



SAFETY DATA SHEET

according to Hazardous Products Regulations (HPR)

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BioSentry® AquaPrime® Activator

Revision 7
Revision date 2020-02-04

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

1.1. Product identifier

Product name	BioSentry® AquaPrime® Activator
Product code	142250, 142350, 142450

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

Product Use	[SU3] Industrial uses: Uses of substances as such or in preparations at industrial sites; [PC20] Products such as pH-regulators, flocculants, precipitants, neutralization agents;
Description	Chlorine dioxide activator and drinking water acidifier.

1.3. Details of the supplier of the safety data sheet

Company	Neogen Corporation
Address	620 Leshler Place Lansing MI 48912 USA
Web	www.neogen.com
Telephone	517-372-9200/800-234-5333
Email	SDS@neogen.com

1.4. Emergency telephone number

	24 hours: Medical: 1-800-498-5743 (U.S. and Canada) or 1-651-523-0318 (international) Spill/CHEMTREC: 1-800-424-9300 (U.S. and Canada) or 1-703-527-3887 (international)
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Further information

	Preserve International 944 Nandino Blvd. Lexington, KY 40511-1205 U.S.A. Preserve International is a wholly-owned subsidiary of Neogen Corporation.
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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture


2.1.2. Classification - EC 1272/2008	Skin Corr. 1B: H314; Aquatic Chronic 3: H412;
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2.2. Label elements

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2.2. Label elements

Hazard pictograms	
Signal Word	Danger
Hazard Statement	Skin Corr. 1B: H314 - Causes severe skin burns and eye damage. Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects.
Precautionary Statement: Prevention	P260 - Do not breathe dust/fume/gas/mist/vapours/spray. P264 - Wash thoroughly after handling. P273 - Avoid release to the environment. P280 - Wear protective gloves/protective clothing/eye protection/face protection.
Precautionary Statement: Response	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. P304+P340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P310 - Immediately call a POISON CENTER or doctor/physician. P363 - Wash contaminated clothing before reuse.
Precautionary Statement: Disposal	P501 - Dispose of contents/container to an approved hazardous/special waste disposal facility in accordance with local and national regulations

2.3. Other hazards

Other hazards	May be harmful if inhaled.
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SECTION 3: Composition/information on ingredients

3.2. Mixtures

EC 1272/2008

Chemical Name	Index No.	CAS No.	EC No.	REACH Registration Number	Conc. (%w/w)	Classification
Sulfuric acid (Sulphuric acid)		7664-93-9	231-639-5		1 - 10%	Skin Corr. 1B: H314;
Hydrogen chloride	017-002-00-2	7647-01-0	231-595-7		1 - 10%	Acute Tox. 3: H331; Skin Corr. 1A: H314;
Citric acid monohydrate		77-92-9	201-069-1		1 - 10%	Eye Dam. 1: H318;
copper sulphate pentahydrate	029-023-00-4	7758-99-8	231-847-6		0 - 0.5%	Acute Tox. 4: H302; Eye Dam. 1: H318; Aquatic Acute 1: H400; Aquatic Chronic 1: H410;

Description

	Concentrations listed are not product specifications.
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Further information

	Full text of Hazard Statements listed in this Section is provided in Section 16.
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SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation	Move the exposed person to fresh air. Immediate medical attention is required. If unconscious,
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4.1. Description of first aid measures

Eye contact	check for breathing and apply artificial respiration if necessary. If breathing is difficult give oxygen. If breathing stops, provide artificial respiration.
	Remove the affected person from the source of contamination immediately. Hold eye open and rinse slowly and gently with water for 15-20 minutes. Contact lenses should be removed. Immediate medical attention is required.
Skin contact	Remove the affected person from the source of contamination immediately. After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of soap and water. Drench the affected skin with running water for 10 minutes or longer if substance is still on skin. Immediate medical attention is required.
Ingestion	Rinse mouth thoroughly. Do not induce vomiting unless told to do so by the poison control center or doctor. Probable mucosal damage may contraindicate the use of gastric lavage. Never give anything by mouth to an unconscious person. Immediate medical attention is required.

