



ISSUE DATE: 09-AUG-2001

MATERIAL SAFETY DATA SHEET

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HMIS RATINGS

(See Section 16 for
additional information)

HEALTH: 3

FLAMMABILITY: 1

REACTIVITY: 0

1 PRODUCT IDENTIFICATION

PRODUCT NAME:

BIOMATE MBC881

PRODUCT APPLICATION AREA:

BIOCIDE**2 COMPOSITION / INFORMATION ON INGREDIENTS**

Information for specific product ingredients as required by the U.S. OSHA HAZARD COMMUNICATION STANDARD is listed. Refer to additional sections of this MSDS for our assessment of the potential hazards of this formulation.

HAZARDOUS INGREDIENTS:

CAS#	CHEMICAL NAME
10222-01-2	DBNPA (2,2-DIBROMO-3-NITRILOPROPIONAMIDE) Corrosive (eyes); highly toxic (by inhalation); toxic (by ingestion); potential sensitizer
7647-15-6	SODIUM BROMIDE Irritant

No component is considered to be a carcinogen by the National Toxicology Program, the International Agency for Research on Cancer, or the Occupational Safety and Health Administration at OSHA thresholds for carcinogens.

3 HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

DANGER

May cause moderate irritation to the skin. Potential skin sensitizer. Corrosive to the eyes. Mists/aerosols may cause irritation to upper respiratory tract.

DOT hazard: Corrosive to steel
Emergency Response Guide #153
Odor: Amine; Appearance: Yellow, Liquid

Fire fighters should wear positive pressure self-contained breathing apparatus (full face-piece type). Proper fire-extinguishing media: Flood with water. Use of CO2 or foam may not be effective.

POTENTIAL HEALTH EFFECTS**ACUTE SKIN EFFECTS:**

Primary route of exposure; May cause moderate irritation to the skin. Potential skin sensitizer.

ACUTE EYE EFFECTS:

Corrosive to the eyes.

ACUTE RESPIRATORY EFFECTS:

Mists/aerosols may cause irritation to upper respiratory tract.

INGESTION EFFECTS:

May cause gastrointestinal irritation. Very large doses may cause diarrhea, depression, colic and death. May also cause severe allergic reactions in sensitive individuals.

TARGET ORGANS:

Repeated skin contact may cause sensitization.

MEDICAL CONDITIONS AGGRAVATED:

Not known.

SYMPTOMS OF EXPOSURE:

Causes redness or itching of skin, possibly leading to burns (dependent on the length of exposure).

4 FIRST AID MEASURES**SKIN CONTACT:**

Wash thoroughly with soap and water. Remove contaminated clothing. Thoroughly wash clothing before reuse. Get medical attention if irritation develops or persists.

EYE CONTACT:

URGENT! Immediately flush eyes with plenty of low-pressure water for at least 20 minutes while removing contact lenses. Hold eyelids apart. Get immediate medical attention.

INHALATION:

Remove to fresh air. If breathing is difficult, give oxygen. If breathing has stopped, give artificial respiration. Get immediate medical attention.

INGESTION:

Do not feed anything by mouth to an unconscious or convulsive victim. Do not induce vomiting. Immediately contact physician.

Dilute contents of stomach using 3-4 glasses milk or water.

NOTES TO PHYSICIANS:

No special instructions

5 FIRE FIGHTING MEASURES

FIRE FIGHTING INSTRUCTIONS:

Fire fighters should wear positive pressure self-contained breathing apparatus (full face-piece type).

EXTINGUISHING MEDIA:

Flood with water. Use of CO2 or foam may not be effective.

HAZARDOUS DECOMPOSITION PRODUCTS:

Thermal decomposition (destructive fires) yields elemental oxides.

FLASH POINT:

> 200F > 93C SETA(CC)

MISCELLANEOUS:

Corrosive to steel

UN3265; Emergency Response Guide #153

6 ACCIDENTAL RELEASE MEASURES

PROTECTION AND SPILL CONTAINMENT:

Ventilate area. Use specified protective equipment. Contain and absorb on absorbent material. Place in waste disposal container. Flush area with water. Spread sand/grit. Neutralize with soda ash.

DISPOSAL INSTRUCTIONS:

Water contaminated with this product may be sent to a sanitary sewer treatment facility, in accordance with any local agreement, a permitted waste treatment facility or discharged under a permit. Product as is - Dispose of in approved pesticide facility or according to label instructions.

7 HANDLING & STORAGE

HANDLING:

Corrosive to eyes.

STORAGE:

Keep containers closed when not in use. Avoid excessive heat and contamination. Store only in vented containers.

8 EXPOSURE CONTROLS / PERSONAL PROTECTION

EXPOSURE LIMITS**CHEMICAL NAME**

DBNPA (2,2-DIBROMO-3-NITRILOPROPIONAMIDE)

PEL (OSHA): NOT DETERMINED

TLV (ACGIH): NOT DETERMINED

MISC: Note- manufacturer's recommended exposure limit: 2 mg/m3(ceiling)-for powder.

SODIUM BROMIDE

PEL (OSHA): NOT DETERMINED

TLV (ACGIH): NOT DETERMINED

ENGINEERING CONTROLS:

Adequate ventilation to maintain air contaminants below exposure

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limits.

PERSONAL PROTECTIVE EQUIPMENT:

Use protective equipment in accordance with 29CFR 1910 Subpart I

RESPIRATORY PROTECTION:

A RESPIRATORY PROTECTION PROGRAM THAT MEETS OSHA'S 29 CFR 1910.134 AND ANSI Z88.2 REQUIREMENTS MUST BE FOLLOWED WHENEVER WORKPLACE CONDITIONS WARRANT A RESPIRATOR'S USE.
USE AIR PURIFYING RESPIRATORS WITHIN USE LIMITATIONS ASSOCIATED WITH THE EQUIPMENT OR ELSE USE SUPPLIED AIR-RESPIRATORS.
If air-purifying respirator use is appropriate, use a respirator with organic vapor/acid gas cartridges and dust/mist prefilters.

