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Material Safety Data Sheet

BIO CLEAR® 2000

HEALTH	3
FLAMMABILITY	1
PHYSICAL HAZARD	1
PERSONAL PROTECTION	

1. Product and Company Identification

Material name	BIO CLEAR® 2000
Patent Number	Not available
Revision date	June-27-2011
Version No.	5
CAS #	Mixture
Product use	BIOCIDES
Manufacturer information	Weatherford Engineered Chemistry 100 Leetsdale Industrial Drive Suite A Leetsdale, PA 1505 CHEMTREC 1-800-424-9300/703-527-3887
Emergency	CHEMTREC 1-800-424-9300/703-527-3887
Supplier information	WEATHERFORD® ENGINEERED CHEMISTRY® 515 Post Oak Blvd. Houston, TX 77027 US
Supplier emergency telephone number(s)	Chemtrec 800-424-9300 Int'l 703-527-3887

2. Hazards Identification

Emergency overview	DANGER Corrosive material. Contact with this product may cause severe eye damage. MAY BE FATAL IF ABSORBED THROUGH SKIN. May cause sensitization by skin contact. Highly toxic to fish and/or other aquatic organisms. This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
OSHA regulatory status	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
Potential health effects	
Eyes	May cause chemical burns. May cause irritation with prolonged contact. Do not get this material in contact with eyes.
Skin	Prolonged contact may cause severe skin irritation with local redness and discomfort. Repeated exposure may cause irritation, even a burn. May cause sensitization of susceptible persons. Do not get this material in contact with skin.
Inhalation	Excessive exposure may cause severe irritation to upper respiratory tract (nose and throat) and lungs. Do not breathe dust/fume/gas/mist/vapors/spray.



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Ingestion

Harmful if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause serious injury, even death. Do not ingest.

Potential environmental effects

May cause long-term adverse effects in the environment.

3. Composition / Information on Ingredients

Components	CAS #	Percent
2,2-dibromo-3-nitrilopropionamide	10222-01-2	15 - 40

4. First Aid Measures

First aid procedures

Eye contact

Wash immediately and continuously with flowing water for at least 30 minutes. Remove contact lenses after the first 5 minutes and continue washing. Obtain prompt medical consultation, preferably from an ophthalmologist.

Skin contact

Remove contaminated clothing. Wash skin with soap and plenty of water for 15-20 minutes. Call a physician or Poison Control Center immediately. Wash clothing separately before reuse.

Inhalation

Remove to fresh air. Do not use mouth-to-mouth method if victim inhaled the substance. If not breathing, give artificial respiration or give oxygen by trained personnel. Get medical attention immediately.

Ingestion

If material is ingested, immediately contact a physician or poison control center. Do not induce vomiting without advice from poison control center. Drink 1 or 2 glasses of water.

Notes to physician

If the product is ingested, probable mucosal damage may contraindicate the use of gastric lavage. Treat the affected person appropriately. In case of shortness of breath, give oxygen. Keep victim warm. Symptoms may be delayed.

General advice

In case of shortness of breath, give oxygen. Keep victim warm. Call a physician if symptoms develop or persist. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire Fighting Measures

Flammable properties

Containers may explode when heated. Runoff to sewer may cause fire or explosion hazard.

Extinguishing media

Suitable extinguishing media

Water. Dry chemical, CO2, water spray or regular foam.

Unsuitable extinguishing media

Do not use a solid water stream as it may scatter and spread fire.

Protection of firefighters

Specific hazards arising from the chemical

Fire may produce irritating, corrosive and/or toxic gases.



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Protective equipment and precautions for firefighters

In the event of fire and/or explosion do not breathe fumes. Wear full protective clothing, including helmet, self-contained positive pressure or pressure demand breathing apparatus, protective clothing and face mask. If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also consider initial evacuation for 800 meters (1/2 mile) in all directions. ALWAYS stay away from tanks engulfed in flame. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles. Withdraw immediately in case of rising sound from venting safety devices or any discoloration of tanks due to fire. Move containers from fire area if you can do it without risk. For massive fire, use unmanned hose holders or monitor nozzles; if this is impossible, withdraw from area and let fire burn. Use water spray to cool unopened containers. Cool containers with flooding quantities of water until well after fire is out.

6. Accidental Release Measures

Personal precautions

Fully encapsulating, vapor protective clothing should be worn for spills and leaks with no fire. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering. Keep unnecessary personnel away. Stay upwind. Keep out of low areas.

Methods for containment

Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Prevent entry into waterways, sewers, basements or confined areas.

Methods for cleaning up

When handling or dealing with spills, wear protective clothing as indicated in the Personal Protective Equipment section. Cover wet spills with 10% sodium bicarbonate solution, water and then an inert absorbent before sweeping up and disposing as described for pesticide disposal. If drum contents are contaminated or decomposing, isolate unsealed drum in the open or in a well-ventilated area. Flood with 10% sodium bicarbonate solution and large volume of water, if necessary.

7. Handling and Storage

Handling

Do not handle or store near an open flame, heat or other sources of ignition. All equipment used when handling the product must be grounded. Do not breathe vapors or spray mist. Wear self-contained breathing apparatus and protective suit. Use only with adequate ventilation. Avoid release to the environment. Wash thoroughly after handling.

