



Kit SDS Cover Sheet

Product Name:

Item No(s):

This is a test kit that is comprised of several individual components, listed below, each of which may have its own Safety Data Sheet (SDS). If a component does not have a Safety Data Sheet included, the item falls under Hazard Communication [1910.1200(b)(6)], *Articles*, and does not require a Safety Data Sheet.

Kit Components:

For product information, please contact your Neogen Corporation Representative.
For further information regarding this SDS, please contact SDS@neogen.com.

SAFETY DATA SHEET

according to 29 CFR 1910.1200 and GHS

Page 1/10

Activator Ampoules (2% Bromine)

Revision 0
Revision date 2019-11-11

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

1.1. Product identifier

Product name	Activator Ampoules (2% Bromine)
Product code	8924, 8951, 8956

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

Product Use	[SU22] Professional uses: Public domain (administration, education, entertainment, services, craftsmen); [PC21] Laboratory chemicals;
Description	Intended for laboratory use only.

1.3. Details of the supplier of the safety data sheet

Company	Neogen Corporation
Address	620 Leshner 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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SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

2.1.2. Classification - GHS	Skin Irrit. 2: H315; Eye Dam. 1: H318; Acute Tox. 1: H330; Aquatic Chronic 3: H412;
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2.2. Label elements

Hazard pictograms	
Signal Word	Danger
Hazard Statement	Skin Irrit. 2: H315 - Causes skin irritation. Eye Dam. 1: H318 - Causes serious eye damage. Acute Tox. 1: H330 - Fatal if inhaled. Aquatic Chronic 3: H412 - Harmful to aquatic life with long lasting effects.

Activator Ampoules (2% Bromine)

Revision 0
Revision date 2019-11-11

2.2. Label elements

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. P284 - [In case of inadequate ventilation] wear respiratory protection.
Precautionary Statement: Response	P302+P352 - IF ON SKIN: Wash with plenty of water/ . P304+P340 - IF INHALED: Remove person to fresh air and keep 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/doctor/ .
Precautionary Statement: Storage	P403+P233 - Store in a well-ventilated place. Keep container tightly closed. P405 - Store locked up.
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	None known.
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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
Bromine	035-001-00-5	7726-95-6	231-778-1		2%	Acute Tox. 2: H330; Skin Corr. 1A: H314; Aquatic Acute 1: H400;

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, check for breathing and apply artificial respiration if necessary. If breathing is difficult give oxygen. If breathing stops, provide artificial respiration.
Eye contact	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	Rinse immediately with plenty of water. Remove contaminated clothing. Seek medical attention if irritation or symptoms persist.
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	Fatal if inhaled. In severe cases, may cause loss of consciousness. May cause irritation to mucous membranes.
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Activator Ampoules (2% Bromine)

Revision 0
Revision date 2019-11-11

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

Eye contact	Risk of serious damage to eyes. Causes severe inflammation and may damage the cornea. Danger of very serious irreversible effects.
Skin contact	Causes skin irritation.
Ingestion	May cause oral mucosal irritation. 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

	Poison inhalation hazard. Corrosive. Do not breathe vapor or spray mist. Fire will produce dense black smoke.
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5.3. Advice for firefighters

	In case of fire and/or explosion do not breathe fumes. Do not breathe vapor 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

	Contact emergency response personnel. 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

	Contact emergency response personnel. 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. Clean spillage area thoroughly with plenty of water. Do not contaminate water by cleaning of equipment or disposal of wastes.
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6.4. Reference to other sections

	See Section(s) 2, 8, and 13 for further information.
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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 vapor 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.
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Activator Ampoules (2% Bromine)

Revision 0
Revision date 2019-11-11

7.1. Precautions for safe handling

	<p>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.</p> <p>Read the entire label and follow all use directions, restrictions, and precautions.</p>
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7.2. Conditions for safe storage, including any incompatibilities

	<p>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.</p>
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7.3. Specific end use(s)

	See Section(s) 1.2 for further information.
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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure Limit Values

Bromine	<p>ACGIH TLV TWA: 0.1 ppm</p> <p>Notations: -</p> <p>OSHA PEL 8hr TWA mg m3: 0.7</p> <p>NIOSH REL 10hr TWA ppm:</p> <p>NIOSH REL 15 min ST ppm:</p>	<p>ACGIH TLV STEL: 0.2 ppm</p> <p>OSHA PEL 8hr TWA ppm: 0.1</p> <p>Skin Designation: -</p> <p>NIOSH REL 10hr TWA mg m3:</p> <p>NIOSH REL 15 min ST mg m3:</p>
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8.2. Exposure controls

