

SECTION 1 CHEMICAL PRODUCT AND COMPANY IDENTIFICATION 1

Product Name: Maintain for Spas Bromine
Chemical name: Bromo-chloro-5,5-dimethylhydantoin
Synonym(s): BCDMH, Halobrom
Chemical formula: C 5 H 6 BrClN 2 O 2
Chemical family: Halogenated hydantoin
Molecular weight: 241.5
Date: 05/15/2015
Type of product and use: Swimming pool and Spa disinfectant
Supplier: ICL-IP America Inc.
 95 MacCorkle Ave. SW,
 South Charleston, WV 25303, USA
 Toll Free Number: 1-800-811-2327
Emergency Telephone: Chemtrec (800)424-9300
 Medical (800)420-9236
Sold By: Baleco International Inc.
 PO Box 11331
 Cincinnati, OH 45211
 (513) 353-3000

SECTION 2 HAZARDS IDENTIFICATION 2

GHS classification Acute Tox. 4, H302 Harmful if swallowed
 Skin Corr. 1B, H314 Causes severe skin burns and eye damage
 Skin Sens. 1, H317 May cause an allergic skin reaction
 Aquatic Acute 1, H400 - Very toxic to aquatic life

Labels and other form of warning
Symbol(s)



Hazard statements H302 - Harmful if swallowed
 H314 - Causes severe skin burns and eye damage
 H317 - May cause an allergic skin reaction
 H400 - Very toxic to aquatic life

Precautionary statements EUH031 - Contact with acids liberates toxic gas
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray
 P273 - Avoid release to the environment
 P280 - Wear protective gloves/protective clothing/eye protection/face protection
 P301 + P330 + P331 - IF SWALLOWED: rinse mouth. Do NOT induce vomiting
 P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower
 P333 + P313 - If skin irritation or rash occurs: Get medical advice/attention
 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 or doctor/physician
 P362 + P364 - Take off all contaminated clothing and wash it before reuse
 P391 - Collect spillage
 P264 - Wash hands thoroughly after handling
 P270 - Do not eat, drink or smoke when using this product
 P272 - Contaminated work clothing should not be allowed out of the workplace
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
 P301 + P312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
 P330 - Rinse mouth
 P405 - Store locked up
 P501 - Dispose of contents/container in accordance with national and international regulations

NFPA Ratings (Scale 0-4) Health = 3, Fire = 0, Reactivity = 1. Special Hazard Warning: OXIDIZER.
HMIS Ratings (Scale 0-4) Health = 3, Fire = 0, Reactivity = 1.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS 3

Components	CAS No.	Weight %
Bromochloro-5,5-dimethylhydantoin	32718-18-6	96-99.5

SECTION 4 FIRST AID MEASURES 4

Eye contact Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

Skin contact Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Inhalation Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

Ingestion Call poison control center, or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person.

Most important symptoms and effects, acute or delayed

- **Eye Contact** Corrosive
May cause temporary or permanent eye damage.
- **Skin contact** Exposure to wet skin may cause burns.
May cause sensitization by skin contact.
- **Inhalation** Irritant to upper respiratory tract.
Shortness of breath, headache and nausea.
- **Ingestion** Harmful if swallowed.

Note to physician Corrosive
No specific antidote.
In case of ingestion DO NOT induce vomiting.
Treat symptomatically and supportively.
Probable mucosal damage may contraindicate the use of gastric lavage.

SECTION 5 **FIRE FIGHTING MEASURES** **5**

Suitable extinguishing media Dry powder, carbon dioxide or water spray. In case of exothermic decomposition and appearance of smoke, water should be used to suppress it.

Extinguishing media not to Be used Do not use dry chemical extinguisher containing ammonia compounds.

Unusual fire and explosion Hazards Forms explosive mixtures with combustible, organic or other easily oxidizable materials. Dust may form a weak explosive mixture with air (class St1), but is not sensitive to ignition from electrostatic discharges. When heated to decomposition, may release poisonous and corrosive fumes.

Fire fighting procedure Cool containers with water spray. In closed stores, provide fire-fighters with self-contained breathing apparatus in positive pressure mode.