Storage

Keep locked-up. The pressure in sealed containers can increase under the influence of heat. Keep container tightly closed. This material can accumulate static charge which may cause spark and become an ignition source. Prevent electrostatic charge build-up by using common bonding and grounding techniques. Keep in a well-ventilated place. Keep out of the reach of children. Keep away from heat and flame.

8. Exposure Controls / Personal Protection

Engineering controls

Ensure adequate ventilation, especially in confined areas.

Personal protective equipment

Eye / face protection

Wear chemical goggles. Wear safety glasses with side shields. Face-shield.

Skin protection

Wear chemical protective equipment that is specifically recommended by the manufacturer. Wear appropriate chemical resistant clothing. Closed-toe shoes recommended. apron Boots

General hygiene considerations

When using do not smoke. Keep away from food and drink. Handle in accordance with good industrial hygiene and safety practice.





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9. Physical & Chemical Properties

Appearance	Clear
Color	Colorless - yellow
Odor	odourless - mild
Odor threshold	Not available
Physical state	Liquid.
Form	Liquid.
pH	3 - 4
Melting point	not applicable
Freezing point	< -30 °F (< -34.4 °C)
Boiling point	> 158 °F (> 70 °C)
Flash point	> 359.6 °F (> 181.5 °C)
Evaporation rate	Not available
Flammability	Not available.
Flammability limits in air, upper, % by volume	Not available
Flammability limits in air, lower, % by volume	Not available
Vapor pressure	18.9 mm Hg @ 25 C estimated
Vapor density	Not available
Specific gravity	1.18 - 1.24
Relative density	1.2099 g/cm3 estimated
Solubility (water)	Not available
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
VOC	50.5 % estimated
Viscosity	20 cps

10. Chemical Stability & Reactivity Information

Chemical stability	Stable at normal conditions.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Avoid Contact with: Oxidizers, Strong bases and metals like Aluminium.
Possibility of hazardous reactions	Hazardous polymerization does not occur.

11. Toxicological Information

Acute effects	Acute LD50: > 2000 mg/kg, Rat, Oral Acute LD50: 510 mg/kg, Rat, Dermal Acute LC50: 1.25 - 1.4 mg/l/4h, Rat, Inhalation
Sensitization	Not expected to be hazardous by OSHA criteria.



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Chronic effects	Excessive exposure may increase the blood and tissue levels of bromine. Observations in animals include kidney effects following repeated ingestion of active ingredient, but no evidence of systemic toxicity following repeated dermal exposure at maximum attainable doses.
Carcinogenicity	Not expected to be hazardous by OSHA criteria.
Neurological effects	Not expected to be hazardous by OSHA criteria.

12. Ecological Information

Ecotoxicity	Components of this product have been identified as having potential environmental concerns. LC50 3.6 mg/l estimated, Rainbow Trout, 96.00 Hours, EC50 2.5 mg/l estimated, Daphnia, 48.00 Hours,
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13. Disposal Considerations

Disposal instructions	Do not allow this material to drain into sewers/water supplies. This product, in its present state, when discarded or disposed of, is not a hazardous waste according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria for hazardous waste. Dispose in accordance with all applicable regulations.
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14. Transport Information

Department of Transportation (DOT) Requirements

Not regulated as hazardous goods.

Department of Transportation (DOT) Requirements

Bulk

Not regulated as hazardous goods.

Department of Transportation (DOT) Requirements

Not regulated as dangerous goods.

Canadian Transportation of Dangerous Goods (TDG) Requirements

Basic shipping requirements:

Proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (2,2-DIBROMO-3-NITRILOPROPIONAMIDE)
Hazard class	8
UN number	UN3265
Packing group	III
Additional information:	
Special provisions	16





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IMDG

Basic shipping requirements:

Proper shipping name	CORROSIVE LIQUID, ACIDIC, ORGANIC, N.O.S. (2,2-DIBROMO-3-NITRILOPROPIONAMIDE)
Hazard class	8
Subsidiary hazard class	•
UN number	3265
Packing group	III



IATA

Basic shipping requirements:

Proper shipping name	Corrosive liquid, acidic, organic, n.o.s. (2,2-DIBROMO-3-NITRILOPROPIONAMIDE)
Hazard class	8
UN number	3265
Packing group	III



15. Regulatory Information

Labelling

Contains 2,2-dibromo-3-nitrilopropionamide

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

CERCLA/SARA Hazardous Substances - Not applicable.

U.S. - FDA - Direct Food Additives

2,2-dibromo-3-nitrilopropionamide 10222-01-2 21 CFR 173.320

Occupational Safety and Health Administration (OSHA)

29 CFR 1910.1200 hazardous chemical Yes

CERCLA (Superfund) reportable quantity

None

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
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Section 302 extremely hazardous substance No

Section 311 hazardous chemical Yes



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Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	Yes
China	Inventory of Existing Chemical Substances in China (IECSC)	Yes
Europe	European Inventory of New and Existing Chemicals (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

State regulations

This product does not contain a chemical known to the State of California to cause cancer, birth defects or other reproductive harm.

16. Other Information

HMIS® ratings

Health: 3
Flammability: 1
Physical hazard: 1

NFPA ratings

Health: 3
Flammability: 1
Instability: 1

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Disclaimer

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MSDS sections updated

Product and Company Identification: Alternate Trade Names
Exposure Controls / Personal Protection: Skin and body protection
Physical & Chemical Properties: Physical & Chemical Properties



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