

Material Safety Data Sheet

SPAGUARD® BROMINATING TABLETS

Version: 1.3

Revision Date: 01/01/2014

Print Date: 03/10/2014

SECTION 1. PRODUCT AND COMPANY IDENTIFICATION

Product name: SPAGUARD® BROMINATING TABLETS

Chemical nature: Halogenated hydantoin

Registration number: 5185-420

Company: Bio-Lab, Inc.
BioGuard
P.O. Box 300002
Lawrenceville, GA
30049-1002

Telephone: (800) 859-7946

Emergency telephone number: CHEMTREC: (24 hours) 800-424-9300, 703-527-3887
Poison Control Center (Medical) :: (877) 800-5553
Customer Care: 800-998-7946

For additional emergency telephone numbers see section 16 of the Safety Data Sheet.

Prepared by Product Safety Department

01/01/2014

SECTION 2. HAZARDS IDENTIFICATION

Emergency Overview

Danger

Form: tablet Colour: white Odour: Faint Halogen.

Hazard Summary : Corrosive
Oxidizer
Causes serious eye damage.
Causes skin burns.
Harmful if swallowed.
Causes respiratory tract irritation.
Avoid breathing dust or vapor.
Do not get in eyes, on skin, or on clothing.

OSHA Hazards : THIS MATERIAL IS HAZARDOUS UNDER THE CRITERIA OF THE FEDERAL OSHA HAZARD COMMUNICATION STANDARD 29CFR 1910.1200.

Potential Health Effects

Primary Routes of Entry : Skin contact

Material Safety Data Sheet

SPAGUARD® BROMINATING TABLETS

Version: 1.3

Revision Date: 01/01/2014

Print Date: 03/10/2014

	Eye contact
	Inhalation
	Ingestion
Aggravated Medical Condition	: Respiratory disorders Skin disorders
Inhalation	: Causes respiratory tract irritation.
Skin	: Causes skin burns. On contact with moisture, this material readily hydrolyzes to acid which may result in burns if not promptly removed.
Eyes	: Causes serious eye damage.
Ingestion	: Harmful if swallowed.
Chronic Exposure	: None known.
Carcinogenicity:	
IARC	No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
OSHA	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
NTP	No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
ACGIH	No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous components

Component / CAS-No.	Weight percent
1-bromo-3-chloro-5,5-dimethylimidazolidine-2,4-dione 16079-88-2	96 %

SECTION 4. FIRST AID MEASURES

First aid procedures

Inhalation	: Remove to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call a physician or poison control centre immediately.
Skin contact	: Remove contaminated clothing and shoes. Rinse immediately with plenty of water for at least 15 minutes. Call a physician or poison control centre immediately.
Eye contact	: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing

Material Safety Data Sheet

SPAGUARD® BROMINATING TABLETS

Version: 1.3

Revision Date: 01/01/2014

Print Date: 03/10/2014

eye.
Call a physician or poison control centre immediately.

Ingestion : Call a physician or poison control centre immediately.
Have person sip a glass of water if able to swallow.
DO NOT induce vomiting unless directed to do so by a physician or poison control center.
Do not give anything by mouth to a convulsing or unconscious person.

Notes to physician

Treatment : Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5. FIREFIGHTING MEASURES

Flammable properties

Flash point : Remarks: not applicable

Fire fighting

Suitable extinguishing media : Flood with large volumes of water.

Unsuitable extinguishing media : ABC powder
Dry chemical
Risk of violent reaction.

Further information : In large fires fueled by other materials, this product may smolder for prolonged periods emitting a dense black smoke.
Do not let fire burn.

Protective equipment and precautions for firefighters

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.
Thoroughly decontaminate fire fighting equipment including all fire fighting wearing apparel after the incident.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Environmental precautions : Do not flush into surface water or sanitary sewer system.

Methods for containment / Methods for cleaning up : Using appropriate protective clothing and safety equipment, contain spilled material.
Do not add water to spilled material.
Using clean dedicated equipment, sweep and scoop all spilled material, contaminated soil, and other contaminated material and place into clean dry containers for disposal.
Do not close containers containing wet or damp material. They should be left open to disperse any hazardous gases that may form.

Additional advice : Do not use floor sweeping compounds to clean up spills.
Do not transport wet or damp material.
Treat recovered material as described in the section "Disposal considerations".

