

Section 1. Identification

Product name : BPC 68950 BIOCIDE
Product code : BPC68950

Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Industrial Bactericide.

Print date : 3/16/2015.

Validation date : 3/16/2015.

Version : 1

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

Emergency telephone number (with hours of operation) : 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)

Section 2. Hazards identification

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

Classification of the substance or mixture : CORROSIVE TO METALS - Category 1
ACUTE TOXICITY: ORAL - Category 4
ACUTE TOXICITY: INHALATION - Category 4
SKIN CORROSION/IRRITATION - Category 2
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 1
SKIN SENSITIZATION - Category 1
AQUATIC HAZARD (ACUTE) - Category 1

GHS label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : May be corrosive to metals.
Harmful if swallowed or if inhaled.
Causes serious eye damage.
Causes skin irritation.
May cause an allergic skin reaction.
Very toxic to aquatic life.

Precautionary statements

Section 2. Hazards identification

- Prevention** : Wear protective gloves: > 8 hours (breakthrough time): Nitrile or Neoprene gloves. Butyl rubber gloves.. Wear eye or face protection. Keep only in original container. Use only outdoors or in a well-ventilated area. Avoid release to the environment. Avoid breathing vapor. Do not eat, drink or smoke when using this product. Wash hands thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace.
- Response** : Collect spillage. IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or physician if you feel unwell. IF SWALLOWED: Call a POISON CENTER or physician if you feel unwell. Rinse mouth. IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing. Wash contaminated clothing before reuse. If skin irritation or rash occurs: Get medical attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or physician.
- Storage** : Store in corrosive resistant container with a resistant inner liner.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Hazards not otherwise classified** : None known.

Additional information

Corrosive to aluminum and steel.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Ingredient name	%	CAS number
2,2-Dibromo-3-nitrilopropionamide	15 - 30	10222-01-2
Sodium Bromide (NaBr)	1 - 5	7647-15-6
Dibromoacetonitrile	1 - 5	3252-43-5

Section 4. First aid measures

Description of necessary first aid measures

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush the eye(s) continuously with lukewarm, gently flowing water for at least 20-60 minutes while holding the eyelid(s) open. Check for and remove any contact lenses. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash affected area with soap and mild detergent for at least 20 - 60 minutes. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Section 4. First aid measures

Ingestion : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye damage.
Inhalation : Harmful if inhaled. May give off gas, vapor or dust that is very irritating or corrosive to the respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure.
Skin contact : Causes skin irritation. May cause an allergic skin reaction.
Ingestion : Harmful if swallowed. May cause burns to mouth, throat and stomach.

Over-exposure signs/symptoms

Eye contact : pain, watering, redness
Inhalation : No specific data.
Skin contact : pain or irritation, redness, blistering may occur
Ingestion : stomach pains

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Specific treatments : No specific treatment.
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. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.
Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : In a fire or if heated, a pressure increase will occur and the container may burst. This material is very toxic to aquatic life. 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, metal oxide/oxides

Section 5. Fire-fighting measures

- Special protective actions for fire-fighters** : 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.
- 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.
- Remark** : Avoid temperatures above 70 degC (158 degF). Product may decompose and cause pressure in closed systems.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : 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. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Absorb spillage to prevent material damage. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Absorb spillage to prevent material damage. 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.) Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see Section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). 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 breathe vapor or mist. Do not ingest. Avoid release to the environment. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container. Absorb spillage to prevent material damage.
- Advice on general occupational hygiene** : 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. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Section 7. Handling and storage

Conditions for safe storage, including any incompatibilities : Do not store above the following temperature: 35°C (95°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store in corrosive resistant container with a resistant inner liner. Store locked up. 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.

Section 8. Exposure controls/personal protection

Control parameters

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.											

Consult local authorities for acceptable exposure limits.

Only components of this product with established exposure limits appear in the box above.

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.

Appropriate engineering controls : 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.

Individual protection measures

- 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. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Wear chemical safety goggles. When transferring material wear face-shield in addition to chemical safety goggles. If inhalation hazards exist, a full-face respirator may be required instead.
- Hand protection** : Chemical-resistant gloves: Nitrile or Neoprene gloves. Butyl rubber gloves.
- Skin protection** : Wear long sleeves and chemical resistant apron to prevent repeated or prolonged skin contact.
- Respiratory protection** : If a risk assessment indicates it is necessary, use a properly fitted, air purifying or supplied air respirator complying with an approved standard. 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.

