



SAFETY DATA SHEET  
Purebrom Flakes - 0680

**Product Name:** Purebrom Flakes  
**Date:** 6/15/2015

SECTION 1 **IDENTIFICATION**

**Supplier:** Phoenix Products Company  
55 Container Drive  
Terryville, CT 06786  
(860) 589-7502

**Distributor:**

**U.S. PERS Emergency Telephone:** 1-800-633-8253

**Product Name:** Purebrom Flakes

**Synonyms:** Dibromantin

**Chemical Name:** 1,3-Dibromo-5,5-dimethylhydantoin

**Chemical Formula:** C<sub>5</sub>H<sub>6</sub>Br<sub>2</sub>N<sub>2</sub>O<sub>2</sub>

**CAS Number:** 77-48-5

**Product Use:** For use in disinfection of pools, spas and hot tubs and to control microbial growth in decorative waters.

SECTION 2 **HAZARDS IDENTIFICATION**

Emergency Overview

Danger

Corrosive



**GHS Classification**

Oxidizing solids (Category 2)  
Acute toxicity, Oral (Category 3)  
Skin corrosion (Category 1A)  
Serious eye damage (Category 1)  
Acute aquatic toxicity (Category 1)

**Hazard Statement(s)**

H272: May intensify fire; oxidizer.  
H301: Toxic if swallowed.  
H314: Causes severe skin burns and eye damage.  
H400: Very toxic to aquatic life.

**Precautionary Statement(s)**

P220: Keep/Store away from clothing/ combustible materials.  
P273: Avoid release to the environment.  
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P321: Specific treatment (see First Aid Measures on this label).  
P310: Immediately call a POISON CENTER or doctor/ physician.

**HMIS Classification**

**Health hazard:** 3  
**Flammability:** 0  
**Physical hazards:** 2

**NFPA Rating**

**Health hazard:** 3  
**Fire:** 0  
**Reactivity Hazard:** 2



Special hazard: OX

SECTION 2 **HAZARDS IDENTIFICATION - Continued**

**Potential Health Effects**

**Inhalation:** May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

**Skin:** May be harmful if absorbed through skin. Causes skin burns.

**Eyes:** Causes eye burns. Causes severe eye burns.

**Ingestion:** Toxic if swallowed.

SECTION 3 **COMPOSITION / INFORMATION ON INGREDIENTS**

<b>Component</b>	<b>CAS Number</b>	<b>Percent</b>
1,3-Dibromo-5,5-dimethylhydantoin*	77-48-5	99.4%

\*Available bromine: 111%

SECTION 4 **FIRST-AID MEASURES**

**General Advice:** Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**Inhalation:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**Skin Contact:** Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

**Eye Contact:** Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician. Continue rinsing eyes during transport to hospital.

**Ingestion:** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

SECTION 5 **FIRE FIGHTING MEASURES**

**Suitable Extinguishing Media:** Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for firefighters:** Wear self-contained breathing apparatus for fire fighting if necessary.

**Hazardous Combustion Products:** Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Hydrogen bromide gas

**Further Information:** Use water spray to cool unopened containers.



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SECTION 6 **ACCIDENTAL RELEASE MEASURES**

**Personal Precautions:** Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

**Environmental Precautions:** Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

**Methods and materials for containment and cleaning up:** Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

SECTION 7 **HANDLING AND STORAGE**

**Precautions for Safe Handling:** Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No Smoking. Keep away from heat and sources of ignition. Normal measures for preventive fire protection.

**Conditions for Safe Storage:** Keep container tightly closed in a dry and well-ventilated place. Moisture sensitive. Keep in a dry place.

SECTION 8 **EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Exposure Limits:** Contains no substances with occupational exposure limit values.

**Personal protective equipment**

**Respiratory Protection:** Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Hand Protection:** Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Eye Protection:** Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin and Body Protection:** Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Hygiene Measures:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.



SECTION 9 **PHYSICAL AND CHEMICAL PROPERTIES**

<b>Appearance:</b>	Light yellow flakes.
<b>Odor:</b>	No data available.
<b>Odor Threshold:</b>	No data available.
<b>pH:</b>	No data available.
<b>Melting Point/Freezing Point:</b>	No data available.
<b>Initial Boiling Point and Boiling Range:</b>	No data available.
<b>Flash Point</b>	No data available.
<b>Evaporation Rate</b>	No data available.
<b>Melting Point/Range:</b>	197 - 199 °C - dec.
<b>Flammability (solid, gas):</b>	No data available.
<b>Upper/Lower Flammability:</b>	No data available.
<b>Vapor Pressure:</b>	No data available.
<b>Vapor Density:</b>	No data available.
<b>Relative Density:</b>	No data available.
<b>Water Solubility:</b>	No data available.
<b>Partition Coefficient (n-octanol/water):</b>	No data available.
<b>Auto-ignition Temperature:</b>	No data available.
<b>Decomposition Temperature:</b>	No data available.
<b>Viscosity:</b>	No data available.
<b>Explosive Properties:</b>	No data available.
<b>Oxidizing Properties:</b>	The substance or mixture is classified as oxidizing with the category 2.