Material Safety Data Sheet

SPAGUARD® BROMINATING TABLETS

Version: 1.3

Revision Date: 01/01/2014

Print Date: 03/10/2014

SECTION 7. HANDLING AND STORAGE

Handling

Handling procedures : Strong oxidizing agent.
Avoid contact with skin, eyes and clothing.
Avoid breathing dust.
Avoid breathing vapors.
Do not mix with other chemicals.
Mix only with water.
Never add water to this product.
Always add product to large quantities of water.
When using automatic feeding devices, always follow manufacturer's directions as to the proper addition of sanitizer product to brominators.
Use only clean and dry utensils.
Do not add this product to any dispensing devices containing remnants of any other product. Such use may cause a violent reaction leading to fire or explosion.
Contamination with moisture, organic matter or other chemicals will start a chemical reaction and generate heat, hazardous gas, possible fire and explosion.
In case of contamination or decomposition, do not reseal container.
If possible, isolate container in open air or well-ventilated area.
Flood with large volumes of water.
Wash hands thoroughly with soap and water after handling and before eating, drinking or using tobacco.
Do not handle until all safety precautions have been read and understood.
Do not contaminate water, food or feed by storage or disposal or cleaning of equipment.

Storage

Requirements for storage areas and containers : Store in original container.
Keep containers tightly closed in a dry, cool and well-ventilated place.
Keep out of reach of children.
Keep away from animals.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Engineering measures

Engineering measures : Use with adequate ventilation.
Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eye protection : Goggles
Safety glasses with side-shields

Hand protection : Wear rubber gloves.

Material Safety Data Sheet

SPAGUARD® BROMINATING TABLETS

Version: 1.3

Revision Date: 01/01/2014

Print Date: 03/10/2014

Respiratory protection : A respiratory protection program that meets OSHA 1910.134 and ANSI Z88.2 requirements must be followed whenever workplace conditions warrant a respirator's use.

Hygiene measures : Wash contaminated clothing before reuse.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Form : tablet
Colour : white
Odour : Faint Halogen.

Safety data

Flash point : Note: not applicable
Oxidizing properties : Note: Oxidizer
pH : 4.5
Note: (as aqueous solution), 0.1%, solution
Melting point/range : 248 - 298 °F (120 - 148 °C)
Note: Decomposes
Boiling point/boiling range : Note: not applicable
Vapour pressure : not applicable
Density : 0.87 - 0.92 g/cm³
Water solubility : 1.5 g/l
Note: no data available
Partition coefficient: n-octanol/water : Note: no data available
Viscosity, kinematic : Note: not applicable
Relative vapour density : Note: not applicable

SECTION 10. STABILITY AND REACTIVITY

Conditions to avoid : Remarks: High temperatures.
Poor ventilation.
Contamination
Moisture/high humidity.

Materials to avoid : Remarks: Avoid contact with water on concentrated material in the container. Avoid contact with easily oxidizable material; ammonia, urea, or similar nitrogen containing compounds; inorganic reducing compounds; floor sweeping compounds; calcium hypochlorite; other swimming pool/spa

Material Safety Data Sheet

SPAGUARD® BROMINATING TABLETS

Version: 1.3

Revision Date: 01/01/2014

Print Date: 03/10/2014

chemicals in their concentrated form; alkalis. Avoid contact with all other chemicals.

Hazardous decomposition products : Note: Hydrogen halides
Bromine
Chlorine
Carbon oxides
nitrogen oxides (NO_x)

Thermal decomposition : 180 °C

Hazardous reactions : Hazardous polymerisation does not occur.

SECTION 11. TOXICOLOGICAL INFORMATION

Acute oral toxicity : LD50: 578 mg/kg
Species: rat

Acute dermal toxicity : LD50: > 2,000 mg/kg
Species: rabbit

Skin irritation : Species: rabbit
Result: Primary Irritation Index (PII) = 6.1
Classification: Corrosive
Remarks: Causes skin burns.
Direct contact with wet material or moist skin may cause severe irritation, pain and possibly burns.

Eye irritation : Species: rabbit
Classification: Corrosive
Remarks: Causes serious eye damage.

Sensitisation : Remarks: Did not cause sensitization on laboratory animals.

