestion, inhalation or contact with eyes.

Hydrogen Peroxide: The initial focus is on the local action, characterised by quickly progressing deep tissue damage. In the eye, caustic/irritating and harmful liquids cause, depending on the intensity of the exposure, various levels of irritation, destruction and ablation of the epithelium of the conjunctiva and corneal clouding, oedema and ulcerations Danger! Possible loss of eyesight! Superficial irritations and damage to ulcerations and scarring develop on the skin. After accidental absorption in the body, the pathology and clinical findings are dependent on the kinetics of the substance (quantity of absorbed substance, the absorption time, and the effectiveness of early elimination measures (first aid/excretion – metabolism) A specific action of the substance is unknown In case of substances with high water solubility, irritations up to formation of necrosis in the upper respiratory tract may result after inhalation of caustic/irritating aerosols and mists. The initial focus is on the local action: Signs of irritation of the respiratory tract such as coughing, burning behind the sternum, tears, burning in the eyes or nose. There is risk of pulmonary oedema!

5 - FIRE FIGHTING MEASURES

General Fire Hazards

5.1. Extinguishing media

SUITABLE EXTINGUISHING MEDIA

Water spray, Dry powder, foam.

UNSUITABLE EXTINGUISHING MEDIA

None

5.2. Special hazards arising from the substance or mixture

UNUSUAL FIRE & EXPLOSION HAZARDS

In case of fire toxic gases may be released. (CO_x, NO_x, HCl).

SPECIFIC HAZARDS

None noted.

5.3. Advice for fire-fighters

SPECIAL FIRE FIGHTING PROCEDURES

Collect fire extinguishing water separately, do not allow to enter drains. Exceptionally large spillages should be notified to the appropriate authorities.

PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Wear self-contained breathing apparatus.

6 - ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Keep unnecessary people away. Wear protective clothing as described in Section 8 of this safety data sheet. Follow precautions for safe handling described in this safety data sheet. Ensure suitable personal protection (including respiratory protection) during removal of spillages in a confined area.

6.2. Environmental precautions

Do not let product enter drains. Discharge into the environment must be avoided. Appropriate authorities should be notified in case of contamination of sewerage or surface water.

6.3. Methods and material for containment and cleaning up

Prevent further leakage or spillage if safe to do so. If possible contain the spillage with adsorbent material, place in a suitable container and dispose of as described in section 13 of this safety data sheet.

6.4. Reference to other sections

Personal protection –section 8.

Disposal considerations –Section 13.

7 - HANDLING AND STORAGE

7.1. Precautions for safe handling

Ensure good ventilation when using this product, avoid inhalation of vapours and spray. Handle with care and avoid spilling, skin and eye contact. Do not handle broken packages without protective equipment. Follow instructions and ensure correct dilution of this product before use.

7.2. Conditions for safe storage, including any incompatibilities

Store in tightly closed original container in a dry, cool and well-ventilated place. Keep in original container

7.3. Specific end use(s)

Water sanitizer

8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Component	CAS-No.	Value	Control Parameters	Basis
HYDROGEN PEROXIDE	7722-84-1	TWA	1 ppm 1.4 mg/m ³	Austrian OEL Regulation
HYDROGEN PEROXIDE	7722-84-1	STEL	2 ppm 2.8 mg/m ³	Austrian OEL Regulation
HYDROGEN PEROXIDE	7722-84-1	TWA	1 ppm 1.4 mg/m ³	Belgium VLEP/GWBB
HYDROGEN PEROXIDE	7722-84-1	TWA	1 ppm 1.4 mg/m ³	Denmark
HYDROGEN PEROXIDE	7722-84-1	STEL	2 ppm 2.8 mg/m ³	Denmark
HYDROGEN PEROXIDE	7722-84-1	TWA	1 ppm 1.5 mg/m ³	France INRS
HYDROGEN PEROXIDE	7722-84-1	TWA	0.5 ppm 0.71 mg/m ³	Germany DFG
HYDROGEN PEROXIDE	7722-84-1	STEL	0.5 ppm 0.71 mg/m ³	Germany DFG
HYDROGEN PEROXIDE	7722-84-1	TWA	1 ppm 1.5 mg/m ³	Ireland
HYDROGEN PEROXIDE	7722-84-1	STEL	2 ppm 3 mg/m ³	Ireland
HYDROGEN PEROXIDE	7722-84-1	TWA	1 ppm 1.4 mg/m ³	Spain - Royal Decree 374/2001
HYDROGEN PEROXIDE	7722-84-1	TWA	1 ppm 1.4 mg/m ³	Sweden
HYDROGEN PEROXIDE	7722-84-1	STEL	2 ppm 3 mg/m ³	Sweden
HYDROGEN PEROXIDE	7722-84-1	TWA	0.5 ppm 0.71 mg/m ³	Switzerland
HYDROGEN PEROXIDE	7722-84-1	STEL	0.5 ppm 0.71 mg/m ³	Switzerland
HYDROGEN PEROXIDE	7722-84-1	TWA	1 ppm 1.4 mg/m ³	UK - EH40 WEL
HYDROGEN PEROXIDE	7722-84-1	STEL	2 ppm 2.8 mg/m ³	UK - EH40 WEL

Biological limit values

Recommended monitoring procedures
Follow standard monitoring procedures.

