

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

1.1	Product identifiers Trade Name or designation	DP2130 BioShield P
1.2	Identification of Uses Uses advised against	BIOCIDAL PRODUCT -PT3: veterinary hygiene disinfectant - PT4: food and feed area disinfectant - Only for professional use. Professional use only
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
C, R34, R20/22, R42/43

Classification in accordance to EC 1272/2008 as amended

PHYSICAL HAZARDS

Not Classified

HEALTH HAZARDS

Acute Toxicity Oral	Category 4	H302 Harmful if swallowed
Acute Toxicity Inhalation	Category 4	H332 Harmful if inhaled
Skin Corrosive	Category 1B	H314 Causes severe skin burns and eye damage
Eye Damage	Category 1	H318 Causes serious eye damage
Skin Sensitiser	Category 1	H317 May cause an allergic skin reaction
Respiratory Sensitiser	Category 1	H334 May cause allergy or asthma like symptoms or breathing difficulties if inhaled
Specific Organ Toxicity Single Exposure	Category 3	H335 May cause respiratory irritation

ENVIRONMENTAL HAZARDS

Aquatic Acute	Category 1	H400 Very toxic to aquatic life
Aquatic Chronic	Category 2	H411 Toxic to aquatic life with long lasting effects

Hazard summary

Physical hazards

Not Classified

Health hazards

Harmful if swallowed. Harmful if inhaled. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause allergy or asthma like symptoms or breathing difficulties if inhaled. May cause respiratory irritation.

Environmental hazards

Very toxic to aquatic life with long lasting effects

Specific hazards

Not known

Main symptoms

Harmful if swallowed. Symptoms may include nausea and discomfort. Harmful if inhaled. Symptoms may include nausea and discomfort to the upper respiratory tract. 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. Rash, May cause an allergic skin reaction. Dermatitis. May cause respiratory sensitisation. Symptoms may include difficulty breathing, tightness in chest. May cause respiratory irritation. Symptoms may include difficulty breathing, discomfort in chest and upper respiratory tract.

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

Contains GLUTARALDEHYDE 14 %, QUATERNARY AMMONIUM COMPOUNDS 2.5 %

Hazard pictograms**Signal word**

Danger

Hazard statements

H302 Harmful if swallowed

H314 Causes severe skin burns and eye damage

H317 May cause an allergic skin reaction

H332 Harmful if inhaled

H334 May cause allergy or asthma like symptoms or breathing difficulties if inhaled

H335 May cause respiratory irritation

H400 Very toxic to aquatic life

H411 Toxic to aquatic life with long lasting effects

Precautionary statements**Prevention**

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

Response

P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P301 + P330 + P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303 + P361 +P353: IF on SKIN (or hair): Remove / Take off immediately all contaminated clothing. Rinse skin with water / Shower.

P305+351+338 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 centre or doctor / physician.

Storage

P405 Store Locked up.

Disposal

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

Supplemental label information

Not applicable

1.3 Other hazards

Not known

3 - COMPOSITION/INFORMATION ON INGREDIENTS**3.2 Mixtures**

GLUTARALDEHYDE		14 %	
CAS-No.: 111-30-8	EC No.: 203-856-5	EC Index No.: 605-022-00-X	Reach No.:
Classification (67/548/EEC) T, C, N, R23/25, R34, R42/43, R50		Classification (EC 1272/2008) Acute Tox. 3- H301 Acute Tox. 3 - H331 Skin Sens. 1- H317 Resp. Sens 1- H334 Skin Corr. 1B – H314 STOT SE 3 – H335 Aquatic Acute 1- H400 Aquatic Chronic 1 - H410	
QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C12-16-ALKYLDIMETHYL, CHLORIDES		2.5 %	
CAS-No.: 68424-85-1	EC No.: 270-325-2	EC Index No.:	Reach No.:
Classification (67/548/EEC) C, Xn, N, R34, R22, R50		Classification (EC 1272/2008) Met. Corr. 1 - H290 Acute Tox. 4 - H302 Skin Corr. 1B - H314 Eye Dam. 1- H318 Aquatic Acute 1 -H400 Aquatic chronic 1 - H410	

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 to fresh air. Call a physician if symptoms develop or persist.

Ingestion

Call a physician or poison control centre immediately. Rinse mouth. Never give anything by mouth to a victim who is unconscious or is having convulsions. Do not induce vomiting. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Skin contact

Remove contaminated clothing immediately and wash skin with soap and water. Call a physician or poison control centre immediately. Chemical burns must be treated by a physician. Wash contaminated clothing before reuse.

