

MATERIAL SAFETY DATA SHEET

BMRT-3

(ISO 11014-1 / ANSI Z 400.1-1998 / 93/112/EC)

First Issued: June 6th, 2003

Prepared By: The Company Health and Risk Assessment Unit, PO Box 17893, Austin, TX 78760-7893.

1. PRODUCT AND COMPANY IDENTIFICATION

Company Name: Biological Systems, Inc.

Company Mailing Address: PO Box 17893
Austin, TX 78760-7893

EMERGENCY PHONE NO.: CHEM-TEL 800.255.3924
Other Applicable No.: Voice: 888.424.6797, Fax 512.233.6663

Common Name, Chemical Name or Trade Name: **BMRT-3**

2. COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients: Proprietary mixture of surfactant; fatty acids not otherwise specified selected bacterial cultures and water.

No constituents are hazardous as defined in 29 CFR 1910.1200

3. HAZARDS IDENTIFICATION

3.1 Emergency Overview

BMRT-3 is a viscous, green colored liquid soap with a neutral chemical odor. Product is stable at normal temperatures. There are no known OSHA threshold limit values. May cause mild skin irritation as can any soap but skin irritation is not expected to be a problem. Product should not be elevated to temperatures above 150°F (65°C). Product should not be exposed to strong oxidizing agents.

3.2 Potential Health Effects

Routes of Exposure: Skin, eyes and Inhalation
Threshold Limit Values: None established by OSHA
Routes of Contact- Eyes: May cause mild irritation. Keep product away from children.

MSDS: BMRT-3

Routes of Contact- Skin: Skin exposure not anticipated to be a problem. May produce drying upon prolonged contact. Keep product away from children.

Routes of Contact- Inhalation: Mists may produce irritation to mucous membranes.

Routes of Contact- Ingestion: Irritation to G.I. tract mucous membranes.

Signs and Symptoms: Acute Over Exposure: Slight irritation to eyes or skin.

Chronic Over Exposure: No data available. Not considered a problem.

Medical Conditions Aggravated by Exposure: None known.

Chemical Listed as Possible Carcinogen: National Toxicity Program: No
I. A. R. C. Monographs: No
OSHA Regulated: No

3.3 Potential Environmental Effects

No significant environmental hazards are associated with any of the constituent chemicals in this formulation. While BMRT-3 is water soluble, the bacterial component enhances its bio-degradability and accelerates the chemical breakdown to harmless compounds.

4. FIRST-AID MEASURES

4.1 First Aid Procedures

Eye Contact: Use preventive measures. If contacted with eyes, flush with copious amounts of water for 15 minutes. If irritation persists, seek medical attention. Keep product away from children.

Skin Contact: Rinse with water. If irritation is noticed, seek medical attention. Irritation after flushing in generally not anticipated. Keep product away from children.

Inhalation: Do not spray in air. If aerosol is formed, leave the area immediately and start exhaust or open windows. Do not return until aerosol has been removed. Keep product away from children.

Ingestion: Do not induce vomiting. If oral doses of concentrated product are taken internally give large doses of water or milk. If gastric distress occurs seek medical attention. Keep product away from children.

Note to physician: Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Flashpoint Non-flammable liquid

Extinguishing Media: Determined by surrounding material. Water fog or spray, Foam, Dry Powder, Carbon Dioxide (CO₂).

Decomposition Products: From fire; Smoke, Carbon dioxide, & Carbon Monoxide

Lower Flame Limit: NA

Higher Flame Limit: N/A

Unusual Fire and Explosion Hazards: None Known

Fire Fighting Equipment: Fire fighters and others exposed to products of combustion should wear self-contained breathing apparatus. Equipment should be thoroughly decontaminated after use.

MSDS: BMRT-3

6. ACCIDENTAL RELEASE MEASURES

- 6.1 Emergency Number:** CHEM-TEL: 800.255.3924
- 6.2 Spill/Leak Procedures:** Stop leak. Flush remaining residue with water to drain.
- 6.3 Disposal Procedures:** Product is self-disposing by application, is non-toxic, biodegradable and, when diluted, is acceptable to meet requirements for NPDES discharge to POTW.

7. HANDLING AND STORAGE

- 7.1 Handling:** Avoid eye contact, Limit skin contact. Wash all exposed areas with soap and water. Do not allow material to contact open wounds. If such contact occurs, wash with soap and water and apply superficial disinfectant.
- 7.2 Storage:** Store in a cool dry place in original containers. Keep away from strong oxidizing agents. Do not remove from original containers until prior to use, then use as soon as possible following directions contained in company literature and labeling.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 Exposure Controls:** No special controls are deemed necessary so long as material is retained in original containers and stored in a cool dry place.
- 8.2 Personal Protection:** Not normally necessary. If individuals have chemically sensitive skin, irritation may result. Wear chemical resistant gloves or cease using product immediately. Avoid eye contact, Limit skin contact.
- 8.3 Personal Hygiene:** Wash all exposed areas with soap and water. Do not allow material to contact open wounds. If such contact occurs, wash with soap and water and apply superficial disinfectant.
- 8.4 Exposure guidelines:** OSHA/PEL/TWA: No limits established.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/Odor: Viscous, green liquid, fresh odor

Boiling Point: >212° F

Vapor Pressure: (mm Hg) N/A

Specific Gravity: 1.00 @ 25°C

pH: 9.2-9.4

Flash Point: None to boiling

Auto-ignition Temperature: Not determined.