Derived no-effect level (DNEL)

HYDROGEN PEROXIDE

Route	Use	Effect	Time	Value
Inhalation	Worker	Local	Short Term	3 mg/m ³
Inhalation	Worker	Systemic	Lon Term	1.4 mg/m ³
Inhalation	Consumer	Local	Short Term	1.93 mg/m ³
Inhalation	Consumer	Local	Long Term	0.21 mg/m ³

Predicted no effect concentrations (PNECs)

HYDROGEN PEROXIDE

Route	Value
Freshwater	0.0126 mg/l
Freshwater sediment	0.47 mg/kg (DW)
Intermittent release	0.0138 mg/l
Marine sediment	0.47 mg/kg (DW)
Marine water	0.0126 mg/l
STP	4.66 mg/l
Soil	0.0023 mg/kg (DW)

8.2 Exposure controls



Appropriate Engineering controls

No specific engineering measures are noted except that this product should be used in a well ventilated area.

Individual protection measures, such as personal protective equipment

In case of splashing where suitable protective equipment.

General information

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday

Respiratory equipment

Where risk assessment shows air-purifying respirators are appropriate use a respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator.

Hand protection

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Full contact

Material: Nitrile rubber

Minimum layer thickness: 0.6 mm

Break through time: >480 min

Splash contact

Material: Nitrile rubber

Minimum layer thickness: 0.2 mm

Break through time: >35 min

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Eye protection

In case of splashing, wear safety goggles or face shield.

Other protection

Wear appropriate clothing to prevent any possibility of liquid contact and repeated or prolonged vapour contact.

Hygiene measures

DO NOT SMOKE IN WORK AREA! Wash at the end of each work shift and before eating, smoking and using the toilet. Promptly remove any clothing that becomes contaminated. Wash promptly with soap & water if skin becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke

Environmental exposure controls

Do not discharge into the watercourse or drains

9 - PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance

Physical State: Liquid
Form: Suspension

pH <1-3
BP/BP Range 114C
MP/MP Range -52.2
Vapour Pressure: 31.06 hPa at 30°C
Solubility Miscible in water

9.2. Other information

Not available

10 - STABILITY AND REACTIVITY**10.1 Reactivity**

Not expected under normal conditions of use

10.2 Chemical stability

Stable under normal temperature conditions

10.3 Possibility of hazardous reactions

Not expected under normal conditions of use

10.4 Conditions to avoid

Avoid exposure to high temperatures or direct sunlight

10.5 Incompatible materials

Materials to avoid -strong acids or alkalis. Oxidising agents.

10.6 Hazardous decomposition products

None, see section 5 for decomposition products under fire conditions

11 - TOXICOLOGICAL INFORMATION**General information****Information on likely routes of exposure****Inhalation**

Inhalation of vapours/aerosols can lead to irritation of the respiratory tract and cause inflammation of the respiratory tract and pulmonary oedema. Symptoms may occur with delay

Skin contact

Causes caustic burns. With increasing contact length, local erythema or extreme irritation (whitening) up to blistering (caustic burn) can occur

Eye contact

Extreme irritation up to cauterisation. Can cause severe conjunctivitis, cornea damage or irreversible eye damage. Symptoms may occur with delay

Ingestion

Swallowing can lead to bleeding of the mucosa of the mouth, oesophagus and stomach. The rapid release of oxygen can cause distension and bleeding of the mucosa in the stomach and lead to severe damage of the internal organs, especially in the event of greater intake of the product

Symptoms

Harmful if swallowed. Symptoms may include nausea and discomfort. Burning pain and severe corrosive skin damage. Rash. Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result. May cause respiratory irritation. Symptoms may include difficulty breathing, discomfort in chest and upper respiratory tract.

11.1 Information on toxicological effects**Acute toxicity**

HYDROGEN PEROXIDE	Oral	LD50 50%	801 mg/kg (Rat)
	Inhalation	LD50 4h 50%	>0.17 mg/l (Rat)
	Dermal	LD50 70%	>6500 mg/kg (Rabbit)
	Dermal	LD50 35%	>2000 mg/kg (Rabbit)

Skin corrosion/irritation

HYDROGEN PEROXIDE	Rabbit 3 h 70% Conc.	Strongly Corrosive Irritating
	Rabbit 4 h 35% Conc.	