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

Inhalation	Corrosive to the respiratory tract. Causes burns. In severe cases, may cause loss of consciousness. May cause irritation to mucous membranes. May cause dizziness and headache.
Eye contact	Risk of serious damage to eyes. Causes severe inflammation and may damage the cornea. Danger of very serious irreversible effects.
Skin contact	Corrosive to living tissue. Causes skin burns. Danger of very serious irreversible effects.
Ingestion	Corrosive to living tissue. Causes severe burns. Danger of very serious irreversible effects. Ingestion may cause nausea and vomiting.

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

	Remove the affected person from the source of contamination immediately. Transfer to hospital if there are burns or symptoms of poisoning. Immediate medical attention is required. If medical advice is needed, have product container or label at hand.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

	Use extinguishing media appropriate to the surrounding fire conditions.
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5.2. Special hazards arising from the substance or mixture

	Corrosive. Do not breathe vapour or spray mist.
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5.3. Advice for firefighters

	In case of fire and/or explosion do not breathe fumes. Do not breathe vapour or spray mist. Wear: Self-contained breathing apparatus, Protective equipment.
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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

	In the case of cleanup following a spill, wear protective clothing and appropriate equipment to prevent exposure of skin and eyes and to prevent ingestion or inhalation. Ensure adequate ventilation of the working area. Keep personnel away from spill. Avoid contact with eyes and skin. Avoid prolonged or repeated exposure. Keep away from incompatible materials.
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6.2. Environmental precautions

	Prevent further spillage if safe. Clean spillage area thoroughly with plenty of water. Do not flush into surface water. Do not let product contaminate subsoil.
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6.3. Methods and material for containment and cleaning up

	Absorb with inert, absorbent material. Collect spillage. Transfer to suitable, labelled containers for disposal. Dispose of this material and its container to hazardous or special waste collection point.
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6.3. Methods and material for containment and cleaning up

Clean spillage area thoroughly with plenty of water. Do not contaminate water by cleaning of equipment or disposal of wastes.

6.4. Reference to other sections

See Section(s) 2, 8, and 13 for further information.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Adopt best Manual Handling considerations when handling, carrying and dispensing. Handle and open container with care. Do not breathe vapour or spray mist. Ensure adequate ventilation of the working area. In case of insufficient ventilation, wear suitable respiratory equipment. Causes eye damage and skin damage. Wear chemical protective clothing. Wear goggles or face shield and rubber gloves when handling this product. Wash the outside of gloves before removing them. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Contaminated work clothing should not be allowed out of the workplace. Do not contaminate water by cleaning of equipment or disposal of wastes. Do not eat, drink or smoke in areas where this product is used or stored.
Read the entire label and follow all use directions, restrictions, and precautions.

7.2. Conditions for safe storage, including any incompatibilities

Store in original container in a cool, dry place inaccessible to children and pets. Keep container tightly closed. Do not contaminate water, food, or feed by storage or disposal. Keep containers closed and away from other chemicals. Do not store with incompatible substances or mixtures. Follow label instructions.

7.3. Specific end use(s)

See Section(s) 1.2 for further information.

Further information

Refer to product label and/or package insert for additional information.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Exposure Limit Values

Hydrogen chloride	8-hour OEL ppm:	8-hour OEL mg/m3:
	8-hour OEL f/cc:	15-min or ceiling (c) OEL ppm: (c) 5
	15-min or ceiling (c) OEL mg/m3: (c) 7.5	Substance interaction 1,2,3:
Sulfuric acid (Sulphuric acid)	8-hour OEL ppm:	8-hour OEL mg/m3: 1
	8-hour OEL f/cc:	15-min or ceiling (c) OEL ppm:
	15-min or ceiling (c) OEL mg/m3: 3	Substance interaction 1,2,3:

8.2. Exposure controls



8.2.1. Appropriate engineering controls

Ensure adequate ventilation of the working area. Exposure above the recommended occupational exposure limit (OEL) may cause adverse health effects.

