# MATERIAL SAFETY DATA SHEET

## Company Identification

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| **Manufacturer Information** | Blue Ribbon Products, Inc.<br>7687 Winton Drive, Bldg. 130<br>Indianapolis, IN 46268 |
| **Phone** | (317) 972-7970 * (888) 274-2266 |
| **Emergency Phone** | CHEMTREC<br>1-800-424-9300<br>FOR INTERNATIONAL CALLS<br>(703) 527-3887 |
| **Product Name** | 120 Day Toilet Bowl Cleaner |
| **Chemical Name** | Calcium Hypochlorite Granular 65% |

## Composition/Information on Ingredients

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| Calcium Hypochlorite | 7778-54-3 | >65% |

## Hazards Identification

**Emergency Overview:**

**DANGER!** Strong Oxidizing Agent! Mix only with water. Contamination may cause fire or explosion. Do not add this product to any dispensing device containing remnants of any other product.

**Precautions:** Do not swallow. Swallowing may cause injury or death. Do not get in eyes, on skin, or on clothing. May cause burns. Avoid breathing dust. Irritating to nose and throat. Wash hands after handling. Keep out of reach of children.

## First Aid Measures

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| **Inhalation:** | Move person to fresh air. If not breathing, give artificial respiration, preferably mouth-to-mouth. If breathing is difficult, give oxygen. Call a physician. |
| **Eye/Skin Contact:** | In case of contact, immediately flush eyes and skin with plenty of water (soap and water for skin) for at least 15 minutes, while removing contaminated clothing and shoes. For eye contact, get immediate medical attention. If skin irritation occurs, get medical attention. |
| **Ingestion:** | If swallowed, give at least 3-4 glasses of water, but do not induce vomiting. Do not give anything by mouth to an unconscious or convulsing person. Get medical attention. |
| **Note To Physician:** | Treat syptomatically. |

## Fire Fighting Measures

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| **Flash Point:** | Ninguno |
| **Extinguishing Media:** | Water only. Smothering ineffective – product supplies own oxygen. |
| **Special Firefighting Procedures:** | Product decomposes at 180 degrees C releasing oxygen gas. Container may rupture. Fire-fighters must wear NIOSH approved, pressure demand, self-contained breathing apparatus with full face piece for possible exposure to hazardous gases. |

## Accidental Release Measures

**Action To Be Taken If Material Is Released or Spilled:**
Use extreme caution in handling spilled material. Contamination with organic or combustible material may cause fire or violent decomposition. If fire or decomposition occurs in area of spill, immediately douse with plenty of water. Otherwise, sweep up all visible material using a clean, dry shovel and broom and dissolve material in water. Spilled material that has been swept up and dissolved in water should be used immediately in the normal application for which this product is being consumed.

## Handling and Storage

**Precautions To Be Taken During Handling And Storage:**
Store in a cool, dry, well-ventilated place. Keep in original container. Keep container closed when not in use. Keep away from heat, sparks, flames, direct sunlight, and other sources of heat, including lighted tobacco products. Use only a clean, dry scoop made of metal or plastic each time product is taken from the container. Do not add this product to any dispensing device containing remnants of any other product. Such use may cause violent reaction leading to fire or explosion. Add this product only to water. May cause fire or explosion if mised with other chemicals. Fire may result if contaminated with acids or easily combustible materials such as oil, kerosene, gasoline, paint products and most other organic materials. Do not reuse container. Residual material remaining in empty drum can react to cause fire. Thoroughly flush empty container with water then destroy by placing in trash collection. Do not contaminated water, food, or feed by storage or disposal.