SKIN PROTECTION:

butyl gloves-- Wash off after each use. Replace as necessary.

EYE PROTECTION:

splash proof chemical goggles

9 PHYSICAL & CHEMICAL PROPERTIES

Specific Grav. (70F,21C)	1.155	Vapor Pressure (mmHG)	24.0
Freeze Point (F)	< -30	Vapor Density (air=1)	< 1.00
Freeze Point (C)	< -34		
Viscosity(cps 70F,21C)	62	% Solubility (water)	100.0
Odor		Amine	
Appearance		Yellow	
Physical State		Liquid	
Flash Point	SETA(CC)	> 200F > 93C	
pH As Is (approx.)		2.5	
Evaporation Rate (Water=1)		ND	

NA = not applicable ND = not determined

10 STABILITY & REACTIVITY

STABILITY:

Stable under normal storage conditions.

HAZARDOUS POLYMERIZATION:

Will not occur.

INCOMPATIBILITIES:

Above 120 deg. C bromine, cyanogen bromide and dibromoacetonitrile are formed. May react with bases or strong oxidizers.

DECOMPOSITION PRODUCTS:

Thermal decomposition (destructive fires) yields elemental oxides.

BETZDEARBORN INTERNAL PUMPOUT/CLEANOUT CATEGORIES:

"B"

11 TOXICOLOGICAL INFORMATION

Oral LD50 RAT:	3,115 mg/kg
Dermal LD50 RABBIT:	>2,000 mg/kg
Inhalation LC50 RAT:	>2,000 ppm/6hr
Skin Sensitization G.PIG:	POSITIVE
NOTE - 5% Solution of active ingredient:	7/10 sensitized
Skin Sensitization HUMAN:	NEGATIVE
NOTE - 0/26 Positive from 1,250 ppm aqueous DENPA (active)	
Ames Assay BACTERIA:	NEGATIVE

Non-Ames Mutagenicity : **NEGATIVE**
NOTE - CHO/HGPRT; Micronucleus Test; Rat Hepatocyte unscheduled DNA repair

12 ECOLOGICAL INFORMATION

AQUATIC TOXICOLOGY

Rainbow Trout 96 Hour Static Acute Bioassay

LC50= 9.2 mg/L
No Effect Level= 7.2 mg/L

Fathead Minnow 96 Hour Static Renewal Bioassay

LC50= 35 mg/L
No Effect Level= 12.5 mg/L

Daphnia magna 21 Day Flow-Thru Life-Cycle Chronic Bioassay

Reproduction EC50= 2.6 mg/L
Reproduction NOEL= 1.4 mg/L

Daphnia magna 48 Hour Static Renewal Bioassay

LC50= 15.6 mg/L
No Effect Level= 10.6 mg/L

Bluegill Sunfish 96 Hour Static Acute Bioassay

LC50= 26 mg/L

Sheepshead Minnow 96 Hour Static Acute Bioassay

LC50= 28 mg/L

BIODEGRADATION

COD (mg/gm):	990
TOC (mg/gm):	340
BOD-5 (mg/gm):	0
BOD-28 (mg/gm):	160

13 DISPOSAL CONSIDERATIONS

If this undiluted product is discarded as a waste, the US RCRA hazardous waste identification number is :
D002=Corrosive(steel).

Please be advised; however, that state and local requirements for waste disposal may be more restrictive or otherwise different from federal regulations. Consult state and local regulations regarding the proper disposal of this material.

14 TRANSPORT INFORMATION

DOT HAZARD:	Corrosive to steel
UN / NA NUMBER:	UN3265
DOT EMERGENCY RESPONSE GUIDE #:	153

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15 REGULATORY INFORMATION

TSCA:

This is an EPA registered biocide and is exempt from TSCA inventory requirements.

CERCLA AND/OR SARA REPORTABLE QUANTITY (RQ):

No regulated constituent present at OSHA thresholds

FIFRA REGISTRATION NUMBER:

34571-10-3876

FOOD AND DRUG ADMINISTRATION:

The ingredients in this product are approved by FDA under 21 CFR 176.170, 176.300 and 173.320.

SARA SECTION 312 HAZARD CLASS:

Immediate(acute);Delayed(Chronic)

SARA SECTION 302 CHEMICALS:

No regulated constituent present at OSHA thresholds

SARA SECTION 313 CHEMICALS:

No regulated constituent present at OSHA thresholds

CALIFORNIA REGULATORY INFORMATION**CALIFORNIA SAFE DRINKING WATER AND TOXIC****ENFORCEMENT ACT (PROPOSITION 65) CHEMICALS PRESENT:**

No regulated constituent present at OSHA thresholds

MICHIGAN REGULATORY INFORMATION

No regulated constituent present at OSHA thresholds

16 OTHER INFORMATION

NFPA/HMIS**CODE TRANSLATION**

Health	3	Serious Hazard
Fire	1	Slight Hazard
Reactivity	0	Minimal Hazard
Special	NONE	No special Hazard
(1) Protective Equipment	B	Goggles, Gloves

(1) refer to section 8 of MSDS for additional protective equipment recommendations.

CHANGE LOG

	EFFECTIVE DATE	REVISIONS TO SECTION:	SUPERCEDES
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MSDS status:	01-DEC-1999		** NEW **
	03-MAR-2000	15	01-DEC-1999
	28-APR-2000	15	03-MAR-2000
	29-NOV-2000	4	28-APR-2000
	09-AUG-2001	15	29-NOV-2000