



Material Safety Data Sheet

1. Product and company identification

Product name : BPC 68968 OXIDIZING BIOCIDES
Supplier : Baker Petrolite
A Baker Hughes Company
12645 W. Airport Blvd.
Sugar Land, TX 77478
For Product Information/MSDSs Call: 800-231-3606
(8:00 a.m. - 5:00 p.m. cst, Monday - Friday) 281-276-5400

Material Uses : Special: Microbiocide.

Code : BPC68968

Validation date : 11/11/2011.

Print date : 11/11/2011.

Version : 4

Responsible name : Global Regulatory Affairs - Telephone 281-276-5400 or 800-231-3606

In case of emergency : CHEMTREC: 800-424-9300 (U.S. 24 hour)
Baker Petrolite: 800-231-3606
(001)281-276-5400
CANUTEC: 613-996-6666 (Canada 24 hours)
CHEMTREC Int'l 01-703-527-3887 (International 24 hour)

2. Hazards identification

Physical state : Solid. [Tablet.]

Odor : Halogen. [Slight]

Color : White to off-white.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview : DANGER!
CAUSES EYE AND SKIN BURNS. HARMFUL IF INHALED OR SWALLOWED. CAUSES RESPIRATORY TRACT IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION.
Do not ingest. Do not get in eyes or on skin or clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

Routes of entry : Dermal contact. Eye contact. Inhalation.

Potential acute health effects

Inhalation : Toxic by inhalation. Irritating to respiratory system.

Ingestion : Toxic if swallowed. May cause burns to mouth, throat and stomach.

Skin : Corrosive to the skin. Causes burns. May cause sensitization by skin contact.

Eyes : Corrosive to eyes. Causes burns.

Potential chronic health effects

Chronic effects : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Over-exposure signs/symptoms

Inhalation : respiratory tract irritation, coughing

Ingestion : stomach pains

Skin : pain or irritation, redness, blistering may occur

Eyes : pain, watering, redness

2. Hazards identification

Medical conditions aggravated by over-exposure : Pre-existing skin disorders may be aggravated by over-exposure to this product.

See toxicological information (Section 11)

3. Composition/information on ingredients

<u>Name</u>	<u>CAS number</u>	<u>%</u>
Bromochloro-5,5-dimethylhydantoin	32718-18-6	60 - 100

4. First aid measures

- Eye contact** : Get medical attention immediately. Immediately flush the eye(s) continuously with lukewarm, gently flowing water for at least 20-60 minutes while holding the eyelid(s) open.
- Skin contact** : Wash affected area with soap and mild detergent for at least 20 - 60 minutes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.
- Inhalation** : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.
- Ingestion** : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wear suitable protective clothing and gloves. Remove contaminated clothing and shoes.

5. Fire-fighting measures

Flammability of the product : No specific fire or explosion hazard.

Extinguishing media

- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous thermal decomposition products** : carbon dioxide,carbon monoxide,nitrogen oxides,halogenated compounds
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6. Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

6. Accidental release measures

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Water polluting material. May be harmful to the environment if released in large quantities.

Methods for cleaning up

- Small spill** : Move containers from spill area. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Move containers from spill area. Approach release from upwind. Dike spill area and do not allow product to reach sewage system or surface or ground water. Notify any reportable spill to authorities. (See section 12 for environmental risks and 13 for disposal information.) Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see section 1 for emergency contact information and section 13 for waste disposal.

7. Handling and storage

- Handling** : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Empty containers retain product residue and can be hazardous. Do not reuse container.
- Storage** : Store in accordance with local regulations. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10). Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

Additional information

Recommended storage temperature below 30°C (86°F).

8. Exposure controls/personal protection

Occupational exposure limits		TWA (8 hours)			STEL (15 mins)			Ceiling			
Ingredients:	List name	ppm	mg/m ³	Other	ppm	mg/m ³	Other	ppm	mg/m ³	Other	Notations
No exposure limit value known.											

If OSHA permissible exposure levels are shown above they are the OSHA 1989 levels or are from subsequent OSHA regulatory actions. Although the 1989 levels have been vacated the 11th Circuit Court of Appeals, Baker Hughes recommends that these lower exposure levels be observed as reasonable worker protection.

- Recommended monitoring procedures** : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.
- Engineering measures** : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.
- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location. Take off contaminated clothing and wash before reuse.

Personal protection

8 . Exposure controls/personal protection

- Respiratory** : Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.
- Hands** : Chemical-resistant gloves: PVC gloves.
- Eyes** : Wear chemical safety goggles. When transferring material wear face-shield in addition to chemical safety goggles.
- Skin** : Wear long sleeves and chemical resistant apron to prevent repeated or prolonged skin contact.

9 . Physical and chemical properties

- Physical state** : Solid. [Tablet.]
- Flash point** : Not available.
- Auto-ignition temperature** : Not available.
- Flammable limits** : Not available.
- Color** : White to off-white.
- Odor** : Halogen. [Slight]
- pH** : Not available.
- Boiling/condensation point** : Not available.
- Initial Boiling Point** : Not available.
- Melting/freezing point** : Not available.
- Relative density** : Not available.
- Density** : Not available.
- Vapor density** : Not available.
- Odor threshold** : Not available.
- Evaporation rate** : Not available.
- VOC** : Not available.
- Viscosity** : Not available.
- Solubility (Water)** : Negligible
- Vapor pressure** : Not available.
- Pour Point** : Not available.
- Partition coefficient (LogKow)** : Not available.

