1  Identification of the substances/ mixture and of the company/ undertaking

1.1  Product Identifiers
Product Number  M385
Product Name  Zobell Marine Broth 2216 (Marine Broth 2216)
REACH Registration Number  This product is a mixture. Reach registration number is not available for this mixture.

1.2  Relevant identified uses of the substance or mixture and uses advised against
1.2.1  Relevant identified uses  Laboratory Chemicals, Analytical Purpose, Biochemical Analysis

1.3  Details of the supplier of the safety data sheet
Produced by  HiMedia Laboratories Private Limited
Address  23, Vadhani Industrial Estate, LBS Marg, Ghatkopar (W), Mumbai - 400 086
Mail Id  info@himedialabs.com
Website  www.himedialabs.com

1.4  Emergency Tel. No.  Please contact the regional HiMedia representation in your country

2  Hazards Identification

2.1  Classification of the substance or mixture
CLP Classification-Regulation (EC) No. 1272/2008[EU-GHS/CLP]
Not a hazardous substance or mixture according to Regulation (EC) No.1272/2008.

2.2  Label elements
Labeling according to Regulation (EC) No.1272/2008
The product does not need to be labelled in accordance with EC directives or respective national laws.

2.3  Other Hazards
None

3  Composition/Information On Ingredients

3.2  Mixture

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Calcium chloride, anhydrous</td>
<td>As Per EC Regulation 1272/2008 Eye Irrit. 2A H319</td>
<td>&gt;=1.0 - &lt;=10.0%</td>
</tr>
<tr>
<td>CAS No.: 10043-52-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC No.: 233-140-8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Component Classification Concentration

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ammonium nitrate</td>
<td>As Per EC Regulation 1272/2008</td>
<td>&gt;=0.001 - &lt;=0.01%</td>
</tr>
<tr>
<td></td>
<td>Ox. Sol. 3; Skin Irrit. 2; Eye Irrit. 2A; STOT SE 3 H272; H315; H319; H335</td>
<td></td>
</tr>
<tr>
<td>CAS No. : 6484-52-2</td>
<td>EC No. : 229-347-8</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Potassium bromide</td>
<td>As Per EC Regulation 1272/2008</td>
<td>&gt;=0.1 - &lt;=1.0%</td>
</tr>
<tr>
<td></td>
<td>Skin Irrit. 2; Eye Irrit. 2A; STOT SE 3 H315; H319; H335</td>
<td></td>
</tr>
<tr>
<td>CAS No. : 2139-62-0</td>
<td>EC No. : 231-830-3</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Strontium chloride</td>
<td>As Per EC Regulation 1272/2008</td>
<td>&gt;=0.01 - &lt;=0.1%</td>
</tr>
<tr>
<td></td>
<td>Skin Irrit. 2; Eye Dam. 1; STOT SE 3 H315; H318; H335</td>
<td></td>
</tr>
<tr>
<td>CAS No. : 10476-85-4</td>
<td>EC No. : 233-971-6</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Boric acid</td>
<td>As Per EC Regulation 1272/2008</td>
<td>&gt;=0.01 - &lt;=0.1%</td>
</tr>
<tr>
<td></td>
<td>Repr.Tox. 1A, 1B H360</td>
<td></td>
</tr>
<tr>
<td>CAS No. : 10043-35-3</td>
<td>EC No. : 233-139-2</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Index-No : 005-007-00-2</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Refer Section 16 for complete statement of H codes and its classification

---

**4 First Aid Measures**

**4.1 Description of first aid measures**

**General advice**

Consult a physician. Show this safety data sheet to the doctor in attendance.

*If inhaled*

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

*In case of skin contact*

Wash off with soap and plenty of water. Consult a physician.

*In case of eye contact*

Rinse immediately with plenty of water for at least 15 minutes. Consult a physician.

*If swallowed*

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

**4.2 Most important symptoms and effects, both acute and delayed**

No data available.

**4.3 Indication of immediate medical attention and special treatment needed**

No data available
5 Fire Fighting Measures
5.1 Extinguishing media
Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Unsuitable extinguishing media
No data available.
5.2 Special hazards arising from the substance or mixture
Carbon oxides, Sodium oxides, Hydrogen chloride gas, Magnesium oxides, Sulphur oxides, Calcium oxide, Potassium oxides
5.3 Precautions for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary
5.4 Further information
No data available

6 Accidental Release Measures
6.1 Personal precautions, protective equipment and emergency procedures
Wear respiratory protection. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.
6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
6.3 Methods and materials for containment and cleaning up
Soak up with inert adsorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.
6.4 Reference to other sections
For disposal see Section 13.

7 Handling and Storage
7.1 Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Normal measures for preventive fire protection.
7.2 Conditions for safe storage, including any incompatibilities
Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.
Recommended Storage Temperature : On receipt store between 10-30°C
7.3 Specific end uses
Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

8 Exposure Controls/Personal Protection
8.1 Control parameters
Components with workplace control parameters
8.2 Exposure controls
Appropriate engineering controls
Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the products.

**Personal protective equipment**

**Hygiene measure**
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with the product.

**Eye/face protection**
Tightly fitting safety goggles; Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166 (EU).

**Skin protection**
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

**Body protection**
Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection**
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Environment exposure controls**
Do not empty into drains.