Serious eye damage/eye irritation

HYDROGEN PEROXIDE	Rabbit 35% Conc. Rabbit 10% Conc.	Risk of serious damage to eyes Irritating
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Respiratory sensitisation

Based on the available data not classified as a respiratory sensitiser.

Skin sensitisation

HYDROGEN PEROXIDE	Guinea pig	Not Sensitising
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Germ cell mutagenicity

HYDROGEN PEROXIDE		
Bacterial reverse mutation assay		positive and negative (S-typhimurium /E.coli)
Chromosomal aberration mammalian cells		positive.
Genetic mutation in mammal cells-		positive
OECD 474 Micronucleus mouse		Negative

Carcinogenicity

Based on the available data not classified as a carcinogen.

IARC Monographs. Overall Evaluation of Carcinogenicity

HYDROGEN PEROXIDE	Group 3
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Reproductive toxicity

Based on the available data not classified as a

Specific target organ toxicity - single exposure

Based on the available data not classified as a STOT SE

Specific target organ toxicity - repeated exposure

HYDROGEN PEROXIDE	NOEL 90d Oral	37 mg/kg (Mouse)
Target organ/effect: changes of parameters of blood, body weight development negative, irritative effect: Gastrointestinal tract.		

NOEL 90 d OECD TG 408. 35% Conc. Oral 26 mg/kg (mouse)

Target organ/effect: changes of parameters of blood, body weight development negative. Irritative effect: Gastrointestinal tract.

Aspiration hazard

Based on the available data not classified as an aspiration hazard

Mixture versus substance information

No data available

Other information

Not available

12 - ECOLOGICAL INFORMATION

12.1 Toxicity

HYDROGEN PEROXIDE		
Toxicity to fish	LC50 96 h	16.4 mg/l <i>Primephales promelas</i>
Toxicity to aquatic invertebrates	EC50 48 h	2.4 mg/l <i>Daphnia pulex</i>
	NOEC 21 d	0.63 mg/l <i>Daphnia Magna</i>
Toxicity to Algae	NOEC 72 h	0.63 mg/l <i>Skeletonema costatum</i>
Toxicity to Bacteria	EC50 30 min.	466 mg/l Activated sludge
	EC50 3h	>1000 mg/l Activated Sludge

12.2 Persistence and degradability

No data available

12.3 Bioaccumulative potential

Photodecomposition	50% degradation 20 h
Biodegradation	Readily biodegradable

Partition coefficient n-octanol/water (log Kow)

Log Pow	-1.57 (Calculated)
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15 - REGULATORY INFORMATION**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

Other regulations The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

15.2 Chemical Safety Assessment

National regulations Young people under 18 years old are not allowed to work with this product according to the EU Directive 94/33/EC on the protection of young people at work. Follow national regulation for work with chemical agents.

15.2 Chemical safety assessment

No Chemical Safety Assessment has been carried out.

16 - OTHER INFORMATION**List of abbreviations**

CO Carbon Monoxide
NO Nitrogen Oxide
HCL Hydrochloric acid
TWA Time weighted average
STEL Short Term exposure limit
DW Dry weight

References**Information on evaluation method leading to the classification of mixture**

The classification for health and environmental hazards is derived by a combination of calculation methods and test data, if available.

Full text of any statements or R-phrases and H-statements under Sections 2 to 15

Xn Harmful
Xi Irritant
O Oxidiser
R8 Contact with combustible material may cause fire
R20/22 Harmful by inhalation and if swallowed
R22 Harmful if swallowed
R35 Causes severe burns
R37/38 Irritating to respiratory system and skin
R41 Risk of serious damage to eyes
H271 May cause fire or explosion strong oxidiser
H302 Harmful if swallowed
H314 Causes severe skin burns and eye damage
H318 Causes serious eye damage
H332 Harmful if inhaled
H335 May cause respiratory irritation
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P261 Avoid breathing dust/fume/gas/mist/vapours/ spray
P301+302 IF SWALLOWED OR ON SKIN: Rinse skin and mouth immediately and seek medical advice.
P304+340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

P405 Store Locked up.

P501 Dispose of contents/container in accordance with local regulations.

Training information Follow training instructions when handling this material.

Disclaimer

Biolink cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. This information is provided without warranty. The information is believed to be correct. This information should be used to make an independent determination of the methods to safeguard workers and the environment. The information in the sheet was written based on the best knowledge and experience currently available.