

A Geno Technology, Inc. (USA) brand name

Safety Data Sheet

Cat. # BTNM-0062

pH Buffer, Yellow, pH 7.0, 500 mL

Size: 500 mL





Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830 Revision date: 5/11/2017

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

1.1. Product identifier

Product form : Mixture

Product name : pH Buffer, Yellow, pH 7.0, 500 mL

Product code : P294
Product group : Blend

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

1.2.1. Relevant identified uses

No additional information available

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Geno Technology, Inc./ G-Biosciences 9800 Page Avenue 63132-1429 Saint Louis - United States T 800-628-7730 - F 314-991-1504

technical@GBiosciences.com - www.GBiosciences.com

1.4. Emergency telephone number

Emergency number : Chemtrec 1-800-424-9300 (USA/Canada), +1-703-527-3887 (Intl)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice. Harmful to aquatic life.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---------------------------------|--|------------|---|
| Deionized water | (CAS-No.) 7732-18-5 | >= 80 | Not classified |
| Potassium Phosphate (Monobasic) | (CAS-No.) 7778-77-0 (EC-No.) 231-913-4 | 0.5 - 2 | Not classified |
| 2-bromo-2-nitropropane-1,3-diol | (CAS-No.) 52-51-7 (EC-No.) 200-143-0 (EC Index-No.) 603-085-00-8 | 0.5 - 2 | Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400 |
| 2,4-hexadienoic acid | (CAS-No.) 110-44-1 (EC-No.) 203-768-7 | 0.05 - 0.5 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 |

Full text of H-statements: see section 16

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SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

No additional information available

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained

breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the

product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

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Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour : No data available Odour : No data available · No data available Odour threshold : No data available pН Relative evaporation rate (butylacetate=1) : No data available Melting point : Not applicable Freezing point : No data available Boiling point : No data available : No data available Flash point Auto-ignition temperature : No data available Decomposition temperature : No data available Flammability (solid, gas) : Not applicable Vapour pressure : No data available Relative vapour density at 20 °C : No data available Relative density : No data available : No data available Solubility Log Pow : No data available Viscosity, kinematic : No data available : No data available Viscosity, dynamic · No data available Explosive properties

9.2. Other information

Oxidising properties

Explosive limits

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

2-bromo-2-nitropropane-1,3-diol (52-51-7)

| LD50 oral rat | 305 mg/kg bodyweight (Rat, Male / female, Experimental value, Oral, 14 day(s)) |
|-----------------|--|
| LD50 dermal rat | 1600 mg/kg (24 h, Rat, Male, Experimental value, Dermal, 14 day(s)) |

: No data available

: No data available

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| 2,4-hexadienoic acid (110-44-1) | |
|---------------------------------|-------------------------|
| LD50 oral rat | 10500 mg/kg (Rat, Oral) |

| Potassium Phosphate (Monobasic) (7778-77-0) | | |
|---|-------------------------------|--|
| LD50 oral rat | 7100 mg/kg (Rat, Oral) | |
| LD50 dermal rabbit | > 4640 mg/kg (Rabbit, Dermal) | |
| Skin corrosion/irritation | : Not classified | |
| Serious eye damage/irritation | : Not classified | |
| Respiratory or skin sensitisation | : Not classified | |
| Germ cell mutagenicity | : Not classified | |
| Carcinogenicity | : Not classified | |
| Reproductive toxicity | : Not classified | |
| STOT-single exposure | : Not classified | |
| STOT-repeated exposure | : Not classified | |
| Aspiration hazard | : Not classified | |

SECTION 12: Ecological information

| 12.1 | | |
|------|--|--|
| | | |
| | | |
| | | |

Ecology - general : Harmful to aquatic life.

Acute aquatic toxicity : Not classified Chronic aquatic toxicity : Not classified

| 2-bromo-2-nitropropane-1,3-diol (52-51-7) | |
|---|--|
| LC50 fish 1 | 35.7 mg/l (EPA OPP 72-1, 96 h, Lepomis macrochirus, Flow-through system, Fresh water, Experimental value, GLP) |
| EC50 Daphnia 1 | 1.4 mg/l (Equivalent or similar to OECD 202, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP) |
| ErC50 (algae) | 0.25 mg/l (ISO 10253, 72 h, Skeletonema costatum, Static system, Salt water, Experimental value, GLP) |

| 2,4-hexadienoic acid (110-44-1) | |
|---------------------------------|---|
| LC50 fish 1 | 1000 - 1500 mg/l (48 h, Leuciscus idus) |

| Potassium Phosphate (Monobasic) (7778-77-0) | |
|---|--|
| LC50 fish 1 > 900 mg/l (48 h, Leuciscus idus) | |
| 12.2. Persistence and degradability | |
| 2-bromo-2-nitropropane-1,3-diol (52-51-7) | |
| Persistence and degradability Readily biodegradable in water. | |