SECTION 6 **ACCIDENTAL RELEASE MEASURES** **6**

Personal precautions Evacuate area. Use respirator with combined filter (inorganic gas and dust), gloves, chemical safety goggles and body covering clothes. If material is decomposing, use self-contained breathing apparatus and a fully encapsulated suit.

Methods for cleaning up Sweep up, place in a suitable container and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete. Avoid access to streams, lakes or ponds.

Environmental precautions Prevent entry into sewers and watercourses

SECTION 7 **HANDLING AND STORAGE** **7**

Handling Keep containers tightly closed.

Storage Keep away from all sources of ignition.
Recommended storage temperature below 30°C.
For transportation purposes it is possible to store at temperatures up to 50°C.
Store in a dry, well-ventilated area
Store away from incompatible materials (see "materials to avoid").

SECTION 8 **EXPOSURE CONTROLS / PERSONAL PROTECTION** **8**

Exposure Limits:

Components	ACGIH-TLV Data	OSHA(PEL) Data
Bromochloro-5,5-dimethylhydantoin 32718-18-6	Not determined	Not determined

Manufacturer's TLV-TWA

Recommendation 0.1 mg/m³

Ventilation requirements Use local exhaust as necessary, especially under dusty conditions. Ventilation must be sufficient to maintain atmospheric concentration below recommended exposure limit.

Personal protective equipment:

- **Respiratory protection** Respirator with combined filter (inorganic gas and dust).

- **Hand protection** Neoprene gloves

- **Eye protection** Chemical safety goggles

- **Skin and body protection** Body covering clothes and boots

Hygiene measures Do not eat, smoke or drink where material is handled, processed or stored. Wash hands thoroughly after handling and before eating or smoking. Safety shower and eye bath should be provided.

SECTION 9**PHYSICAL AND CHEMICAL PROPERTIES****9**

Appearance	White to off-white granular solid with faint halogenous odour
Melting point/range	Not applicable (decomposes)
Boiling point/range	Not applicable
Flash point	Not applicable
Evaporation rate (ether=1)	Not applicable under standard conditions
Flammable/Explosion limits	Not available
Vapor pressure	9.35x10 ⁽⁻³⁾ Pa (25°C)
Vapor density	Not applicable under standard conditions
Solubility:	
- Solubility in water	0.22 g/100ml at 25°C
- Solubility in other solvents	Benzene: 2.5 g/100g at 25°C
Partition coefficient (n-octanol/water)	Kow = <1 (pH 5-9)
Auto-ignition temperature	Not available
Decomposition temperature	160°C
Bulk density	1 g/ml
Specific gravity	1.8-2.0
Explosive properties	Dust may form a weak explosive mixture with air (class St1), but is considered insensitive to ignition from electrostatic discharges.
Oxidising properties	Not sufficient for classification as oxidizer (Method A17 & UN Test O.1)
Particle size	Not available

SECTION 10**STABILITY AND REACTIVITY****10**

Reactivity	Combustible materials. Oxidizing agents. Bases.
Stability	Stable under normal conditions
Possibility of hazardous Reactions	Contact with combustible materials may initiate decomposition of the material and emission of smoke.
Conditions to avoid	Exposure to moisture. Heating above decomposition temperature.
Materials to avoid	Oxidizing agents Bases COMBUSTIBLE ORGANIC MATERIALS
Hazardous decomposition products	CO, HBr, Cl ₂ , NO _x , HCl, CO ₂

SECTION 11**TOXICOLOGICAL INFORMATION****11**

Likely Routes of Exposure	Skin Eye contact Inhalation Ingestion
Acute toxicity:	
- Rat oral LD ₅₀	929 mg/kg
- Rat inhalation LC ₅₀	1.1 mg/l/4 hour (powder)
- Dermal irritation (rabbit)	Corrosive
Dermal sensitization	Sensitizer.
Chronic toxicity	Prolonged skin contact may cause sensitization
Mutagenicity	Mutagenic by the Ames Test Mutagenic in the mouse lymphoma L5178Y test system. Non genotoxic in an in-vivo micronucleus test in mice Non genotoxic in an in-vivo liver unscheduled DNA synthesis (USD) assay
Carcinogenicity	Not classified by IARC

