

MATERIAL SAFETY DATA SHEET

Product Trade Name: **BE-3S BACTERICIDE**

Revision Date: 04-Jan-2011

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: BE-3S BACTERICIDE
Synonyms: None
Chemical Family: Blend
Application: Biocide

Manufacturer/Supplier: Halliburton Energy Services
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 Duncan, Oklahoma 73536-0431
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2. COMPOSITION/INFORMATION ON INGREDIENTS

Substances	CAS Number	PERCENT	ACGIH TLV-TWA	OSHA PEL-TWA
2-Monobromo-3-nitropropionamide	1113-55-9	1 - 5%	Not applicable	Not applicable
2,2 Dibromo-3-nitropropionamide	10222-01-2	60 - 100%	Not applicable	Not applicable

3. HAZARDS IDENTIFICATION

Hazard Overview May cause eye burns. May cause skin and respiratory irritation. May be fatal if swallowed. May cause allergic skin reaction.

4. FIRST AID MEASURES

Inhalation If inhaled, remove to fresh air. If not breathing give artificial respiration, preferably mouth-to-mouth. If breathing is difficult give oxygen. Get medical attention.

Skin In case of contact, immediately flush skin with plenty of soap and water for at least 15 minutes. Get medical attention. Get medical attention if irritation persists. Remove contaminated clothing and launder before reuse.

Eyes Immediately flush eyes with large amounts of water for at least 20 minutes. Seek prompt medical attention.

Ingestion If swallowed, call a physician immediately. Only induce vomiting at the instruction of a physician. Never give anything by mouth to an unconscious person. Rinse mouth with water many times. Get immediate medical attention.

Notes to Physician Not Applicable

5. FIRE FIGHTING MEASURES

Flash Point/Range (F):	> 212
Flash Point/Range (C):	> 100
Flash Point Method:	CC
Autoignition Temperature (F):	Not Determined
Autoignition Temperature (C):	Not Determined
Flammability Limits in Air - Lower (%):	Not Determined
Flammability Limits in Air - Upper (%):	Not Determined

Fire Extinguishing Media Carbon Dioxide, Dry Chemicals, Foam. Use water spray to cool fire exposed surfaces.

Special Exposure Hazards Decomposition in fire may produce toxic gases. Organic dust in the presence of an ignition source can be explosive in high concentrations. Good housekeeping practices are required to minimize this potential.

Special Protective Equipment for Fire-Fighters Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

NFPA Ratings: Health 3, Flammability 0, Reactivity 0
HMIS Ratings: Health 3, Flammability 0, Physical Hazard 0

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures Use appropriate protective equipment.

Environmental Precautionary Measures Prevent from entering sewers, waterways, or low areas.

Procedure for Cleaning / Absorption Scoop up and remove.

7. HANDLING AND STORAGE

Handling Precautions Avoid contact with eyes, skin, or clothing. Avoid creating or inhaling dust. Wear appropriate respirator when opening containers. Wash hands after use. Launder contaminated clothing before reuse.

Storage Information Keep container closed when not in use. Store in a cool, dry location. Store in a well ventilated area. Store away from oxidizers. Store away from reducing agents. Store away from direct sunlight.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls Use in a well ventilated area. Local exhaust ventilation should be used in areas without good cross ventilation.

Respiratory Protection Organic vapor respirator with a dust/mist filter.

Hand Protection Impervious rubber gloves. Polyvinylchloride gloves. Nitrile gloves. Neoprene gloves.

Skin Protection Rubber apron. Long-sleeve shirt, long pants, and shoes plus socks.

Eye Protection Dust proof goggles.

Other Precautions Eyewash fountains and safety showers must be easily accessible. Rubber boots

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Powder

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Color:	White to yellow
Odor:	Slight Pungent
pH:	4.7-4.9
Specific Gravity @ 20 C (Water=1):	2.204-2.216
Density @ 20 C (lbs./gallon):	19.73-19.83
Bulk Density @ 20 C (lbs/ft3):	10.5
Boiling Point/Range (F):	Not Determined
Boiling Point/Range (C):	Not Determined
Freezing Point/Range (F):	Not Determined
Freezing Point/Range (C):	Not Determined
Vapor Pressure @ 20 C (mmHg):	Not Determined
Vapor Density (Air=1):	.934
Percent Volatiles:	Not Determined
Evaporation Rate (Butyl Acetate=1):	Not Determined
Solubility in Water (g/100ml):	Partially soluble
Solubility in Solvents (g/100ml):	Not Determined
VOCs (lbs./gallon):	Not Determined
Viscosity, Dynamic @ 20 C (centipoise):	Not Determined
Viscosity, Kinematic @ 20 C (centistrokes):	Not Determined
Partition Coefficient/n-Octanol/Water:	Not Determined
Molecular Weight (g/mole):	Not Determined