| 2,4-hexadienoic acid (110-44-1) | |
|---------------------------------|--|
| Persistence and degradability | Biodegradable in the soil. Readily biodegradable in water. |
| Biochemical oxygen demand (BOD) | 0.37 g O₂/g substance |
| Chemical oxygen demand (COD) | 1 g O ₂ /g substance |
| ThOD | 1.99 g O ₂ /g substance |
| BOD (% of ThOD) | 0.185 |

| Potassium Phosphate (Monobasic) (7778-77-0) | |
|---|----------------|
| Persistence and degradability Biodegradability: not applicable. | |
| Biochemical oxygen demand (BOD) | Not applicable |
| Chemical oxygen demand (COD) | Not applicable |
| ThOD | Not applicable |

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| BOD (% of ThOD) | Not applicable |
|---|---|
| 12.3. Bioaccumulative potential | |
| 2-bromo-2-nitropropane-1,3-diol (52-51-7) | |
| BCF other aquatic organisms 1 | 3.16 (BCFWIN, QSAR) |
| Log Pow | 0.18 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 20 °C) |
| Bioaccumulative potential | Low potential for bioaccumulation (Log Kow < 4). |

| 2,4-hexadienoic acid (110-44-1) | |
|---------------------------------|--|
| BCF other aquatic organisms 1 | 6 (Estimated value) |
| Log Pow | 0.96 - 1.33 |
| Bioaccumulative potential | Low potential for bioaccumulation (Log Kow < 4). |

| Potassium Phosphate (Monobasic) (7778-77-0) | | |
|---|--|--|
| Bioaccumulative potential | No bioaccumulation data available. | |
| 12.4. Mobility in soil | | |
| 2-bromo-2-nitropropane-1,3-diol (52-51-7) | | |
| Surface tension | 72 mN/m (20 °C, 1 g/l, EU Method A.5: Surface tension) | |
| Log Koc | 1.57 - 3.15 (log Koc, Calculated value) | |
| Ecology - soil | No straightforward conclusion can be drawn based upon the available numerical values. | |
| 12.5. Results of PBT and vPvB assessment | | |
| Component | | |
| 2-bromo-2-nitropropane-1,3-diol (52-51-7) | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII | |
| | This substants, mixture asserted these are the official of the form regulation, annothing | |

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Waste treatment methods.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No. (ADR) : Not applicable
UN-No. (IMDG) : Not applicable
UN-No. (IATA) : Not applicable
UN-No. (ADN) : Not applicable
UN-No. (RID) : Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable
Proper Shipping Name (ADN) : Not applicable
Proper Shipping Name (RID) : Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

ADN

Transport hazard class(es) (ADN) : Not applicable

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RID

Transport hazard class(es) (RID) : Not applicable

14.4. Packing group

Packing group (ADR) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable
Packing group (ADN) : Not applicable
Packing group (RID) : Not applicable

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No

Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Substance(s) are not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

| Full text of H- and EUH-statements: | | |
|-------------------------------------|--|--|
| Acute Tox. 4 (Dermal) | Acute toxicity (dermal), Category 4 | |
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 | |
| Aquatic Acute 1 | Hazardous to the aquatic environment — Acute Hazard, Category 1 | |
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 | |
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 | |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 | |
| STOT SE 3 | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation | |
| H302 | Harmful if swallowed. | |
| H312 | Harmful in contact with skin. | |
| H315 | Causes skin irritation. | |

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| H318 | Causes serious eye damage. |
|------|-----------------------------------|
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |
| H400 | Very toxic to aquatic life. |

Safety Data Sheet applicable for regions

: GB - United Kingdom

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.



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

1.1. Product identifier

Product form : Mixture

Product name : pH Buffer, Yellow, pH 7.0, 500 mL

Product code : P294
Product group : Blend

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

1.2.1. Relevant identified uses

No additional information available

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Geno Technology, Inc./ G-Biosciences 9800 Page Avenue 63132-1429 Saint Louis - United States T 800-628-7730 - F 314-991-1504

technical@GBiosciences.com - www.GBiosciences.com

1.4. Emergency telephone number

Emergency number : Chemtrec 1-800-424-9300 (USA/Canada), +1-703-527-3887 (Intl)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Not classified

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice. Harmful to aquatic life.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

No labelling applicable

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---------------------------------|--|------------|---|
| Deionized water | (CAS-No.) 7732-18-5 | >= 80 | Not classified |
| Potassium Phosphate (Monobasic) | (CAS-No.) 7778-77-0 (EC-No.) 231-913-4 | 0.5 - 2 | Not classified |
| 2-bromo-2-nitropropane-1,3-diol | (CAS-No.) 52-51-7 (EC-No.) 200-143-0 (EC Index-No.) 603-085-00-8 | 0.5 - 2 | Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Skin Irrit. 2, H315 Eye Dam. 1, H318 STOT SE 3, H335 Aquatic Acute 1, H400 |
| 2,4-hexadienoic acid | (CAS-No.) 110-44-1 (EC-No.) 203-768-7 | 0.05 - 0.5 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 STOT SE 3, H335 |

Full text of H-statements: see section 16

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SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.