Freezing Point: <32° F

Vapor Density: (Air = 1) N/A

Solubility in H₂O: 100%

F% Volatile: .2%

LEL/UEL: N/K

10. STABILITY AND REACTIVITY

Stability: Product is stable

Conditions to Avoid: Elevated temperatures

Incompatibility, Materials to Avoid: Strong oxidizing agents.

Hazardous Decomposition Products: Oxides of carbon.

Polymerization: Will not occur

Conditions to Avoid: Strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION

11.1 Hazardous Ingredients: No constituents are hazardous as defined in 29 CFR 1910.1200. All chemical ingredients in this formulation appear in whole or in part on the following inventories. CAS, EINECS, CEPA as well as others. Bacterial agents are proprietary and do not appear on any inventories but are USDA certified as NON-PATHOGENIC and are authorized for use in US government inspected meat, poultry and egg grading plants.

As no ingredients are considered hazardous, no specific toxicological studies have been done.

11.2 Eye Effects:

The eye irritation hazard is based on data from information supplied by raw material(s) supplier(s).

Skin Effects:

The skin irritation hazard is based on data from information supplied by raw material(s) supplier(s).

Acute Oral Effects:

The acute oral toxicity is based on data from information supplied by raw material(s) supplier(s).

Acute Inhalation Effects:

The acute respiratory toxicity is based on data from information supplied by raw material(s) supplier(s).

Acute Dermal Toxicity: This product is classified as a *minimal irritant* with a Human Irritancy Equivalent (HIE) of 0.61 on a scale of 0 to 5.

Acute Eye Toxicity: This product is classified as a *non-irritant* with a Irritaction Draize Equivalent (IDE) of 4.3 on a scale of 0 to 80.

11.3 Carcinogens:

This product does not contain any known or anticipated carcinogens according to the criteria of the NTP Annual Report on Carcinogens and OSHA 29 CFR 1910, Z.

12. ECOTOXICITY

Data from laboratory studies and from scientific literature is noted below if available.

All ingredients are considered biodegradable. Biodegradability is greatly enhanced by the inclusion of bacterial components that rapidly break-down the materials that this product is designed to clean as well as the internal chemical composition.

MSDS: BMRT-3

Liquid soap product is totally water soluble. Bacterial strains used in this product are USDA certified and are compatible with and waste treatment facility using bacterial and oxygenation to treat sewage.

13. DISPOSAL INFORMATION

WASTE DISPOSAL: Follow Local, State or Federal Regulations, whichever is applicable.

14. TRANSPORTATION INFORMATION

The data provided in this section is for information only. The description shown may not apply to all shipping situations. Consult 49CFR, or appropriate regulations to properly classify your shipment for transportation.

PROPER SHIPPING NAME:	D.O.T. NON-REGULATED – BMRT-3
REPORTABLE QUANTITY:	None
HAZARD CLASS AND LABEL:	NON-REGULATED
UN NUMBER:	None
NA NUMBER:	None
PACKAGING SIZE:	Gallon jugs, 5 gallon pails, 55 gallon drums, 270/330 gallon totes and Bulk tankers.

15. REGULATORY INFORMATION

SARA 311 CATEGORIES:

EPA ACUTE:	Yes (Eyes)
EPA CHRONIC:	No
EPA IGNITABILITY:	No
EPA REACTIVITY:	No
EPA SUDDEN RELEASE OF PRESSURE:	No
CERCLA RQ VALUE:	None
SARA TPQ:	None
SARA RQ:	None
EPA HAZARD WASTE #:	None
CLEAN AIR:	NA
CLEAN WATER:	NA
SARA SECTION 313:	No
NFPA HEALTH:	1
NFPA FLAMMABILITY:	0
NFPA REACTIVITY:	0
DEA Chemical Trafficking Act:	N/A

MSDS: BMRT-3

TSCA STATUS:

All ingredients in this product are on the TSCA Inventory List, except the Bacterial Component that is USDA certified non-pathogenic..

16. ADDITIONAL INFORMATION

NFPA (National Fire Protection Association) Rating:

Health: 1
Flammability: 0
Reactivity: 0

HMIS: (Hazardous Materials Identification System) Rating:

Health: 1
Flammability: 0
Reactivity: 0

Personal Protection: N/A (none normally needed)

FOOT NOTES: ND - No Data Available NA - Not Applicable < = Less Than > = Greater Than
Prepared according to the OSHA Hazard Communication Standard (29 CFR 1910.1200) and the ANSI MSDS Standard (Z400.1) by the Company Health and Risk Assessment Unit, PO Box 17893, Austin, TX 78760.

REVISION STATEMENT: Changes have been made throughout this Material Safety Data Sheet. Please read the entire document.

DISCLAIMER:

Although the information and recommendations set forth herein (hereinafter "Information") are presented in good faith and believed to be correct as of the date hereof, the Company makes no representations as to the completeness or accuracy thereof. Information is supplied upon the condition that the persons receiving this MSDS will make their own determination as to its suitability for their intended purposes prior to use. Since the product is within the exclusive control of the user, it is the user's obligation to determine the conditions of safe use of this product. Such conditions should comply with all Federal Regulations concerning the Product.

NO REPRESENTATIONS OR WARRANTIES, EITHER EXPRESS OR IMPLIED, OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OF ANY OTHER NATURE ARE MADE HEREUNDER WITH RESPECT TO INFORMATION OR THE PRODUCT TO WHICH INFORMATION REFERS.

THIS IS THE LAST PAGE OF THIS MSDS
