

## MATERIAL SAFETY DATA SHEET

### Reef Pack Enhancer

#### Section I: MANUFACTURER'S NAME, ADDRESS, AND CONTACT INFORMATION

Seachem Laboratories, Inc.  
1000 Seachem Drive  
Madison, GA 30650

Emergency Telephone Number: 706-343-6060  
Telephone Number for Information: 706-343-6060  
Date Prepared: 11 July 2006

Reef Pack Enhancer contains Reef Calcium, Reef Strontium, and Reef Iodide. The MSDS for these three products are attached.

## MATERIAL SAFETY DATA SHEET

### Reef Calcium

#### Section I: MANUFACTURER'S NAME, ADDRESS, AND CONTACT INFORMATION

Seachem Laboratories, Inc.  
1000 Seachem Drive  
Madison, GA 30650

Emergency Telephone Number: 706-343-6060  
Telephone Number for Information: 706-343-6060  
Date Prepared: 05 July 2006

#### SECTION II: CHEMICAL INGREDIENTS/IDENTITY INFORMATION

| Components (Chemical Identity; Common Names (s)) | OSHA PEL | ACGIH TLV | Other Limits |
|--|----------|-----------|--------------|
| Aqueous solution of calcium gluconate.           | NA       | NA        | NA           |

#### SECTION III: PHYSICAL/CHEMICAL CHARACTERISTICS

|                         |                        |   |   |
|-------------------------|------------------------|---|---|
| Boiling Point           | 100 <sup>o</sup> C     | Specific Gravity (H <sub>2</sub> O = 1) | 1.11                                      |
| Vapor Pressure (mm Hg)  | 23.8@25 <sup>o</sup> C | Melting Point                           | NA  |
| Vapor Density (AIR = 1) | <1 H <sub>2</sub> O    | Evaporation Rate (Butyl Acetate = 1)    | 0.3                                       |
| Solubility in Water     | Soluble                | Appearance and Odor                     | Clear yellowish liquid, slight sweet odor |

#### SECTION IV: FIRE AND EXPLOSION HAZARD DATA

|                           |    |
|---------------------------|----|
| Flash Point (Method Used) | NA |
| Flammable Limits          | NA |
| LEL                       | NA |
| UEL                       | NA |
| Extinguishing Media       | NA |

|                                    |    |
|------------------------------------|----|
| Special Fire Fighting Procedures   | NA |
| Unusual Fire and Explosion Hazards | NA |

## SECTION V: REACTIVITY DATA

|                                       |                                       |
|---------------------------------------|---------------------------------------|
| Stability                             | Stable under normal conditions of use |
| Conditions to Avoid                   | None                                  |
| Incompatibility (Materials to Avoid)  | None                                  |
| Hazardous Decomposition or Byproducts | None                                  |
| Hazardous Polymerization              | Will Not Occur                        |
| Polymerization Conditions to Avoid    | None                                  |

## SECTION VI: HEALTH HAZARD DATA

|   |
|---|
| Route(s) of Entry: Ingestion, inhalation, skin, eyes  |
| Health Hazards (Acute): Large oral doses may cause nausea and vomiting. Excessive inhalation may cause shortness of breath. Skin and eye contact may cause irritation.                |
| Carcinogenicity: NA   |
| Signs and Symptoms of Exposure: See health hazards above.   |
| Medical Conditions Generally Aggravated by Exposure: No information found.  |
| Emergency and First Aid Procedures: ingestion-induce vomiting if victim is conscious, get medical advice; skin, eyes-flush with water for 15 minutes; inhalation-remove to fresh air. |

## SECTION VII: PRECAUTIONS FOR SAFE HANDLING AND USE

|  |
|--|
| Steps to Be Taken in Case Material is Released or Spilled: Dilute with water and flush to drain.   |
| Waste Disposal Method: No special disposal method required, except that it be in accordance with current local authority regulations.                          |
| Precautions to Be Taken in Handling and Storing: Do not introduce to drinking water or foodstuffs. Wash hands after use, wear gloves if exposure is prolonged. |
| Other Precautions: All materials should be handled under good housekeeping practices.  |

## SECTION VIII: CONTROL MEASURES

|  |                             |
|--|-----------------------------|
| Respiratory Protection                 | Not required                |
| Ventilation                            | Local exhaust               |
| Protective Gloves                      | Recommended                 |
| Eye Protection                         | Recommended                 |
| Other Protective Clothing or Equipment | None                        |
| Work/Hygienic Practices                | Good housekeeping practices |

## ABBREVIATIONS

ACGIH: The American Conference of Governmental Industrial Hygienists, Inc.