First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

No additional information available

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained

breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information

refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the

product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

Hand protection:

Protective gloves

Eye protection:

Safety glasses

Skin and body protection:

Wear suitable protective clothing

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Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state : Liquid

Colour : No data available Odour : No data available · No data available Odour threshold : No data available pН Relative evaporation rate (butylacetate=1) : No data available Melting point : Not applicable Freezing point : No data available Boiling point : No data available : No data available Flash point Auto-ignition temperature : No data available Decomposition temperature : No data available Flammability (solid, gas) : Not applicable Vapour pressure : No data available Relative vapour density at 20 °C : No data available Relative density : No data available : No data available Solubility Log Pow : No data available Viscosity, kinematic : No data available : No data available Viscosity, dynamic · No data available Explosive properties

9.2. Other information

Oxidising properties

Explosive limits

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

Hazardous decomposition products.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

2-bromo-2-nitropropane-1,3-diol (52-51-7)

| LD50 oral rat | 305 mg/kg bodyweight (Rat, Male / female, Experimental value, Oral, 14 day(s)) |
|-----------------|--|
| LD50 dermal rat | 1600 mg/kg (24 h, Rat, Male, Experimental value, Dermal, 14 day(s)) |

: No data available

: No data available

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| 2,4-hexadienoic acid (110-44-1) | |
|---------------------------------|-------------------------|
| LD50 oral rat | 10500 mg/kg (Rat, Oral) |

| Potassium Phosphate (Monobasic) (7778-77-0) | | |
|---|-------------------------------|--|
| LD50 oral rat | 7100 mg/kg (Rat, Oral) | |
| LD50 dermal rabbit | > 4640 mg/kg (Rabbit, Dermal) | |
| Skin corrosion/irritation | : Not classified | |
| Serious eye damage/irritation | : Not classified | |
| Respiratory or skin sensitisation | : Not classified | |
| Germ cell mutagenicity | : Not classified | |
| Carcinogenicity | : Not classified | |
| Reproductive toxicity | : Not classified | |
| STOT-single exposure | : Not classified | |
| STOT-repeated exposure | : Not classified | |
| Aspiration hazard | : Not classified | |

SECTION 12: Ecological information

| 12.1 | | |
|------|--|--|
| | | |
| | | |
| | | |

Ecology - general : Harmful to aquatic life.

Acute aquatic toxicity : Not classified Chronic aquatic toxicity : Not classified

| 2-bromo-2-nitropropane-1,3-diol (52-51-7) | |
|---|--|
| LC50 fish 1 | 35.7 mg/l (EPA OPP 72-1, 96 h, Lepomis macrochirus, Flow-through system, Fresh water, Experimental value, GLP) |
| EC50 Daphnia 1 | 1.4 mg/l (Equivalent or similar to OECD 202, 48 h, Daphnia magna, Static system, Fresh water, Experimental value, GLP) |
| ErC50 (algae) | 0.25 mg/l (ISO 10253, 72 h, Skeletonema costatum, Static system, Salt water, Experimental value, GLP) |

| 2,4-hexadienoic acid (110-44-1) | |
|---------------------------------|---|
| LC50 fish 1 | 1000 - 1500 mg/l (48 h, Leuciscus idus) |

| Potassium Phosphate (Monobasic) (7778-77-0) | | |
|---|--|--|
| LC50 fish 1 > 900 mg/l (48 h, Leuciscus idus) | | |
| 12.2. Persistence and degradability | | |
| 2-bromo-2-nitropropane-1,3-diol (52-51-7) | | |
| Persistence and degradability Readily biodegradable in water. | | |

| 2,4-hexadienoic acid (110-44-1) | | |
|---------------------------------|--|--|
| Persistence and degradability | Biodegradable in the soil. Readily biodegradable in water. | |
| Biochemical oxygen demand (BOD) | 0.37 g O₂/g substance | |
| Chemical oxygen demand (COD) | 1 g O ₂ /g substance | |
| ThOD | 1.99 g O ₂ /g substance | |
| BOD (% of ThOD) | 0.185 | |

| Potassium Phosphate (Monobasic) (7778-77-0) | | | | |
|---|-----------------------------------|--|--|--|
| Persistence and degradability | Biodegradability: not applicable. | | | |
| Biochemical oxygen demand (BOD) | Not applicable | | | |
| Chemical oxygen demand (COD) | Not applicable | | | |
| ThOD | Not applicable | | | |