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8.2. Exposure controls

8.2.2. Individual protection measures	Wear chemical protective clothing. Do not breathe dust or vapour.
Eye / face protection	Wear: Chemical safety goggles, Face shield.
Skin protection - Handprotection	Wear: Chemical resistant gloves. Wash the outside of gloves before removing them. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
Skin protection - Other	After contact with skin, wash immediately with plenty of soap and water. Wear suitable protective clothing, gloves and eye/face protection.
Respiratory protection	In case of insufficient ventilation, wear suitable respiratory equipment.
Occupational exposure controls	Exposure above the recommended occupational exposure limit (OEL) may cause adverse health effects. Provide chemical shower. Provide eye wash station. Protect clothing from contact with the product. Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Avoid contamination of food or feedstuffs.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State	Liquid
Colour	Clear/Light green
Odour	Pungent
Evaporation rate	No data available
Flammability limits	Not applicable.
Vapour pressure	No data available
Vapour density	No data available
Relative density	1.08 - 1.12
Partition coefficient	No data available
Autoignition temperature	No data available
Viscosity	No data available
Explosive	Not applicable.
Oxidising	No data available
Odour threshold	No data available
pH	No data available
Melting point	No data available
Freezing Point	No data available
Boiling point	No data available
Flash point	No data available
Solubility	Soluble in water

9.2. Other information

Gas group	Not applicable.
VOC (Volatile organic compounds)	Not applicable.

SECTION 10: Stability and reactivity

10.1. Reactivity

	Stable under normal conditions.
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10.2. Chemical stability

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10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

Under the specified conditions, hazardous reactions that lead to excessive temperatures or pressure are not expected.

10.4. Conditions to avoid

Keep away from extreme temperatures. Keep away from incompatible materials.

10.5. Incompatible materials

Keep away from strong bases, Alkali metals, Amines.

10.6. Hazardous decomposition products

Carbon oxides.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	Based on available data, the classification criteria are not met. However, this product does contain substance(s) that are classified as hazardous. For more information, see Section 3.
Skin corrosion/irritation	Corrosive to living tissue. Causes burns. Possible risk of irreversible effects.
Serious eye damage/irritation	Causes severe burns. Causes severe inflammation and may damage the cornea. Possible risk of irreversible effects.
Respiratory or skin sensitisation	May cause allergic reactions in susceptible people.
Germ cell mutagenicity	No mutagenic effects reported.
Carcinogenicity	Not found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs, Volumes 1-123. Not listed in the National Toxicology Program (NTP) 14th Report on Carcinogens. Not listed in the American Conference of Governmental Industrial Hygienists (ACGIH) Guide to Occupational Exposure Values. Not listed in the OSHA standard 1910.1003 Carcinogens.
Reproductive toxicity	No teratogenic effects reported.
STOT-single exposure	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause oral mucosal irritation.
STOT-repeated exposure	Component(s) may cause damage to human organs based on animal data.
Aspiration hazard	No Significant Hazard.
Repeated or prolonged exposure	Avoid prolonged or repeated exposure. Exposure above the recommended occupational exposure limit (OEL) may cause adverse health effects. Delayed appearance of the complaints and development of hypersensitivity (difficult breathing, coughing, asthma) are possible.

11.1.2. Mixtures

See Section(s) 3 for further information.

11.1.3. Hazard Information

See Section(s) 2 and 3 for further information.

11.1.5. Hazard Class

See Section(s) 2 and 4 for further information.

11.1.6. Classification Criteria

Based on the Globally Harmonised System (GHS) considerations for the classification of mixtures.

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11.1.6. Classification Criteria

See Section 15 for regulatory citations.

11.1.7. Information on likely routes of exposure

Eye contact. Skin contact. Inhalation. Ingestion.

11.1.8. Symptoms related to the physical, chemical and toxicological characteristics

See Section(s) 4.2 for further information.

11.1.9. Delayed and immediate effects as well as chronic effects from short and long-term exposure

See Section(s) 4.2 for further information.

11.1.10. Interactive effects

No data available.

11.1.11. Absence of specific data

<1% of this mixture consists of ingredients of unknown acute toxicity.

11.1.12. Mixture versus substance information

See Section(s) 3 for further information.

11.1.13. Other information

Caution - substance not yet fully tested.

SECTION 12: Ecological information

12.1. Toxicity

No data available

12.2. Persistence and degradability

No data is available on this product.

12.3. Bioaccumulative potential

No data is available on this product.

Partition coefficient

BioSentry® AquaPrime® No data available
Activator

12.4. Mobility in soil

No data is available on this product.

12.5. Results of PBT and vPvB assessment

No data is available on this product.