SECTION 12**ECOLOGICAL INFORMATION****12****Aquatic toxicity :****- 96 Hour-LC50, Fish**

1.2 mg/l (Eastern oyster, Acute flow through)
 1.9 mg/l (Mysid shrimp, Acute flow through)
 0.4 mg/l (Rainbow trout, Static)
 0.46 mg/l (Bluegill sunfish, Static)
 1.6 mg/l (Sheepshead minnow, Acute flow through)

- 48 hour-LC50, Daphnia magna

0.75 mg/l (Static)

Avian toxicity:**- Oral LD50, Bobwhite quail**

1839 mg/kg

- Dietary LC50, Mallard duck

>5620 ppm

- Dietary LC50, Bobwhite quail

>5620 ppm

Persistence and degradability

BCDMH and the main degradation product DMH are biodegradable and do not persist in the environment

Bioaccumulative potential

Based on low Kow values, i.e less than 1, BCDMH would not be predicted to significantly accumulate in aquatic organisms, or sorb to organic material in soil or sediment.

Mobility in soil

There will be no exposure of BCDMH to soil. The main degradation product DMH is mobile in soil.

Germany, water endangering Classes (WKG)

2

SECTION 13**DISPOSAL CONSIDERATIONS****13****Waste disposal**

Dispose of in approved landfill sites or an approved incinerator.

Avoid access to streams, lakes or ponds.

Observe all federal, state and local environmental regulations when disposing of this material.

Disposal of Packaging

Crush and bury empty containers.

Do NOT throw into public waste disposal site. Avoid contact with organic materials and moisture. See conditions to avoid (Section 10)

Waste Disposal Methods:

This material, as supplied, is not a hazardous waste according to Federal regulations (40 CFR 261). Dispose of in accordance with local regulations.

Contaminated Packaging:

Dispose of rinse water in accordance with local and national guidelines.

SECTION 14**TRANSPORTATION INFORMATION****14****DOT**

UN number 1479

Proper shipping name: Oxidizing Solid, n.o.s.

(Bromo-Chloro-5,5-DimethylHydantoin)

Class: 5.1 - Oxidizing substances

Label: OXIDIZER (5.1)

Packing Group II

Marking: Marine Pollutant

SECTION 15**REGULATORY INFORMATION****15****USA**

This product is registered under FIFRA

TSCA: EPA Number P-94-34

Subject to reporting under SNUR (Significant New Use Rule) -any use, 60 CFR 11037

BCDMH is listed in TSCA inventory under CAS number:16079-88-2
 8622-25

- EPA Registration no.**- Emergency overview in**

accordance to EPA Master Label	DANGER Corrosive Causes irreversible eye damage and skin burns Eye contact may cause loss of vision May be fatal if inhaled Irritating to nose and throat Harmful if absorbed through skin or swallowed Prolonged or frequently repeated skin contact may cause allergic reaction in some individuals This product is toxic to fish and aquatic organisms. Strong oxidizing agent.
SARA 313	This product does not contain a chemical listed at or above de minimis concentrations
- SARA (311, 312)	This product is a hazardous chemical under 29CFR 1910.1200, and categorized as an immediate and delayed health, and reactivity physical hazard
- Waste Classifications	Not listed under CERCLA. If this product becomes a waste, it meets the criteria of a hazardous waste as defined under 40 CFR 261 and would have the following EPA hazardous waste number: D001.
EU	Reported in EINECS
EC No.	251-171-5
Japan	ENCS No. 5-6368
New Zealand Inventory	Listed in NZIoC
China	
- China inventory	Listed in IECSC
Philippines	Listed in PICCS

SECTION 16

OTHER INFORMATION

HMIS RATING:

HEALTH	2
FLAMMABILITY	0
REACTIVITY	0
PERSONAL PROTECTION	X

NFPA:



Revision Date: 12/14/2015

Reason for Revision: Updates to all sections to bring into GHS compliance.

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End of Safety Data Sheet