Eye contact

Immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician or poison control centre immediately.

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. Contact dermatitis and/or allergic reaction from repeated exposure.

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. If swallowed gastric irrigation with activated carbon. Maintain adequate ventilation and oxygenation of the patient. May cause respiratory sensitization or asthma-like symptoms. Bronchodilators, expectorants and antitussives may be of help. Glutaraldehyde may transiently worsen reversible airways obstruction including asthma or reactive airways disease. Treat bronchospasm with inhaled beta2 agonist and oral or parenteral corticosteroids. Chemical eye burns may require extended irrigation. Obtain prompt consultation, preferably from an ophthalmologist. If burn is present, treat as any thermal burn, after decontamination. Due to irritant properties, swallowing may result in burns/ulceration of mouth, stomach and lower gastrointestinal tract with subsequent stricture. Aspiration of vomitus may cause lung injury. Suggest endotracheal/oesophageal control if lavage is done. Probable mucosal damage may contraindicate the use of gastric lavage. No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control centre or doctor, or going for treatment. Excessive exposure may aggravate pre-existing asthma and other respiratory disorders (e.g. emphysema, bronchitis, reactive airways dysfunction syndrome).

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. (COx, NOx, 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. Incompatible with anionic compounds e.g. anionic surfactants. If large quantities are released into waste water collect in an appropriate container. Adjust with sodium lauryl sulphate solution (Concentration twice as high as the active ingredient in the waste water) to a mixture ratio of 1:1. Polluted surfaces can be decontaminated with a 10% sodium lauryl sulphate solution.

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)

BIOCIDAL PRODUCT -PT3: veterinary hygiene disinfectant - PT4: food and feed area disinfectant - Only for professional use.

8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

Component	CAS-No.	Value	Control Parameters	Basis
GLUTARALDEHYDE	111-30-8	TWA	0.1 ppm 0.4 mg/m ³	Austrian OEL Regulation
GLUTARALDEHYDE	111-30-8	STEL	0.1 ppm 0.4 mg/m ³	Austrian OEL Regulation
GLUTARALDEHYDE	111-30-8	STEL	0.05 ppm 0.21 mg/m ³	Belgium VLEP/GWBB
GLUTARALDEHYDE	111-30-8	TWA	0.2 ppm 0.8 mg/m ³	Denmark
GLUTARALDEHYDE	111-30-8	STEL	0.2 ppm 0.8 mg/m ³	Denmark
GLUTARALDEHYDE	111-30-8	TWA	0.1 ppm 0.4 mg/m ³	France INRS
GLUTARALDEHYDE	111-30-8	STEL	0.2 ppm 0.8 mg/m ³	France INRS
GLUTARALDEHYDE	111-30-8	TWA	0.05 ppm 0.2 mg/m ³	Germany AGS
GLUTARALDEHYDE	111-30-8	STEL	0.1 ppm 0.4 mg/m ³	Germany AGS
GLUTARALDEHYDE	111-30-8	TWA	0.05 ppm 0.24 mg/m ³	Germany DFG
GLUTARALDEHYDE	111-30-8	STEL	0.1 ppm 0.48 mg/m ³	Germany DFG
GLUTARALDEHYDE	111-30-8	STEL	0.05 ppm 0.2 mg/m ³	Ireland
GLUTARALDEHYDE	111-30-8	TWA	5 mg/m ³	Latvia
GLUTARALDEHYDE	111-30-8	TWA	0.4 mg/m ³	Poland - NDS
GLUTARALDEHYDE	111-30-8	STEL	0.6 mg/m ³	Poland - NDS
GLUTARALDEHYDE	111-30-8	STEL	0.05 ppm 0.2 mg/m ³	Spain - Royal Decree 374/2001
GLUTARALDEHYDE	111-30-8	STEL	0.1 ppm 0.4 mg/m ³	Sweden
GLUTARALDEHYDE	111-30-8	TWA	0.05 ppm 0.21 mg/m ³	Switzerland
GLUTARALDEHYDE	111-30-8	STEL	0.1 ppm 0.42 mg/m ³	Switzerland
GLUTARALDEHYDE	111-30-8	TWA	0.05 ppm 0.2 mg/m ³	UK - EH40 WEL
GLUTARALDEHYDE	111-30-8	STEL	0.05 ppm 0.2 mg/m ³	UK - EH40 WEL
GLUTARALDEHYDE	111-30-8	STEL	0.1 ppm 0.42 mg/m ³	Switzerland

Biological limit values

Recommended monitoring procedures

Follow standard monitoring procedures.