Section 9. Physical and chemical properties

Appearance

- Physical state** : Liquid.
- Color** : Colorless to brown.
- Odor** : Odorless to Mild. [Slight]
- Odor threshold** : Not available.
- pH** : 2.6 to 2.9

Section 9. Physical and chemical properties

	: Neat - without dilution.
Melting/freezing point	: -4°C (24.8°F)
Boiling point	: Decomposition temperature: >70°C (>158°F)
Initial Boiling Point	: Not available.
Flash point	: Closed cup: >93.4°C (>200.1°F) [SFCC] Open cup: >182°C (>359.6°F) [Cleveland.]
Burning time	: Not applicable.
Burning rate	: Not applicable.
Evaporation rate	: Not available.
Flammability (solid, gas)	: Slightly flammable in the presence of the following materials or conditions: open flames, sparks and static discharge and heat.
Lower and upper explosive (flammable) limits	: Not available.
Vapor pressure	: 1.9 kPa (14.4 mm Hg) @ 21.1°C (Calculated Value for all Components.)
Vapor density	: >1 [Air = 1]
Relative density	: 1.2496 (15.6°C)
Density	: 10.41 (lbs/gal)
Solubility in water	: Soluble
Partition coefficient: n-octanol/water	: Not available.
Auto-ignition temperature	: Not available.
Decomposition temperature	: >70°C (>158°F)
Viscosity	: Dynamic (20°C): 185 cP
VOC	: Not available.
Pour Point	: Not available.

Section 10. Stability and reactivity

Reactivity	: No specific test data related to reactivity available for this product or its ingredients.
Chemical stability	: The product is stable.
Possibility of hazardous reactions	: Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	: No specific data.
Incompatible materials	: Reactive or incompatible with the following materials: oxidizing materials, metals and alkalis. Corrosive to mild steel and aluminum.
Hazardous decomposition products	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
2, 2-Dibromo-3-nitrilopropionamide Sodium Bromide (NaBr) Dibromoacetone nitrile BPC 68950 BIOCIDES	LC50 Inhalation Dusts and mists	Rat - Female	0.24 mg/l	4 hours
	LC50 Inhalation Dusts and mists	Rat - Male	0.32 mg/l	4 hours
	LD50 Dermal	Rabbit	>2000 mg/kg	-
	LD50 Oral	Female rat	178 mg/kg	-
	LD50 Oral	Male rat	235 mg/kg	-
	LD50 Oral	Mouse	7000 mg/kg	-
	LD50 Oral	Rat	2500 mg/kg	-
	LD50 Oral	Rat	3500 mg/kg	-
	LD50 Oral	Rat	245 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat - Female	1.25 mg/l	4 hours
LC50 Inhalation Dusts and mists	Rat - Male	1.4 mg/l	4 hours	
LD50 Dermal	Rabbit	>2000 mg/kg	-	
LD50 Oral	Rat	510 mg/kg	-	

Irritation/Corrosion

No applicable toxicity data

Sensitization

No applicable toxicity data

Mutagenicity

No applicable toxicity data

Carcinogenicity

Product/ingredient name	OSHA	IARC	NTP
Dibromoacetone nitrile	-	2B	-

Reproductive toxicity

No applicable toxicity data

Teratogenicity

No applicable toxicity data

Specific target organ toxicity (single exposure)

Name	Category	Route of exposure	Target organs
Sodium Bromide (NaBr)	Category 3	Not applicable.	Respiratory tract irritation

Specific target organ toxicity (repeated exposure)

Not applicable.

Aspiration hazard

Not available.

Information on the likely routes of exposure : Routes of entry anticipated: Dermal, Inhalation.

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Section 11. Toxicological information

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

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

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

Not available.

Additional information

Eye Irritation Score = 4 (Extreme Irritant/Corrosive). Skin Irritation Score = 3 (Strong Irritant).