## Exposure Controls/Personal Protection

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| **Exposure Limits** | 8-hour Time Weighted Average (TWA); 15-minute Short-Term Exposure Limit (STEL) |
| **OSHA** | No occupational exposure limits have been established by OSHA for this product. |
| **ACGIH** | No occupational exposure limits have been established by ACGIH for this product. |
| **PPG (IPEL)** | 1 mg/cu.m. TWA. 2 mg/cu.m. STEL. |
| **Respiratory Protection** | If dusty conditions are encountered, use NIOSH approved respirator with acid gas Cartridge and dust prefilter. The respiratory use limitations made by NIOSH or the manufacturer must be observed. Respiratory protection programs must be in accordance with 29 CFR 1910.134. |
| **Ventilation** | None required unless dusty conditions are encountered. |
| **Eye & Face Protection** | Chemical safety goggles. |
| **Protective Gloves** | Natural or synthetic rubber |
| **Other Protective Equipment** | Boots, aprons, or chemical suits should be used when necessary to prevent skin contact. Personal protective clothing and use of equipment must be in accordance with 29 CFR 1910.132 (general requirements), .133 (eye and face protection), and .138 (hand protection). |

## Physical and Chemical Properities

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| **Boiling Point** | Decomposes at 180 degrees C |
| **Vapor Density (Air=1)** | N/A |
| **Specific Gravity (Water=1)** | N/A |
| **pH** | Alkaline |
| **Freezing/Melting Point** | N/A |
| **Solubility (wt. % in water)** | 217 g/l @ 27 degrees C |
| **Bulk Density** | 65-67 lbs./cu.ft. |
| **Volume % Volatile** | N/A |
| **Vapor Pressure** | N/A |
| **Evaporation Rate** | N/A |
| **Heat of Solution** | Slightly exothermic |
| **Physical State** | Powder |
| **Odor** | Slight Chlorine |
| **Color** | White |

## Stability and Reactivity

**Stability** **Unstable above 177 degrees C**

**Hazardous Polymerization** Will not occur

**Incompatibility (Conditions/Materials To Avoid)**
Contamination. Excessive heat above 177 degrees C. Acids. Combustible materials. Organics. Reducing agents.

**Hazardous Thermal Decomposition/Combustion Products**
Acid or ammonia contamination will release toxic gases. Excessive heat will cause decomposition resulting in the release of oxygen and chlorine gas.

## Toxicological Information

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| **Acute Inhalation LC50** | (rat) no mortality at 3.4 mg/l (1 hour). Irritating. |
| **Acute Dermal LD50** | (rabbit) >1000 mg/kg. Slight to very low toxicity. |
| **Skin Irritation** | Causes burns |
| **Eye Irritation** | Causes burns |
| **Acute Oral LD50** | (rat) 850 mg/kg. Slight to very low toxicity. |
| **Chronic Effects/Carcinogenicity** | This product is NOT listed as a carcinogen or suspected carcinogen by NTP, IARC, or OSHA. |
| **Medical Conditions Aggravated** | None Known. |

**Effects of Overexposure**

**Acute:** **Inhalation:** Inhalation of calcium hypochlorite dust and deposition of particles in the respiratory tract can lead to irritation of the tissue and cause a variety of effects. These effects are dependent on concentration and include: upper respiratory tract irritation, nasal congestion, coughing, sore throat, laryngitis, and shortness of breath. In operations where there are high concentrations of respirable particulates, pulmonary edema (fluid in the lung) may be produced. If not treated immediately, pulmonary edema can be life threatening. Since this product is in granular or tablet form; particles of respirable size are not generally encountered.

**Eye/Skin:** Calcium hypochlorite is corrosive to the eyes. Contact of calcium hypochlorite dust with the eyes, even a minute amount for a short duration, can cause severe irritation and even blindness. Contact with the skin may cause severe irritation, burns, or tissue destruction. In studies utilizing rabbits, the skin irritation score was 8/8 and the eye irritation score was 98.5/110.

**Ingestion:** Calcium hypochlorite, if swallowed, causes severe burns to the digestive tract and can be fatal.

**Chronic:** **Genotoxicity:** Calcium hypochlorite produced positive responses in in-vitro assays using bacterial systems (the Ames test) and chromosomal aberrations in Chinese hamster fibroblasts. In a whole animal experiment (mouse micronucleus test), exposures ranging from 20 to 160 mg/kg produced no compound related chromosomal abnormalities.