10 . Stability and Reactivity

- Chemical stability** : The product is stable.
- Possibility of hazardous reactions** : Under normal conditions of storage and use, hazardous reactions will not occur.
- Hazardous polymerization** : Under normal conditions of storage and use, hazardous polymerization will not occur.
- Conditions to avoid** : No specific data.
- Materials to avoid** : Reactive or incompatible with the following materials: oxidizing materials, combustible materials and alkalis.
- Hazardous decomposition products** : Under normal conditions of storage and use, hazardous decomposition products should not be produced.
- Conditions of reactivity** : Non-flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.

BPC 68968 OXIDIZING BIOCIDES**11. Toxicological information**Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Bromochloro-5,5-dimethylhydantoin	LD50 Dermal	Rat	>2000 mg/kg	-
	LD50 Oral	Rat	929 mg/kg	-
	LD50 Oral	Rat	485 mg/kg	-
	LC50 Inhalation	Rat	1.1 mg/L	4 hours
	Dusts and mists			

Chronic toxicity Remarks

1) Bromochloro-5,5-dimethylhydantoin

Not available.

12. Ecological informationAquatic ecotoxicity

Product/ingredient name	Result	Species	Exposure
Bromochloro-5,5-dimethylhydantoin	Acute EC50 2 mg/l	Algae - Algae	72 hours
	Acute EC50 0.87 mg/l	Daphnia - Daphnia	48 hours
	Acute LC50 0.65 mg/l	Fish - Trout	96 hours
BPC 68968 OXIDIZING BIOCIDES	Acute EC50 0.88 mg/L	Daphnia - Ceriodaphnia dubia	48 hours
	Acute LC50 0.75 mg/L	Daphnia - Daphnia magna	48 hours
	Acute LC50 0.46 mg/L	Fish - Bluegill sunfish	96 hours
	Acute LC50 0.93 mg/L	Fish - Fathead minnow	96 hours
	Acute LC50 0.4 mg/L	Fish - Rainbow trout	96 hours
	Acute LC50 1.6 mg/L	Fish - Sheepshead minnow	96 hours


Conclusion/Summary : Not available.BiodegradabilityConclusion/Summary : Not available.**13. Disposal considerations**

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe way. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Disposal should be in accordance with applicable regional, national and local laws and regulations.







Refer to Section 7: HANDLING AND STORAGE and Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION for additional handling information and protection of employees.

14. Transport information

Regulatory information	UN number	Proper shipping name	Classes	PG*	Label	Additional information
DOT Classification	UN1479	OXIDIZING SOLID, N.O.S. (Contains: Bromochloro-5,5-dimethylhydantoin)	5.1	II		<u>Remarks</u> DOT Marine Pollutant if shipped in bulk or by vessel.

BPC 68968 OXIDIZING BIOCID

14 . Transport information

TDG Classification	UN1479	OXIDIZING SOLID, N.O.S. (Contains: Bromochloro-5,5-dimethylhydantoin)	5.1	II	 	Remarks TDG Marine Pollutant if transported on a ship in Canadian waters.
IMDG Class	UN1479	OXIDIZING SOLID, N.O.S. (Contains: Bromochloro-5,5-dimethylhydantoin)	5.1	II	 	Emergency schedules (EmS) F-A S-Q
IATA-DGR Class	UN1479	OXIDIZING SOLID, N.O.S. (Contains: Bromochloro-5,5-dimethylhydantoin)	5.1	II	 	-

PG* : Packing group

DOT Reportable Quantity Not applicable.

Marine pollutant Bromochloro-5,5-dimethylhydantoin.



North-America NAERG : 140

15 . Regulatory information

HCS Classification : Toxic material
Corrosive material
Sensitizing material

U.S. Federal regulations : **TSCA 5(a)2 final significant new use rules:** bromochloro-5,5-dimethylimidazolidine-2,4-dione
United States inventory (TSCA 8b): At least one component is not listed.
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notification: No products were found.
SARA 302/304/311/312 hazardous chemicals: No products were found.
SARA 311/312 MSDS distribution - chemical inventory - hazard identification: BPC 68968 OXIDIZING BIOCID: reactive, Immediate (acute) health hazard, Delayed (chronic) health hazard
CERCLA: Hazardous substances.: No products were found.
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: No products were found.
Clean Air Act (CAA) 112 regulated flammable substances: No products were found.
Clean Air Act (CAA) 112 regulated toxic substances: No products were found.
Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) :
Not listed

15 . Regulatory information

United States inventory (TSCA 8b) : At least one component is not listed.

Canada

WHMIS (Canada) : Class C: Oxidizing material.
Class D-2B: Material causing other toxic effects (Toxic).
Class E: Corrosive material

Canada (CEPA DSL): : At least one component is not listed.

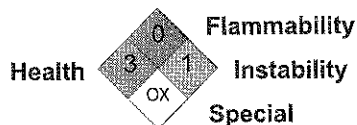
Additional information

EPA Registration #: 8622-30-10707. This product is subject to regulation under the US Federal Insecticide, Fungicide and Rodenticide ACT (FIFRA) and is therefore exempt from US Toxic Substance Control Act (TSCA) inventory listing requirements.

16 . Other information

Label requirements : CAUSES EYE AND SKIN BURNS. HARMFUL IF INHALED OR SWALLOWED. CAUSES RESPIRATORY TRACT IRRITATION. MAY CAUSE ALLERGIC SKIN REACTION.

National Fire Protection Association (U.S.A.) :



Date of printing : 11/11/2011.

☑ Indicates information that has changed from previously issued version.

Notice to reader

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