	
Appropriate engineering controls	Ensure adequate ventilation of the working area. Exposure above the recommended occupational exposure limit (OEL) may cause adverse health effects.
Individual protection measures	Wear chemical protective clothing. Do not breathe dust or vapor.
Eye / face protection	Wear: Chemical safety goggles, Face shield.
Skin protection - Hand protection	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

Activator Ampoules (2% Bromine)

Revision 0
Revision date 2019-11-11

9.1. Information on basic physical and chemical properties

State	Liquid
Color	Clear/Light yellow
Odor	Strong/Unpleasant
Explosive properties	Not applicable.
Oxidizing properties	No data available
Odor threshold	No data available
pH	No data available
Freezing Point	≈ 0 °C
Boiling point	≈ 100 °C
Flash point	No data available
Evaporation rate	No data available
Flammability limits	Not applicable.
Vapor pressure	≈ 233 Pa
Vapor density	No data available
Relative density	≈ 1
Partition coefficient	No data available
Autoignition temperature	No data available
Viscosity	No data available
Solubility	Soluble in water

9.2. Other information

VOC (Volatile organic compounds)	No data available
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SECTION 10: Stability and reactivity

10.1. Reactivity

	Stable under normal conditions.
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10.2. Chemical stability

	Stable under normal conditions.
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10.3. Possibility of hazardous reactions

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

	Keep away from extreme temperatures.
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10.5. Incompatible materials

	No data available.
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10.6. Hazardous decomposition products

	Carbon oxides.
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity	Fatal if inhaled.
Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/irritation	Causes severe burns. Causes severe inflammation and may damage the cornea. Possible risk of

Activator Ampoules (2% Bromine)

Revision 0
Revision date 2019-11-11

11.1. Information on toxicological effects

Respiratory or skin sensitization	irreversible effects.
	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.
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11.1.3. Hazard Information

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

	No data available
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11.1.5. Hazard Class

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

	Based on the Globally Harmonized System (GHS) considerations for the classification of mixtures. See Section 15 for regulatory citations.
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11.1.7. Information on likely routes of exposure

	Inhalation. Eye contact. Skin contact. Ingestion.
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11.1.8. Symptoms related to the physical, chemical and toxicological characteristics

	See Section(s) 4.2 for further information.
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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.
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11.1.10. Interactive effects

	No data available.
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11.1.11. Absence of specific data

	<1% of this mixture consists of ingredients of unknown acute toxicity.
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11.1.12. Mixture versus substance information

	See Section(s) 3 for further information.
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Activator Ampoules (2% Bromine)

Revision 0
Revision date 2019-11-11

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

Activator Ampoules (2% Bromine) No data available

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

Contains substance(s) which are hazardous to the 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.

Disposal methods

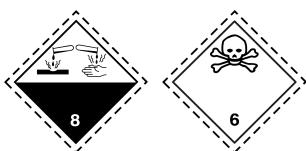
Dispose of contents/container to an approved hazardous/special waste disposal facility in accordance with local and national regulations. Do not contaminate water by cleaning of equipment or disposal of wastes. Do not empty into drains; dispose of this material and its container in a safe way. Do not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

Disposal of packaging

Contact a licensed waste disposal company. Dispose of as special waste in compliance with local and national regulations.

SECTION 14: Transport information

Hazard pictograms



14.1. UN number

Activator Ampoules (2% Bromine)

Revision 0
Revision date 2019-11-11

14.1. UN number	
	UN1744
14.2. UN proper shipping name	
	BROMINE SOLUTION (2% Bromine solution)
14.3. Transport hazard class(es)	
DOT	8
Subsidiary risk	6.1
IMDG	8
Subsidiary risk	6.1
IATA	8
Subsidiary risk	6.1
14.4. Packing group	
Packing group	I
14.5. Environmental hazards	
Environmental hazards	No
Marine pollutant	No
DOT	
Hazard ID	886
Tunnel Category	(C/D)
IMDG	
EmS Code	F-A S-B
IATA	
Packing Instruction (Cargo)	FORBIDDEN
Maximum quantity	FORBIDDEN
Packing Instruction (Passenger)	FORBIDDEN
Maximum quantity	FORBIDDEN