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
2, 2-Dibromo-3-nitrilopropionamide	Acute EC50 0.86 ppm Fresh water	Daphnia - Daphnia magna	48 hours
Sodium Bromide (NaBr)	Acute LC50 0.55 ppm Fresh water	Fish - Pimephales promelas	96 hours
	Chronic NOEC 0.47 ppm	Fish - Oncorhynchus mykiss	85 days
	Acute EC50 8000000 µg/l Fresh water	Algae - Scenedesmus subspicatus - Exponential growth phase	72 hours
	Acute EC50 6000000 µg/l Fresh water	Algae - Scenedesmus subspicatus - Exponential growth phase	96 hours
	Acute EC50 1000 ppm Fresh water	Daphnia - Daphnia magna	48 hours
	Acute EC50 44000 µg/l Fresh water	Fish - Poecilia reticulata	96 hours
	Chronic NOEC 2500000 µg/l Fresh water	Algae - Scenedesmus pannonicus - Exponential growth phase	72 hours
	Chronic NOEC 7.5 mg/l Fresh water	Daphnia - Daphnia magna - Neonate	21 days
	Chronic NOEC 10000 µg/l Fresh water	Fish - Poecilia reticulata - Juvenile (Fledgling, Hatchling, Weanling)	4 weeks
BPC 68950 BIOCIDES	Acute EC50 0.86 mg/l	Daphnia	48 hours
	Acute LC50 1.78 mg/l	Daphnia	48 hours
	Acute LC50 0.72 mg/l	Daphnia	96 hours
	Acute LC50 3.6 mg/l	Fish	96 hours
	Acute LC50 1.1 mg/l	Fish	96 hours

Conclusion/Summary : Toxic to aquatic organisms.

Persistence and degradability

Section 12. Ecological information

Conclusion/Summary : 2,2-Dibromo-3-nitropropionamide is rapidly biodegradable by abiotic means.

Other adverse effects : No known significant effects or critical hazards.





Additional information

This pesticide is toxic to fish and aquatic organisms. Do not discharge effluent containing this product into lakes, streams, ponds or estuaries, oceans or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) Permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
UN number	UN3265	UN3265	UN3265	UN3265
UN proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N. O.S. (Contains: 2, 2-Dibromo-3-nitropropionamide)	CORROSIVE LIQUID, ACIDIC, ORGANIC, N. O.S. (Contains: 2, 2-Dibromo-3-nitropropionamide)	CORROSIVE LIQUID, ACIDIC, ORGANIC, N. O.S. (Contains: 2, 2-Dibromo-3-nitropropionamide)	CORROSIVE LIQUID, ACIDIC, ORGANIC, N. O.S. (Contains: 2, 2-Dibromo-3-nitropropionamide)
Transport hazard class(es)	8 	8 	8 	8 
Packing group	III	III	III	III
Environmental hazards	Yes.	Yes.	Yes.	No.
Additional information	-	-	Emergency schedules (EmS) F-A S-B	-

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 14. Transport information

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code : Not available.

DOT Reportable Quantity : Not applicable.

Marine pollutant : 2,2-Dibromo-3-nitrilopropionamide

North-America NAERG : 153

Section 15. Regulatory information

U.S. Federal regulations : TSCA 12(b) one-time export: No products were found.
 TSCA 12(b) annual export notification: No products were found.
 United States inventory (TSCA 8b): All components are listed or exempted.
 Clean Water Act (CWA) 307: No products were found.
 Clean Water Act (CWA) 311: No products were found.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not listed

SARA 302/304 : No products were found.

SARA 311/312

Classification : Reactive
 Immediate (acute) health hazard

SARA 313

Supplier notification : No products were found.

Canada

Canada (CEPA DSL): : At least one component is not listed in DSL but all such components are listed in NDSL.

Additional information

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.

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals.

Following is the hazard information as required on the pesticide label:

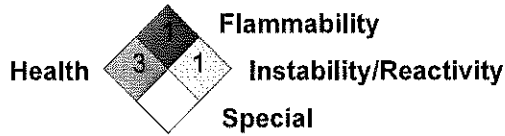
DANGER

Corrosive: Causes irreversible eye damage. May be fatal if inhaled or swallowed. Causes skin irritation. Do not get in eyes, on skin or on clothing. Do not breathe spray mist. When loading or handling wear protective eyewear (goggles or face shield with safety glasses), long sleeved shirt and long pants, socks, shoes, chemically resistant gloves and a NIOSH approved respirator. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco. Remove and wash contaminated clothing, separated from other laundry, before reuse.

This pesticide is toxic to fish and aquatic organisms.

Section 16. Other information

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



History

Date of printing : 3/16/2015.

▣ Indicates information that has changed from previously issued version.

Notice to reader

NOTE: The information on this SDS is based on data which is considered to be accurate. Baker Hughes, however, makes no guarantees or warranty, either expressed or implied of the accuracy or completeness of this information.

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of this product.

This SDS was prepared and is to be used for this product. If the product is used as a component in another product, this SDS information may not be applicable.