Derived no-effect level (DNEL)

Not available.

Predicted no effect concentrations (PNECs)

Not available

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 wear 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

Physical State:	Liquid
Form:	Solution
Colour:	Colourless
Odour:	Slight aldehyde
Odour:	Threshold < 0.01 ppm Literature
pH	3.1 - 4.5 Calculated
BP/BP Range	100.7 °C OECD 103
MP/MP Range	N/A
Freezing Point:	-3 °C Calculated
Evaporation Rate (Butyl Acetate = 1):	0.8 Calculated
Vapour Pressure:	0.3 mmHg @ 20 °C OECD 104 Active ingredient
Vapour Density (air = 1):	0.7 Calculated
Specific Gravity (H2O = 1):	1.035 Calculated
Solubility:	In water 100 % @ 20 °C EC Method A6
Dynamic Viscosity:	3.2 mPa.s @ 20 °C (Brookfield Viscosity)
Kinematic Viscosity:	3.09 cSt @ 20 °C Calculated

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.
Anionic compounds

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

Harmful if inhaled. Symptoms may include nausea and discomfort to the upper respiratory tract. May cause respiratory sensitisation. Symptoms may include difficulty breathing, tightness in chest. May cause respiratory irritation. Symptoms may include difficulty breathing, discomfort in chest and upper respiratory tract.

Skin contact

Burning pain and severe corrosive skin damage. Rash. , May cause an allergic skin reaction. Dermatitis.

Eye contact

Causes serious eye damage. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Ingestion

Harmful if swallowed. Symptoms may include nausea and discomfort.

Symptoms

Harmful if swallowed. Symptoms may include nausea and discomfort. Harmful if inhaled. Symptoms may include nausea and discomfort to the upper respiratory tract. 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. Rash, May cause an allergic skin reaction. Dermatitis. May cause respiratory sensitisation. Symptoms may include difficulty breathing, tightness in chest. May cause respiratory irritation. Symptoms may include difficulty breathing, discomfort in chest and upper respiratory tract.

11.1 Information on toxicological effects

Acute toxicity

QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C12-16-ALKYLDIMETHYL, CHLORIDES

Oral	LD50	795 mg/kg (Rat)
Dermal	ATEmix	> 5000 mg/kg (calculated)

GLUTARALDEHYDE

Oral	LD50	200 mg/kg (Rat)
Dermal	LD50	1749 mg/kg

Skin corrosion/irritation

QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C12-16-ALKYLDIMETHYL, CHLORIDES

OECD 404	Corrosive (Rabbit)
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GLUTARALDEHYDE Brief contact may cause skin burns. Symptoms may include pain, severe local redness and tissue damage.

Serious eye damage/eye irritation

GLUTARALDEHYDE May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur. Vapour may cause eye irritation experienced as mild discomfort and redness.

Respiratory sensitisation

GLUTARALDEHYDE May cause allergic respiratory response in a small proportion of individuals.

Skin sensitisation

QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C12-16-ALKYLDIMETHYL, CHLORIDES

OECD 406	Not sensitising (Guinea pig)
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GLUTARALDEHYDE Guinea pig Sensitising

Germ cell mutagenicity

GLUTARALDEHYDE In vitro genetic toxicity studies were negative in some cases and positive in other cases. Animal genetic toxicity studies were predominantly negative.

Carcinogenicity

GLUTARALDEHYDE

In a NTP chronic 2-year inhalation study on glutaraldehyde, no carcinogenicity was seen in rats or in mice. An increase in large granular lymphocytes in Fischer rats dosed with glutaraldehyde for two years was random or a secondary carcinogenic effect due to a modifying influence on the occurrence of this common neoplasm in this rat strain.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed

Reproductive toxicity

GLUTARALDEHYDE Has been toxic to the foetus in laboratory animals at doses toxic to the mother. Did not cause birth defects in laboratory animals.

Specific target organ toxicity - single exposure

Based on the available data not classified as STOT SE.

Specific target organ toxicity - repeated exposure

GLUTARALDEHYDE Repeated skin contact may result in absorption of amounts which could cause death. May cause nausea and vomiting.