**Carcinogenisis:** Although no study has been conducted with calcium hypochlorite, the carcinogenic potential of sodium hypochlorite was studied in F344 rats. After 104 weeks of drinking water containing up to 2000 ppm sodium hypochlorite, there was no evidence that this chemical produced any carcinogenic response. In addition, this exposure did not result in any adverse affects in blood, clinical chemistry, or other target organs.

One of the major uses of calcium hypochlorite is as a source of chlorine for water sanitation in drinking and recreational water. Studies have been conducted to determine the long-term effects of chlorinated drinking water. Seven generations of rats were given 100 ppm chlorine in their drinking water. No difference in fertility, growth, blood parameters, or specific organ toxicity was observed between control and exposed animals. Two separate animal studies conducted by different government agencies determined that the chlorination of municipal drinking water did not result in toxicity to the developing mouse fetus.

Safe handling of this material on a long-term basis should emphasize minimizing repeated acute exposures.

## Ecological Information

**Highly toxic to aquatic life.** 0.088 mg/l (Bluegill) 96-hour LC50

## Disposal Considerations

**Disposal:** Spilled material that has been swept up and dissolved in water should be used immediately in the normal application for which this product is being used. If this is not possible, carefully neutralize dissolved material by adding hydrogen peroxide (one pint of 35% hydrogen peroxide solution per pound of calcium hypochlorite to be neutralized) then dilute the neutralized material with plenty of water and flush to sewer. NOTE: Only properly neutralized material should be flushed to sewer. Unneutralized material can cause environmental damage to receiving water or can interfere with treatment plant operation. For on-site neutralization, carefully and slowly pour the appropriate quantity of 35% hydrogen peroxide solution over all spilled material then flush area with plenty of water. Care must be taken when using or disposing of chemical materials and/or their containers to prevent environmental contamination. It is your duty to dispose of the chemical materials and/or their containers in accordance with the Clean Air Act, the Clean Water Act, the Resource Conservation and Recovery Act, as well as any other relevant Federal, State, or local laws/regulations

regarding disposal.

**RCRA** Waste calcium hypochlorite and contaminated soils/materials from spill cleanup are D001 hazardous waste as per 40 CFR 261.21 (a) (4) and must be disposed of accordingly under RCRA.

## Transport Information

**USA DOT Description**

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| **Proper Shipping Name** | Calcium Hypochlorite, Hydrated |
| **Hazard Class** | 5.1 (Oxidizer) |
| **Identification Number** | UN2880 |
| **Packing Group** | II |
| **Reportable Quantity** | 10 lbs./4.5 kg. |

## Regulatory Information

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| **USA TSCA** | This product is listed on the TSCA Inventory. |
| **Europe EINECS** | This product is listed on EINECS |
| **Canada DSL** | This product is listed on the Canadian DSL |
| **Australia AICS** | This product is listed on AICS |
| **Korea ECL** | This product is listed on ECL |
| **Japan MITI (ENCS)** | This product is listed on MITI |
| **SARA Title III**<br>**SARA (311, 312) Hazard Class** | Acute Health Hazard. Reactive hazard. Fire hazard. |
| **SARA (313) Chemicals:** | Not listed |
| **Sara Section 302:** | Not listed as an Extremely Hazardous Substance |
| **CERCLA Hazardous Substance** | Listed in Table 302.4 of 40 CFR Part 302 as a hazardous substance with a reportable quantity of 10 pounds. Releases to air, land or water which exceed the RQ must be reported to the National Response Center, 800-424-8802. |
| **Hazard Rating System (HMIS/NFPA)** | NFPA: Health 3, Flammability O, Reactivity 1 (Oxidizer) |
| **FIFRA** | This product is registered with EPA as a pesticide. |

## Other Information

**Other Information**
NSF Drinking Water Treatment Chemicals Listing – PPG calcium hypochlorite is certified for maximum use at 46 mg/l under ANSI/NSF Standard 60.

**The following has been revised since the last issue of this MSDS**
Date. Edition. Section 11 has been updated. Section 12 has been updated. Section 13 has been updated. Section 15 has been updated.

**Previous Revision Date:** 8/15/04
**Previous Edition Number:** 006

**N/A =** Not Available

**Disclaimer**
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**Prepared By** Technical Department

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