10. STABILITY AND REACTIVITY

Stability Data:	Stable
Hazardous Polymerization:	Will Not Occur
Conditions to Avoid	Keep away from heat, sparks and flame.
Incompatibility (Materials to Avoid)	Strong oxidizers. Reducing agents.
Hazardous Decomposition Products	Oxides of nitrogen. Bromine. Hydrogen bromide. Methyl and ethyl bromide. Cyanogen bromide. Carbon monoxide and carbon dioxide.
Additional Guidelines	Not Applicable

11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure	Eye or skin contact, inhalation.
Inhalation	Causes severe respiratory irritation. May be harmful if inhaled.
Skin Contact	Causes severe skin irritation. This product contains ingredients which may produce an allergic skin reaction. It should be treated as a skin sensitizer.
Eye Contact	Causes severe eye irritation May cause eye burns. May cause permanent eye damage.
Ingestion	May be fatal if swallowed.
Aggravated Medical Conditions	Skin disorders. Respiratory disorders. Eye ailments.
Chronic Effects/Carcinogenicity	No data available to indicate product or components present at greater than 1% are chronic health hazards.
Other Information	None known.
Toxicity Tests	
Oral Toxicity:	LD50: 235 mg/kg, 178 mg/kg (rat) LD50: 201 mg/kg (rat)

Dermal Toxicity:	LD50: > 2000 mg/kg (Rabbit)
Inhalation Toxicity:	LC50: 0.32 mg/l/4 hr. (Rat)
Primary Irritation Effect:	Not determined
Carcinogenicity	Not determined
Genotoxicity:	Not determined
Reproductive / Developmental Toxicity:	Not determined

12. ECOLOGICAL INFORMATION

Mobility (Water/Soil/Air)	Not determined
Persistence/Degradability	Resistant
Bio-accumulation	Not determined

Ecotoxicological Information

Acute Fish Toxicity:	May be toxic to aquatic life. TLM96: 2.3 mg/l (Oncorhynchus mykiss) TLM96: 3.4 mg/l (Cyprinodon variegatus) TLM96: 2.3 mg/l (Lepomis macrochirus)
Acute Crustaceans Toxicity:	TLM: 0.72 ppm (Mysidopsis bahia) LC50: 0.37 ppm (Crassostrea virginica)
Acute Algae Toxicity:	Not determined

Chemical Fate Information	Not determined
Other Information	Not applicable

13. DISPOSAL CONSIDERATIONS

Disposal Method	Disposal should be made in accordance with federal, state, and local regulations.
Contaminated Packaging	Follow all applicable national or local regulations.

14. TRANSPORT INFORMATION

Land Transportation

DOT

UN2811, Toxic Solid, Organic, N.O.S.(2, 2-Dibromo-3-Nitrilopropionamide), 6.1, II, Marine Pollutant
NAERG 154

Canadian TDG

Toxic Solid, Organic, N.O.S.(2, 2-Dibromo-3-Nitrilopropionamide), 6.1, UN2811, II, Marine Pollutant

ADR

UN2811, Toxic Solid, Organic, N.O.S.(2, 2-Dibromo-3-Nitrilopropionamide), 6.1, II, Marine Pollutant

Air Transportation

ICAO/IATA

UN2811, Toxic Solid, Organic, N.O.S., 6.1, II
(2, 2-Dibromo-3-Nitrilopropionamide) , Marine Pollutant

Sea Transportation

IMDG

UN2811, Toxic Solid, Organic, N.O.S.(2, 2-Dibromo-3-Nitrilopropionamide), 6.1, II
, Marine Pollutant
EmS F-A, S-A

Other Transportation Information

Labels: Toxic

15. REGULATORY INFORMATION

US Regulations

US TSCA Inventory Product contains one or more components not listed on the inventory.

EPA SARA Title III Extremely Hazardous Substances Not applicable

EPA SARA (311,312) Hazard Class Acute Health Hazard

EPA SARA (313) Chemicals 2,2-Dibromo-3-nitrilopropionamide//10222-01-2

EPA CERCLA/Superfund Reportable Spill Quantity Not applicable.

EPA RCRA Hazardous Waste Classification If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.

Federal Insecticide, Fungicide and Rodenticide Act: Label in accordance with Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) requirements.

California Proposition 65 All components listed do not apply to the California Proposition 65 Regulation.

MA Right-to-Know Law Does not apply.

NJ Right-to-Know Law Does not apply.

PA Right-to-Know Law Does not apply.

Canadian Regulations

Canadian DSL Inventory Product contains one or more components not listed on the inventory.

WHMIS Hazard Class
D1A Very Toxic Materials
D2B Toxic Materials
D1B Toxic Materials

16. OTHER INFORMATION

The following sections have been revised since the last issue of this MSDS

Not applicable

Additional Information

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Material Safety Data Sheet for this or other Halliburton products, contact Chemical Compliance at 1-580-251-4335.

Disclaimer Statement

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*****END OF MSDS*****