Aspiration hazard

GLUTARALDEHYDE Aspiration into the lungs may occur during ingestion or vomiting, causing tissue damage or lung injury.

Mixture versus substance information

No data available

Other information

Not known

12 - ECOLOGICAL INFORMATION

12.1 Toxicity

GLUTARALDEHYDE

Toxicity to fish LC50 96 h 10.8 mg/l Pimephales promelas

Toxicity to aquatic invertebrates LC50 48 h 0.69 mg/l Daphnia magna

NOEC 21 d 0.24 mg/l

Toxicity to Algae ErC50 72 h 2.64 mg/l

QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C12-16-ALKYLDIMETHYL, CHLORIDES

Toxicity to fish LC50 96 h 0.085 mg/l (rainbow trout)

Toxicity to aquatic invertebrates EC50 48 h 0.016 mg/l *Daphnia magna*.

Toxicity to Algae EC50 72 h 0.025 mg/l *Selenastrum capricornutum*

12.2 Persistence and degradability

GLUTARALDEHYDE OECD 301 A 28 d 83%

OECD 306 28 d 73%

QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C12-16-ALKYLDIMETHYL, CHLORIDES

OECD 301 D 70% Activated Sludge

COD 1130 mg/g

12.3 Bioaccumulative potential

GLUTARALDEHYDE BCF <100

Partition coefficient n-octanol/water (log Kow)

GLUTARALDEHYDE LogPow -0.333

QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C12-16-ALKYLDIMETHYL, CHLORIDES

n-octanol/water OECD 107 2.88

12.4 Mobility in soil

GLUTARALDEHYDE Koc 50-150

Partition coefficient, soil organic carbon/water (Koc): 120 - 500 Estimated.

Henry's Law Constant (H): 3.3E-08 atm*m3/mole; 25 °C Measured

12.5 Results of PBT and vPvB assessment

No data available

12.6 Other adverse effects

Not known

13 - DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Dispose of waste and residues in accordance with local authority requirements

Residual waste

Dispose of waste and residues in accordance with local authority requirements

Contaminated packaging

Dispose of as unused product.

EU Waste Code

Product: 07-04-04 Container: 15-01-10

Disposal methods/information

Wear protective equipment as outlined in section 8 of this safety data sheet when handling this product contaminated materials and packaging.

Special precautions

Not noted.

14 - TRANSPORT INFORMATION

Road Transport Notes

14.1 UN-number

ADR/RID: 3265

IMDG: 3265

IATA: 3265

14.2 UN proper shipping name

ADR/RID: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (GLUTARALDEHYDE, QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C12-16-ALKYLDIMETHYL, CHLORIDES)

IMDG: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (GLUTARALDEHYDE, QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C12-16-ALKYLDIMETHYL, CHLORIDES)

IATA: CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (GLUTARALDEHYDE, QUATERNARY AMMONIUM COMPOUNDS, BENZYL-C12-16-ALKYLDIMETHYL, CHLORIDES)

14.3 Transport hazard class(es)

ADR/RID: 8

IMDG: 8

IATA: 8

14.4 Packaging group

ADR/RID: III

IMDG: III

IATA: III

14.5 Environmental hazards

IMDG: Marine pollutant: Yes

14.6 Special precautions for users

Danger: Corrosive

14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

N/A

Further information

Limited quantities: 5L

Expected quantities: E1

Transport Category (Tunnel Restriction Code): 3 (E)

Hazard Identification Number: 80

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

C Corrosive
T Toxic
N Dangerous to the environment
Xn Harmful
R20/22 Harmful by inhalation and if swallowed
R22 Harmful if swallowed
R23/25 Toxic by inhalation and if swallowed
R34 Causes burns
R42/43 May cause sensitization by inhalation and skin contact
R50 Very toxic to aquatic organisms
H290 May be corrosive to metals
H301 Toxic if swallowed
H302 Harmful if swallowed
H332 Harmful if inhaled
H314 Causes severe skin burns and eye damage
H318 Causes serious eye damage
H317 May cause an allergic skin reaction
H331 Toxic if inhaled
H334 May cause allergy or asthma like symptoms or breathing difficulties if inhaled
H335 May cause respiratory irritation
H400 Very toxic to aquatic life
H410 Very toxic to aquatic life with long lasting effects
P271 Use only outdoors or in a well-ventilated area.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
P301+302 IF SWALLOWED OR ON SKIN: Rinse skin and mouth immediately and seek medical advice.
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.