12.6. Other adverse effects

May cause long-term adverse effects in the aquatic environment.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Dispose of contents/container to an approved hazardous/special waste disposal facility in accordance with local and national regulations. Do not discharge effluent containing this product to sewer systems. Follow label instructions.

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Disposal methods

	Dispose of contents/container to an approved hazardous/special waste disposal facility in accordance with local and national regulations. Do not contaminate water by cleaning of equipment or disposal of wastes. Do not empty into drains; dispose of this material and its container in a safe way. Do not flush into surface water. Do not let product contaminate subsoil.
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Disposal of packaging


	Nonrefillable container. Do not reuse or refill this container. If empty: Do not reuse this container. Place in trash or offer for recycling, if available. If partly filled: Call your local solid waste agency for disposal instructions. Never place unused product down any indoor or outdoor drain. Empty containers can be sent to landfill after cleaning, if in compliance with local and national regulations. Can be recycled if in compliance with local and national regulations.
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Further information

	Refer to product label and/or package insert for additional information.
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SECTION 14: Transport information

Hazard pictograms

	
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14.1. UN number

	UN1760
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14.2. UN proper shipping name

	CORROSIVE LIQUID, N.O.S. (Hydrochloric acid, Sulfuric acid)
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14.3. Transport hazard class(es)

ADR/RID	8
Subsidiary risk	-
IMDG	8
Subsidiary risk	-
IATA	8
Subsidiary risk	-

14.4. Packing group

Packing group	II
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14.5. Environmental hazards

Environmental hazards	No
Marine pollutant	No

ADR/RID

Hazard ID	80
Tunnel Category	(E)

IMDG

EmS Code	F-A S-B
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IATA

Packing Instruction (Cargo)	855
Maximum quantity	30 L
Packing Instruction (Passenger)	851
Maximum quantity	1 L

SECTION 15: Regulatory information

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

Regulations	<p>WHMIS 2015 requirements as specified in the Hazardous Products Act (HPA) and the Hazardous Products Regulations (HPR).</p> <p>--International--</p> <p>Basel Convention (Hazardous Waste): H8.</p> <p>Chemical Weapons Convention (OPCW): This material contains no reportable components.</p> <p>Kyoto Protocol Greenhouse Gases: This material contains no reportable components.</p> <p>Mercosur Agreement: Not applicable.</p> <p>Montreal Protocol: This material contains no reportable components.</p> <p>The Rotterdam Convention: This material contains no reportable components.</p> <p>The Stockholm Convention: This material contains no reportable components.</p> <p>--Asia and the ASEAN Nations--</p> <p>Catalog of Hazardous Chemicals (China): [2507, Hydrochloric acid (Hydrogen chloride), CAS No. 7647-01-0], [1302, Sulfuric acid, CAS No. 7664-93-9].</p> <p>Regulation of Minister of Trade of the Republic of Indonesia, Number 75, Year 2014, regarding The Second Amendment of Minister of Trade, Number 44, Year 2009, Regarding Provision, Distribution, and Control of Hazardous Substances: Usable hazardous and toxic material, [Hydrochloric acid (Hydrogen chloride), CAS No. 7647-01-0], [Sulfuric acid, CAS No. 7664-93-9].</p> <p>Chemical Substances Control Law (Japan): Air Pollution Control Law., Water Pollution Control Law., [Hydrochloric acid (Hydrogen chloride), CAS No. 7647-01-0].</p> <p>Industrial Safety and Health Act, Dangerous Substances (Japan): Labeling/Notification required, Group 3 specified substance, [Hydrochloric acid (Hydrogen chloride), CAS No. 7647-01-0], [Sulfuric acid, CAS No. 7664-93-9], [Copper sulfate (copper compounds), CAS No. 7758-99-8].</p> <p>Poisonous and Deleterious Substances Act (Japan): Deleterious substance, [Copper sulfate (copper compounds), CAS No. 7758-99-8].</p> <p>Chemical Substances Subject to Permission (Korea): This material contains no reportable components.</p> <p>Restricted or Prohibited Substances (Korea): This material contains no reportable components.</p> <p>Use and Standards of Exposure of Chemicals Hazardous to Health (USECHH), Regulation 2000 (Malaysia): Schedule I exposure standard, CLASS regulation, [Hydrochloric acid (Hydrogen chloride), CAS No. 7647-01-0], [Sulfuric acid, CAS No. 7664-93-9].</p> <p>Philippine Inventory of Chemicals and Chemical Substances (PICCS): [CPEC, Table II - Hydrochloric acid (Hydrogen chloride), CAS No. 7647-01-0].</p> <p>Taiwan Toxic and Concerned Chemical Substances Control Act (TCCSCA): [1/87, Sulfuric acid, CAS No. 7664-93-9].</p> <p>Hazardous Substances Act (Thailand): This material contains no reportable components.</p> <p>Law on Chemicals (Vietnam): Annex I, Appendix IV, Appendix V, Appendix VI, Appendix VII, [Hydrochloric acid (Hydrogen chloride), CAS No. 7647-01-0], [Sulfuric acid, CAS No. 7664-93-9].</p> <p>--Australia and New Zealand--</p> <p>Australian Dangerous Goods Code: Class 8.</p> <p>Australian Inventory of Chemical Substances (AICS): All ingredients listed or exempt.</p> <p>New Zealand Inventory of Chemicals (NZIoC): All ingredients listed or exempt.</p>
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15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

