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Material Safety Data Sheet

BCDMH

Section 1: Chemical Product and Company Identification

Product Name: BCDMH(1-Bromo-3-chloro-5,5-dimethylhydantoin)
CAS#: *16079-88-2 or* 32718-18-6
Synonym: 1-Bromo-3-Chloro-5,5-Dimethylhydantoin,
1-Bromo-3-chloro-5,5-dimethylimidazolidine-2,4-dione,
Chemical Name: Bromochloro-5,5-dimethylhydantoin
Chemical Formula: C5H6BrClN2O2
Contact Information for Emergency: (0086) 551 65418678

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Section 2: Composition and Information on Ingredients

Composition:

Name	**CAS # %**	**By Weight**
BCDMH	32718-18-6	≥ 98.7%

Toxicological Data on Ingredients: Bromochloro-5,5-dimethylhydantoin

Section 3: Hazards Identification

Kind of Hazards: No 5.1 & No.8 in GB6944－86, Oxidative and Corrosive solid.
Routes of Entry: Skin Contact, Inhalation, Swallow
Health Hazards: Strong irritation to aspiration organs, eyes and skin. Dust inhalation can cause aspiration organs reddening, cough, decompensation and lungs damage. Eyes contact can cause twinge, reddening and uncomfortable symptom even irreversible eye damage and blindness. Skin contact for a long time may cause skin reddening, twinge and canker.

Environment Hazards: Correct utilization results no effects.
Explosion Danger: Produces irritative and choking gas (hydrogen bromide, hydrogen chloride，bromide gas and nitrogen oxides) under strong light, fire and high temperature.

Section 4: First Aid Measures

Inhalation: Provide fresh air, warmth and rest, perfectly in a comfortable upright sitting position. Get medical attention if any discomfort continues.

Skin Contact: Immediately take off contaminated clothes and flush skin with soap and plenty of water.

Eye Contact: In case of contact, hold eyelids apart and immediately flush eyes with 0.1% NaHSO3 and plenty of water for 10 minutes. If still feel uncomfortable, get medical immediately.

Ingestion: Drink large amounts of 0.5% FeSO4 solution and water to vomit. Get medical immediately.

Section 5: Fire and Explosion Data

Characteristic of Danger: Material is oxidative. Has special irritative odor. Decompose in water and bases. React with reducing agents and organic chemicals. Produces poison gas when heated or exposed under light. Harmful Combustion Product: HBr，HCl，NO2，CO.

Extinguishing and Media: Foam, dry ice, sand and water. DO NOT use CO2 or dry chemicals

Protective Measures in Fire: Use self-contained breathing apparatus.

Section 6: Accidental Release Measures

Emergency Disposal: Clean up as much as the spill. Prevented from entering drains.

Elimination Measures: Carefully sweep up material and place in a compatible container for reclamation. Then spray 1%FeSO4 solution and flush with plenty of water.

Section 7: Handling and Storage

Note of Manipulation: Wear gas mask, goggle and plastic-rubber resistant suits to avoid breathing, eyes and skin contact, handling without strong sunlight.

Note of Storage: Do not reuse container. Store the product under a cool, dry and ventilated place. Store away from reducing agents, food, organic chemicals

Section 8: Exposure Controls/Personal Protection

Upper Concentration Limit: Not Known

Monitoring Ways: Not Known

Engineering Control: Use local exhaust ventilation.

Respiratory Protection: Wear antiseptic mask. General room ventilation is normally adequate.

Eye Protection: Safety glasses with side shields or goggles

Body protection: Whole-body shielded by plastic-rubber suit.

Hand protection: Chemical-resistant gloves.

Other protection: Don’t eating and drinking in workshop. After work, take bath and change clothes. Accept medical examination regularly.

Section 9: Physical and Chemical Properties

Appearance and Odor: White or off white tablet with faint halogen smell.
PH: 3.5-4.5 (1% BCDMH in water)
Melting Point: 156-163 ℃
Boiling Point: Not available.
Specific Gravity:1.8-2.0
Specific Vapor Density: Not volatile
Flash Point: Not burnable
Burning Temperature: Not burnable
Upper Explosive Limit: Not available
Lower Explosive Limit: Not available
Solvent Solubility: 1.9 g/L at 25℃ (in water)
Application: Sterilization, killing off algae

Section 10: Stability and Reactivity Data

Stability: Stable under normal temperatures and pressures.
Condition of Avoiding Contact: Strong light, high temperature and moisture
Incompatibilities: Acids，Bases，Oxidizers，Reducing agents，Organic chemicals.
Hazardous Polymerization: Not occur.
Hazardous Decomposition Products: Thermal decomposition forms HBr，HCl，NO2，CO，CO2, decomposition in water produces HBr，HCl，NH3，CO2.

Section 11: Toxicological Information

Acute toxicity: Acute toxicity. LD50. Oral Rat. 578 mg/kg.
Acute toxicity LD50. Skin Rat. >2000 mg/kg.
Acute toxicity LD50.Inhalation Rat LC50=0.53mg/L of air.
Subsidiary and Chronic Toxicity: None.
Irritability: BCDMH was considered corrosive to the skin. The primary skin irritation index was calculated to be 6.1.
Sensitization: Prolonged or repeated skin contact with solid BCDMH resulted in minor reddening of the skin and superficial necrosis with the development of excessive exfoliation. Contact with dilute solutions of 0.1% or less was not irritating to the skin. Eye contacts with BCDMH powder result in persistent severe conjunctiva irritation and slow development of corneal damage in rabbits.
Washing the eye promptly resulted in a significant reduction of adverse effects. Dilute solutions of 0.1% or less were non-irritating to the eyes.
Mutagenicity:BCDMH was tested for potential mutagenic effects using Salmonella and Saccharomyces. All the results of the tests were negative.
Deformity: No deformity to rat sperm.
Carcinogenicity: Not found.

Section 12: Ecological Information

Ecological Toxicity: Not available
Biological Decomposition: Not available
Non- biological Decomposition: Not available
Biological Concentration or Accumulation: Not available

Section 13: Disposal Considerations

Properties of Waster : Hazardous waster.
Waste disposal Methods: Control burning, absorb waste gas by limewater.
Note: Do not reuse package and container, control burning them as above

Section 14: Transport Information

UN No.: 3085
CLASS:5.1, 8
Packing Group: III
Packing Label:

Packing Category: Oxidizing solid

Packing Methods: Sealed in plastic bag and then packing in large ones..
Transportation Note: Prevent from high temperature, high moisture and straight sunlight.

Section 15: Other Regulatory Information

egulatory Information: 1. In the《Rules for Safety Managing of Chemical Hazards》 released on Feb. 17, 1987, by the Chinese State Department, the production, utilization, storage, transportation and loading of chemical hazards have been regulated.
2.Based the《Classification and labels of dangerous chemical substances commonly used》, GB13690-92 and the《Classification and code of dangerous goods》, GB6944-86. BCDMH was classified as No.5.1 and No.8, Oxidative and corrosive solid.
Canadian Regulatory Information: Class C - Oxidizing Material; Class D, Div 2b - Poisonous or Infectious Material: other toxic effects.

Section 16: Other Information

eference:1. Guotai Zhou, 《Encyclopedia for Chemical Hazards Safety Data》, Chemical Industry Press, 1997.
MSDS for Pool Logic Brominating Tablets, Sept.1, 2001.