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| BOD (% of ThOD) | Not applicable | | | | | |
|---|---|--|--|--|--|--|
| 12.3. Bioaccumulative potential | | | | | | |
| 2-bromo-2-nitropropane-1,3-diol (52-51-7) | | | | | | |
| BCF other aquatic organisms 1 | 3.16 (BCFWIN, QSAR) | | | | | |
| Log Pow | 0.18 (Experimental value, OECD 107: Partition Coefficient (n-octanol/water): Shake Flask Method, 20 $^{\circ}\text{C})$ | | | | | |
| Bioaccumulative potential | Low potential for bioaccumulation (Log Kow < 4). | | | | | |

| 2,4-hexadienoic acid (110-44-1) | | | | |
|---------------------------------|--|--|--|--|
| BCF other aquatic organisms 1 | 6 (Estimated value) | | | |
| Log Pow | 0.96 - 1.33 | | | |
| Bioaccumulative potential | Low potential for bioaccumulation (Log Kow < 4). | | | |

| Potassium Phosphate (Monobasic) (7778-77-0) | | | | | | |
|---|--|--|--|--|--|--|
| Bioaccumulative potential | No bioaccumulation data available. | | | | | |
| 12.4. Mobility in soil | | | | | | |
| 2-bromo-2-nitropropane-1,3-diol (52-51-7) | | | | | | |
| Surface tension | 72 mN/m (20 °C, 1 g/l, EU Method A.5: Surface tension) | | | | | |
| Log Koc 1.57 - 3.15 (log Koc, Calculated value) | | | | | | |
| Ecology - soil | No straightforward conclusion can be drawn based upon the available numerical values. | | | | | |
| 12.5. Results of PBT and vPvB assessment | | | | | | |
| Component | | | | | | |
| 2-bromo-2-nitropropane-1,3-diol (52-51-7) | This substance/mixture does not meet the PBT criteria of REACH regulation, annex XIII This substance/mixture does not meet the vPvB criteria of REACH regulation, annex XIII | | | | | |
| 42.C. Other adverse affects | | | | | | |

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods : Waste treatment methods.

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

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| | | | | | | | | | | | | | | | | |

UN-No. (ADR) : Not applicable
UN-No. (IMDG) : Not applicable
UN-No. (IATA) : Not applicable
UN-No. (ADN) : Not applicable
UN-No. (RID) : Not applicable

14.2. UN proper shipping name

Proper Shipping Name (ADR) : Not applicable
Proper Shipping Name (IMDG) : Not applicable
Proper Shipping Name (IATA) : Not applicable
Proper Shipping Name (ADN) : Not applicable
Proper Shipping Name (RID) : Not applicable

14.3. Transport hazard class(es)

ADR

Transport hazard class(es) (ADR) : Not applicable

IMDG

Transport hazard class(es) (IMDG) : Not applicable

IATA

Transport hazard class(es) (IATA) : Not applicable

ADN

Transport hazard class(es) (ADN) : Not applicable

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RID

Transport hazard class(es) (RID) : Not applicable

14.4. Packing group

Packing group (ADR) : Not applicable
Packing group (IMDG) : Not applicable
Packing group (IATA) : Not applicable
Packing group (ADN) : Not applicable
Packing group (RID) : Not applicable

14.5. Environmental hazards

Dangerous for the environment : No
Marine pollutant : No

Other information : No supplementary information available

14.6. Special precautions for user

Overland transport

Not applicable

Transport by sea

Not applicable

Air transport

Not applicable

Inland waterway transport

Not applicable

Rail transport

Not applicable

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to REGULATION (EU) No 649/2012 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 4 July 2012 concerning the export and import of hazardous chemicals.

Substance(s) are not subject to Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC.

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

| Full text of H- and EUH-statements: | | | | | |
|-------------------------------------|--|--|--|--|--|
| Acute Tox. 4 (Dermal) | Acute toxicity (dermal), Category 4 | | | | |
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 | | | | |
| Aquatic Acute 1 | Hazardous to the aquatic environment — Acute Hazard, Category 1 | | | | |
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 | | | | |
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 | | | | |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 | | | | |
| STOT SE 3 | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation | | | | |
| H302 | Harmful if swallowed. | | | | |
| H312 | Harmful in contact with skin. | | | | |
| H315 | Causes skin irritation. | | | | |

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| H318 | Causes serious eye damage. | | | | |
|------|-----------------------------------|--|--|--|--|
| H319 | Causes serious eye irritation. | | | | |
| H335 | May cause respiratory irritation. | | | | |
| H400 | Very toxic to aquatic life. | | | | |

Safety Data Sheet applicable for regions

: GB - United Kingdom

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.