	<p>--European Union (EU) and the United Kingdom (UK)--.</p> <p>Authorisation List (Annex XIV of REACH): This material contains no reportable components. Annex XVII for REACH: This material contains no reportable components. Article 95 of the Biocidal Products Regulation (BPR): [PT2, Hydrochloric acid (Hydrogen chloride), CAS No. 7647-01-0].</p> <p>--North America--.</p> <p>Domestic/Non-Domestic Substances Lists (DSL/NDSL): All ingredients listed or exempt. Toxic Substances Control Act (TSCA): All ingredients listed or exempt. Massachusetts Right-to-Know Hazardous Substance List: Hydrochloric acid, Sulfuric acid. New Jersey Worker and Community Right to Know Act: Hydrogen chloride, Sulfuric acid, Copper sulfate. Pennsylvania Right to Know Law: Hydrochloric acid, Sulfuric acid. Rhode Island Right-to-Know General Law: Hydrochloric acid, Sulfuric acid.</p> <p>California Proposition 65: This material contains no reportable components.</p>
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SECTION 16: Other information

Other information

Revision	<p>This document differs from the previous version in the following areas:.</p> <p>2 - 2.1. Classification of the substance or mixture. 12 - 12.1. Toxicity. 15 - Labelling. 15 - Hazard Statement. 15 - Safety phrases. 15 - .</p>
Acronyms	<p>ADR/RID: European Agreements Concerning the International Carriage of Dangerous Goods by Rail (RID) and by Road (ADR). CAS No.: Chemical Abstracts Service. CLASS: Classification, Labelling, and Safety Data Sheet of Hazardous Chemicals Regulation 2013 (Malaysia). GHS: Globally Harmonized System. HCS 2012: U.S. Hazard Communication Standard (2012 revision). IATA: International Air Transport Association. ICAO: International Civil Aviation Organisation. IMDG: International Maritime Dangerous Goods. LD: Lethal dose. OEL: Occupational exposure limit. OSHA: U.S. Occupational Safety and Health Administration. PEL: Permissible Exposure Limit. REACH: Registration, Evaluation, Authorisation, and Restriction of Chemicals. SVHC: Substance of very high concern. US DOT: United States Department of Transportation. VOC: Volatile Organic Compound. WEL: Workplace Exposure Limit.</p>
Text of Hazard Statements in Section 3	<p>Skin Corr. 1B: H314 - Causes severe skin burns and eye damage. Skin Corr. 1A: H314 - Causes severe skin burns and eye damage. Acute Tox. 3: H331 - Toxic if inhaled. Eye Dam. 1: H318 - Causes serious eye damage. Acute Tox. 4: H302 - Harmful if swallowed. Aquatic Acute 1: H400 - Very toxic to aquatic life.</p>

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Other information

Aquatic Chronic 1: H410 - Very toxic to aquatic life with long lasting effects.

Further information

DISCLAIMER: The information and recommendations set forth herein ("Information") are presented in good faith and believed to be correct as of the date issued. No representation is made regarding the completeness or accuracy of the Information. Further, because of the many factors that affect the use of this product, the Information is supplied upon the condition that the person(s) receiving it will make their own determination regarding its suitability for their own unique purpose(s), prior to use.

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