SECTION 15: Regulatory information

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

Regulations	Hazard Communication Standard: 29 Code of Federal Regulations 1910.1200: Occupational Safety and Health Standards: Z: Toxic and Hazardous Substances: Hazard Communication.
Chemical Inventories/Right-to-Know Lists:	<p>--International--</p> <p>Basel Convention (Hazardous Waste): H6.1, 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: 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): This product, as packaged, does not meet the threshold criteria for reporting.</p> <p>Regulation of Minister of Trade of the Republic of Indonesia, Number 75, Year 2014, regarding The</p>

Activator Ampoules (2% Bromine)

Revision 0
Revision date 2019-11-11

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

Second Amendment of Minister of Trade, Number 44, Year 2009, Regarding Provision, Distribution, and Control of Hazardous Substances: Usable hazardous and toxic material, [Bromine, CAS No. 7726-95-6].

Chemical Substances Control Law (Japan): Class I environmental release, Air Pollution Control Law., Water Pollution Control Law., [Bromine, CAS No. 7726-95-6].

Industrial Safety and Health Act, Dangerous Substances (Japan): Labeling/Notification required, [Bromine, CAS No. 7726-95-6].

Poisonous and Deleterious Substances Act (Japan): Deleterious substance, [Bromine, CAS No. 7726-95-6].

Chemical Substances Subject to Permission (Korea): Accident precaution, [76, Bromine, CAS No. 7726-95-6].

Restricted or Prohibited Substances (Korea): Toxic substance, [97-1-111, Bromine, CAS No. 7726-95-6].

Use and Standards of Exposure of Chemicals Hazardous to Health (USECHH), Regulation 2000 (Malaysia): Schedule I exposure standard, CLASS regulation, [Bromine, CAS No. 7726-95-6].

Philippine Inventory of Chemicals and Chemical Substances (PICCS): Toxic Substances and Hazardous and Nuclear Wastes Control Act (RA6969)., [Bromine, CAS No. 7726-95-6].

Taiwan Toxic and Concerned Chemical Substances Control Act (TCCSCA): This material contains no reportable components.

Hazardous Substances Act (Thailand): Type 3, [Bromine, CAS No. 7726-95-6].

Law on Chemicals (Vietnam): Annex I, Appendix IV, Appendix V, Appendix VI, Appendix VII, [Bromine (Dibromine), CAS No. 7726-95-6].

--Australia and New Zealand--.

Australian Dangerous Goods Code: Class 8.

Australian Inventory of Chemical Substances (AICS): All ingredients listed or exempt.

New Zealand Inventory of Chemicals (NZIoC): All ingredients listed or exempt.

--European Union (EU) and the United Kingdom (UK)--.

Authorization 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): Not applicable.

--North America--.

Domestic/Non-Domestic Substances Lists (DSL/NDL): All ingredients listed or exempt.

Toxic Substances Control Act (TSCA): All ingredients listed or exempt.

Massachusetts Right-to-Know Hazardous Substance List: Bromine.

New Jersey Worker and Community Right to Know Act: This material contains no reportable components.

Pennsylvania Right to Know Law: This material contains no reportable components.

Rhode Island Right-to-Know General Law: Bromine (inhalation).

California Prop 65: This material contains no reportable components.

Inventories

Ingredient	TSCA	MA	SARA313	CALPROP65	CWA307	CAA112	CWA311	SARA302	SARA304
Bromine	Y	N	Y 1.0	N	N	N	N	Y 500	Y 500

SECTION 16: Other information

Other information

Acronyms	
	ADR/RID: European Agreements Concerning the International Carriage of Dangerous Goods by Rail (RID) and by Road (ADR).

Activator Ampoules (2% Bromine)

Revision 0
Revision date 2019-11-11

Other information

	<p>CAS No.: Chemical Abstracts Service. GHS: Globally Harmonized System. HCS 2012: Hazard Communication Standard (2012 revision). IATA: International Air Transport Association. ICAO: International Civil Aviation Organization. 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, Authorization, 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. 1A: H314 - Causes severe skin burns and eye damage. Acute Tox. 2: H330 - Fatal if inhaled. Aquatic Acute 1: H400 - Very toxic to aquatic life.</p>

Further information

	<p>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.</p> <p>Except as expressly stated herein, NO WARRANTIES, GUARANTEES, OR REPRESENTATIONS OF ANY KIND, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, COURSE OF PERFORMANCE, USAGE OF TRADE, OR RESULTS TO BE OBTAINED BY USE OF THIS PRODUCT are made with respect to this product or use of this product. The product covered is furnished "as is" and only subject to the warranties herein provided, no liability is assumed resulting from the use of this product.</p>
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