SECTION 10 **STABILITY AND REACTIVITY**

**Chemical Stability:** Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** No data available.

**Conditions To Avoid:** No data available.

**Materials to Avoid:** Strong reducing agents, Strong bases

**Hazardous Decomposition Products:** Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Hydrogen bromide gas

SECTION 11 **TOXICOLOGICAL INFORMATION**

**Acute Toxicity**

**Oral LD50:** LD50 Oral - rat - 250 mg/kg

**Inhalation LC50:** No data available

**Dermal LD50:** No data available

**Skin Corrosion/Irritation:** No data available

**Serious eye damage/eye irritation:** No data available

**Respiratory or skin sensitization:** No data available

**Germ cell mutagenicity:** No data available



SECTION 11 **TOXICOLOGICAL INFORMATION - Continued**

**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.

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.

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.

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.

**Reproductive Toxicity:** No data available

**Teratogenicity:** No data available

**Specific target organ toxicity - single exposure (Globally Harmonized System):** No data available

**Specific target organ toxicity - repeated exposure (Globally Harmonized System):** No data available

**Aspiration Hazard:** No data available

**Potential Health Effects:**

**Inhalation:** May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

**Ingestion:** Toxic if swallowed.

**Skin:** May be harmful if absorbed through skin. Causes skin burns.

**Eyes:** Causes eye burns. Causes severe eye burns.

**Signs and Symptoms of Exposure:** Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, shortness of breath, Headache, Nausea

SECTION 12 **ECOLOGICAL INFORMATION**

**Toxicity**

Toxicity to Fish

LC50 - *Oncorhynchus mykiss* (rainbow trout) - 0.16 mg/l - 96.0 h

LC0 - *Oncorhynchus mykiss* (rainbow trout) - 0.16 mg/l - 96.0 h

Toxicity to daphnia and other aquatic invertebrates

EC50 - *Daphnia magna* (Water flea) - 0.63 mg/l - 48 h

**Persistence and Degradability:** No data available

**Bioaccumulative Potential:** No data available

**Mobility in Soil:** No data available



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**PBT and vPvB Assessment:** No data available

**Other Adverse Effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal. Very toxic to aquatic life.

**SECTION 13      *DISPOSAL CONSIDERATIONS***

**Product:** Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting, as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Contaminated Packaging:** Dispose of as unused product.

**SECTION 14      *TRANSPORTATION DATA***



**DOT:**      **UN Number:**                      3087  
              **Proper Shipping Name:**      Oxidizing Solid, Toxic, N.O.S. (1,3-Dibromo-5,5-dimethylhydantoin)  
              **Class:**                                      5.1 (6.1)  
              **Packing Group:**                      II

**IMDG:**      **UN Number:**                      3087  
              **Proper Shipping Name:**      Oxidizing Solid, Toxic, N.O.S. (1,3-Dibromo-5,5-dimethylhydantoin)  
              **Class:**                                      5.1 (6.1)  
              **Packing Group:**                      II  
              **Marine Pollutant:**                      No

**IATA:**      **UN Number:**                      3087  
              **Proper Shipping Name:**      Oxidizing Solid, Toxic, N.O.S. (1,3-Dibromo-5,5-dimethylhydantoin)  
              **Class:**                                      5.1 (6.1)  
              **Packing Group:**                      II

**SECTION 15      *REGULATORY INFORMATION***

**OSHA Hazards:** Oxidizer, Toxic by ingestion, Corrosive

**SARA 302 Components:** SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA 313 Components:** SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

**SARA 311/312 Hazards:** Reactivity Hazard, Acute Health Hazard

**Massachusetts Right To Know Components:** No components are subject to the Massachusetts Right to Know Act.

**Pennsylvania Right To Know Components:**      CAS-No.                                      Revision Date  
1,3-Dibromo-5,5-dimethylhydantoin              77-48-5



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<b>New Jersey Right To Know Components:</b>	CAS-No.	Revision Date
1,3-Dibromo-5,5-dimethylhydantoin	77-48-5	

**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.

SECTION 16 <b><i>ADDITIONAL INFORMATION</i></b>
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No representations or warranties, either expressed or implied, of merchant ability, fitness for a particular purpose or any other nature are made hereunder with respect to information or the product to which information refers.

Date: 6/15/2015  
Phoenix Products Company