IARC: The International Agency for Research on Cancer

LEL: Lower Explosive Limit (or Lower Flammable Limit)  
 NA: Not Applicable  
 ND: Not Determined  
 NTP: The National Toxicology Program  
 OSHA: The Occupational Health and Safety Administration  
 PEL: Permissible Exposure Limit  
 TLV: Threshold Limit Value  
 UEL: Upper Explosive Limit (or Upper Flammable Limit)

## MATERIAL SAFETY DATA SHEET

### Reef Strontium

#### Section I: MANUFACTURER'S NAME, ADDRESS, AND CONTACT INFORMATION

Seachem Laboratories, Inc.                      Emergency Telephone Number: 706-343-6060  
 1000 Seachem Drive                              Telephone Number for Information: 706-343-6060  
 Madison, GA 30650                                Date Prepared: 06 July 2006

#### SECTION II: CHEMICAL INGREDIENTS/IDENTITY INFORMATION

| Components (Chemical Identity; Common Names (s)) | OSHA PEL | ACGIH TLV | Other Limits |
|--|----------|-----------|--------------|
| Aqueous solution of strontium gluconate.         | NA       | NA        | NA           |

#### SECTION III: PHYSICAL/CHEMICAL CHARACTERISTICS

|                         |                        |   |                                       |
|-------------------------|------------------------|---|---------------------------------------|
| Boiling Point           | 101 <sup>o</sup> C     | Specific Gravity (H <sub>2</sub> O = 1) | 1.01                                  |
| Vapor Pressure (mm Hg)  | 23.8@25 <sup>o</sup> C | Melting Point                           | NA                                    |
| Vapor Density (AIR = 1) | <1 H <sub>2</sub> O    | Evaporation Rate (Butyl Acetate = 1)    | 0.3                                   |
| Solubility in Water     | Soluble                | Appearance and Odor                     | Clear green liquid, slight sweet odor |

#### SECTION IV: FIRE AND EXPLOSION HAZARD DATA

|                           |    |
|---------------------------|----|
| Flash Point (Method Used) | NA |
| Flammable Limits          | NA |

|                                    |    |
|------------------------------------|----|
| LEL                                | NA |
| UEL                                | NA |
| Extinguishing Media                | NA |
| Special Fire Fighting Procedures   | NA |
| Unusual Fire and Explosion Hazards | NA |

## SECTION V: REACTIVITY DATA

|                                       |                                       |
|---------------------------------------|---------------------------------------|
| Stability                             | Stable under normal conditions of use |
| Conditions to Avoid                   | None                                  |
| Incompatibility (Materials to Avoid)  | None                                  |
| Hazardous Decomposition or Byproducts | None                                  |
| Hazardous Polymerization              | Will Not Occur                        |
| Polymerization Conditions to Avoid    | None                                  |

## SECTION VI: HEALTH HAZARD DATA

|   |
|---|
| Route(s) of Entry: Ingestion, inhalation, skin, eyes  |
| Health Hazards (Acute): Large oral doses may cause nausea and vomiting. Excessive inhalation may cause shortness of breath. Skin and eye contact may cause irritation.                |
| Carcinogenicity: NA   |
| Signs and Symptoms of Exposure: See health hazards above.   |
| Medical Conditions Generally Aggravated by Exposure: No information found.  |
| Emergency and First Aid Procedures: ingestion-induce vomiting if victim is conscious, get medical advice; skin, eyes-flush with water for 15 minutes; inhalation-remove to fresh air. |

## SECTION VII: PRECAUTIONS FOR SAFE HANDLING AND USE

|  |
|--|
| Steps to Be Taken in Case Material is Released or Spilled: Dilute with water and flush to drain.   |
| Waste Disposal Method: No special disposal method required, except that it be in accordance with current local authority regulations.                          |
| Precautions to Be Taken in Handling and Storing: Do not introduce to drinking water or foodstuffs. Wash hands after use, wear gloves if exposure is prolonged. |
| Other Precautions: All materials should be handled under good housekeeping practices.  |

## SECTION VIII: CONTROL MEASURES

|  |                             |
|--|-----------------------------|
| Respiratory Protection                 | Not required                |
| Ventilation                            | Local exhaust               |
| Protective Gloves                      | Recommended                 |
| Eye Protection                         | Recommended                 |
| Other Protective Clothing or Equipment | None                        |
| Work/Hygienic Practices                | Good housekeeping practices |

## ABBREVIATIONS

ACGIH: The American Conference of Governmental Industrial Hygienists, Inc.