12. ECOLOGICAL INFORMATION

Toxicity to fish
1-bromo-3-chloro-5,5-
dimethylimidazolidine-2,4-
dione : LC50: 0.87 mg/l
Exposure time: 96 h
Species: Fish

Toxicity to daphnia and other aquatic invertebrates
1-bromo-3-chloro-5,5-
dimethylimidazolidine-2,4-
dione : EC50: 0.46 mg/l
Exposure time: 48 h
Species: Daphnia

Bioaccumulation

Material Safety Data Sheet

SPAGUARD® BROMINATING TABLETS

Version: 1.3

Revision Date: 01/01/2014

Print Date: 03/10/2014

1-bromo-3-chloro-5,5-dimethylimidazolidine-2,4-dione : Bioconcentration factor (BCF): < 500

Biodegradability
1-bromo-3-chloro-5,5-dimethylimidazolidine-2,4-dione : Result: Readily biodegradable.

Further information on ecology

Additional ecological information : Toxic to fish.
Toxic to aquatic organisms.
Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of the National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

SECTION 13. DISPOSAL CONSIDERATIONS

Further information : Dispose of waste material in compliance with all federal, state, and local regulations.
Improper disposal of excess product, spray mixture or rinsate is a violation of Federal Law.
If these wastes cannot be disposed of by use according to label instructions, contact your Environmental Control Agency or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance. For registered pesticides, contact your State Pesticide Agency.
Do not put product, spilled product, or filled or partially filled containers into the trash or waste compactor.
Contact with incompatible materials could cause a reaction or fire.

Contaminated packaging : Do not re-use empty containers.
Rinse thoroughly before discarding in trash.

SECTION 14. TRANSPORT INFORMATION

DOT

UN number : 1479
Description of the goods : Oxidizing solid, n.o.s.
(CONTAINS BROMO-CHLORO-DIMETHYLHYDANTOIN)
Class : 5.1
Packing group : III
ERG Code : 140

IATA

UN number : 3085
Description of the goods : Oxidizing solid, corrosive, n.o.s.
(CONTAINS BROMO-CHLORO-DIMETHYLHYDANTOIN)

Material Safety Data Sheet

SPAGUARD® BROMINATING TABLETS

Version: 1.3

Revision Date: 01/01/2014

Print Date: 03/10/2014

Class : 5.1 (8)
Packing group : III
Labels : 5.1 (8)
Environmentally hazardous : no

IMDG

UN number : 3085
Description of the goods : OXIDIZING SOLID, CORROSIVE, N.O.S.
(CONTAINS BROMO-CHLORO-DIMETHYLHYDANTOIN)
Class : 5.1 (8)
Packing group : III
EmS Number 1 : F-A
EmS Number 2 : S-Q

Marine pollutant : yes
CONTAINS BROMO-CHLORO-DIMETHYLHYDANTOIN
Environmentally hazardous : yes
CONTAINS BROMO-CHLORO-DIMETHYLHYDANTOIN

Not recommended for shipment by air
ORM-D Consumer Commodity exemption possible
Not regulated by DOT and TDG if shipped or transported in packaging less than 400KG by road and/or rail.

SECTION 15. REGULATORY INFORMATION

OSHA Hazards : This material is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29CFR 1910.1200.

SARA 311/312 Hazards : Fire Hazard
Acute Health Hazard
Reactivity Hazard

California Prop. 65 Components : This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

The components of this product are reported in the following inventories:

EINECS : On the inventory, or in compliance with the inventory

TSCA : On TSCA Inventory

AICS : On the inventory, or in compliance with the inventory

DSL : All components of this product are on the Canadian DSL list.

ENCS : On the inventory, or in compliance with the inventory

KECI : On the inventory, or in compliance with the inventory

PICCS : On the inventory, or in compliance with the inventory

Material Safety Data Sheet

SPAGUARD® BROMINATING TABLETS

Version: 1.3

Revision Date: 01/01/2014

Print Date: 03/10/2014

IECSC

On the inventory, or in compliance with the inventory

SECTION 16. OTHER INFORMATION

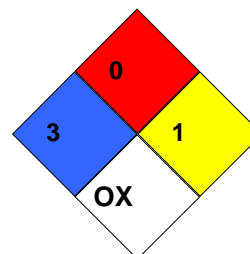
Further information

HMIS Classification

: Health hazard: 3
Flammability: 0
Reactivity: 1
PPI: Ask supervisor or safety specialist for handling instructions

NFPA Classification

: Health hazard: 3
Fire Hazard: 0
Reactivity Hazard: 1
Specific hazards: OX Class 2
Oxidizer.



Other Emergency Phone Number

<u>Latin America:</u>	Brazil	+55 113 711 9144
	All other countries	+44 (0) 1235 239 670
<u>Mexico:</u>		+52 555 004 8763

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.