IARC: The International Agency for Research on Cancer

LEL: Lower Explosive Limit (or Lower Flammable Limit)

NA: Not Applicable

ND: Not Determined

NTP: The National Toxicology Program

OSHA: The Occupational Health and Safety Administration

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

UEL: Upper Explosive Limit (or Upper Flammable Limit)

## MATERIAL SAFETY DATA SHEET

### Reef Iodide

#### Section I: MANUFACTURER'S NAME, ADDRESS, AND CONTACT INFORMATION

Seachem Laboratories, Inc.  
1000 Seachem Drive  
Madison, GA 30650

Emergency Telephone Number: 706-343-6060  
Telephone Number for Information: 706-343-6060  
Date Prepared: 26 May 2006

#### SECTION II: CHEMICAL INGREDIENTS/IDENTITY INFORMATION

| Components (Chemical Identity; Common Names (s))  | OSHA PEL | ACGIH TLV | Other Limits |
|---|----------|-----------|--------------|
| Proprietary aqueous solution of potassium iodide. | NA       | NA        | NA           |

#### SECTION III: PHYSICAL/CHEMICAL CHARACTERISTICS

|                         |                        |   |                       |
|-------------------------|------------------------|---|-----------------------|
| Boiling Point           | 102 <sup>o</sup> C     | Specific Gravity (H <sub>2</sub> O = 1) | 0.97                  |
| Vapor Pressure (mm Hg)  | 23.8@25 <sup>o</sup> C | Melting Point                           | NA                    |
| Vapor Density (AIR = 1) | <1 H <sub>2</sub> O    | Evaporation Rate (Butyl Acetate = 1)    | 0.3                   |
| Solubility in Water     | Soluble                | Appearance and Odor                     | Clear odorless liquid |

#### SECTION IV: FIRE AND EXPLOSION HAZARD DATA

|                           |    |
|---------------------------|----|
| Flash Point (Method Used) | NA |
| Flammable Limits          | NA |

|                                    |    |
|------------------------------------|----|
| LEL                                | NA |
| UEL                                | NA |
| Extinguishing Media                | NA |
| Special Fire Fighting Procedures   | NA |
| Unusual Fire and Explosion Hazards | NA |

#### **SECTION V: REACTIVITY DATA**

|                                       |                                       |
|---------------------------------------|---------------------------------------|
| Stability                             | Stable under normal conditions of use |
| Conditions to Avoid                   | None                                  |
| Incompatibility (Materials to Avoid)  | None                                  |
| Hazardous Decomposition or Byproducts | None                                  |
| Hazardous Polymerization              | Will Not Occur                        |
| Polymerization Conditions to Avoid    | None                                  |

#### **SECTION VI: HEALTH HAZARD DATA**

|  |
|--|
| Route(s) of Entry: Ingestion   |
| Health Hazards (Acute and Chronic): Large oral doses may cause irritation to the gastrointestinal tract.                                   |
| Carcinogenicity: NA  |
| Signs and Symptoms of Exposure: NA   |
| Medical Conditions Generally Aggravated by Exposure: No information found  |
| Emergency and First Aid Procedures: Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice. |

#### **SECTION VII: PRECAUTIONS FOR SAFE HANDLING AND USE**

|  |
|--|
| Steps to Be Taken in Case Material is Released or Spilled: Dilute with water and flush to drain.   |
| Waste Disposal Method: No special disposal method required, except that it be in accordance with current local authority regulations.                          |
| Precautions to Be Taken in Handling and Storing: Do not introduce to drinking water or foodstuffs. Wash hands after use, wear gloves if exposure is prolonged. |
| Other Precautions: All materials should be handled under good housekeeping practices.  |

#### **SECTION VIII: CONTROL MEASURES**

|  |              |
|--|--------------|
| Respiratory Protection                 | Not required |
| Ventilation                            | Not required |
| Protective Gloves                      | Recommended  |
| Eye Protection                         | Recommended  |
| Other Protective Clothing or Equipment | None         |

**ABBREVIATIONS**

ACGIH: The American Conference of Governmental Industrial Hygienists, Inc.

IARC: The International Agency for Research on Cancer

LEL: Lower Explosive Limit (or Lower Flammable Limit)

NA: Not Applicable

NTP: The National Toxicology Program

OSHA: The Occupational Health and Safety Administration

PEL: Permissible Exposure Limit

TLV: Threshold Limit Value

UEL: Upper Explosive Limit (or Upper Flammable Limit)

PAGE

PAGE 1