---

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Cream to yellow coloured homogeneous free flowing powder</td>
</tr>
<tr>
<td>Odour</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>7.40 - 7.80</td>
</tr>
<tr>
<td>Melting/freezing point</td>
<td>No data available</td>
</tr>
<tr>
<td>Initial boiling point and boiling range</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash point</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (Solid, gas)</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Relative density</td>
<td>No data available</td>
</tr>
<tr>
<td>Water Solubility</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/water</td>
<td>No data available</td>
</tr>
<tr>
<td>Autoignition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No data available</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour density</td>
<td>No data available</td>
</tr>
<tr>
<td>Thermal decomposition</td>
<td>No data available</td>
</tr>
</tbody>
</table>
9.2 Other safety information
No data available

10 Stability and Reactivity
10.1 Reactivity
No data available
10.2 Chemical stability
No data available
10.3 Possibility of hazardous reactions
No data available
10.4 Conditions to avoid
No data available
10.5 Incompatible materials
No data available
10.6 Hazardous decomposition products
Refer Section 5.2

11 Toxicological Information
11.1 Information on toxicological effects
   Acute toxicity
   No data available
   Skin corrosion/irritation
   No data available
   Serious eye damage/eye irritation
   No data available
   Respiratory or skin sensitisation
   No data available
   Germ cell mutagenicity
   No data available
   Carcinogenicity
   IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
   Reproductive toxicity
   No data available
   Specific target organ toxicity- single exposure
   No data available

   Aspiration hazard
   No data available
   Potential Health Effects
   Inhalation
   REFER SECTION 2
   Skin
   REFER SECTION 2
   Eyes
11.2 Components

**Calcium chloride**

*Acute oral toxicity*
Rat LD50: 1,000 mg/kg
(As per IUCLID)

*Acute dermal toxicity*
Rat LD50: 2,630 mg/kg
(As per IUCLID)

*Skin irritation*
Rat
Result: No irritation
(As per OECD Test Guideline 404)

*Eye irritation*
Rabbit
Result: Eye irritation
(As per OECD Test Guideline 405)
Causes serious eye irritation.

**Additional Information**
RTECS: EV9800000

**Ammonium nitrate**

*Acute oral toxicity*
LD50 rat: 2,462 mg/kg
Symptoms: Nausea, Vomiting, Diarrhoea, Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.
(OECD Test Guideline 401)

*Acute inhalation toxicity*
LC50 rat: > 88.8 mg/l; 4 h (IUCLID)
Symptoms: Inhalation may lead to the formation of oedemas in the respiratory tract.
(OECD Test Guideline 401)

**Additional Information:**
RTECS: BR9050000

*Further information:*
After absorption of large quantities:
Symptoms: Methaemoglobinaemia with headache, cardiac arrhythmia, drop in blood pressure, dyspnoea, and spasms, key symptom: cyanosis (blue colouration of the blood). The following applies to ammonium salts in general: after swallowing: local irritation symptoms, nausea, vomiting and diarrhoea. Systemic effect: after the uptake of very large quantities: drop in blood pressure, collapse, CNS disorders, spasms, narcotic conditions, respiratory paralysis and haemolysis.
**Potassium bromide**

*Acute oral toxicity*
Rat oral LD50: 2000 mg/kg, 7d (ECHA)
(As per OECD Guideline 401)

*Effect on Skin*
Rabbit: No skin irritation, 4h
(As per OECD Guideline 404)

*Effect on Eyes*
Rabbit: Irritating to eyes
(As per OECD Guideline 405)

*Germ cell mutagenicity*
No data available

*Carcinogenicity*
No data available

*Reproductive toxicity*
No data available

*Specific Target Organ Toxicity - Single Exposure*
No data available

*Specific Target Organ Toxicity - Repeated Exposure*
No data available

*Aspiration hazard*
No data available

**Additional Information**
RTECS: TS7650000

---

**Strontium chloride**

*Acute oral toxicity*
Rat LD50: 2,250 mg/kg

*Germ cell mutagenicity*
Mouse: Cytogenetic analysis

*Specific target organ toxicity - single exposure*
Inhalation: May cause respiratory irritation.

**Additional information:**
RTECS: WK8400000

---

**Boric Acid**

*Acute Toxicity*
Rat oral LD50: 2660 mg/kg
Rabbit dermal LD50: 2000 mg/kg
Mouse Oral: LD50 = 3450 mg/kg.

**Additional information**
RTECS: ED4550000

*Specific concentration limits (SCL): >5.5%*
Boric acid is included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation (EC) No. 1907/2006 (REACH)
12 Ecological Information

12.1 Toxicity
No data available

Components
Calcium chloride
Toxicity to fish
Lepomis macrochirus (Bluegill sunfish) LC50 : 10,650 mg/l; 96 h
(As per IUCLID)

Toxicity to daphnia and other aquatic invertebrates
Daphnia magna (Water flea) EC50 : 144 mg/l; 48 h
(As per IUCLID)

Toxicity to algae
AlgaeIC50 : 3,130 mg/l; 120 h
(As per IUCLID)

Components:
Ammonium Nitrate
Toxicity to fish
LC50 Cyprinus carpio (Carp): 74 mg/l; 48 h (IUCLID)

Toxicity to daphnia and other aquatic invertebrates
EC50 Daphnia magna (Water flea): 555 mg/l(IUCLID)

Toxicity to algae
IC50 Scenedesmus quadricauda (Green algae): 83 mg/l(IUCLID)

Components
Potassium bromide
Toxicity to fish
Pimephales promelas (Fathead Minnow) LC50: > 45 mg/l; 96 h
As per IUCLID

Toxicity to daphnia and other aquatic invertebrates
Daphnia magna (water flea) EC50: >1000 mg /L; 48 h
As per OECD Test guideline 202

Components:
Strontium chloride
Toxicity to fish
Austropotamobius pallipes pall LC50 : 440 mg/l; 96 h
Toxicity to daphnia and other aquatic invertebrates
Daphnia magna (Water flea) EC50 : 94 mg/l; 48 h
Toxicity to aquatic algae and cyanobacteria
Chlorella vulgaris : >150 mg Sr/L; 12 wk unbounded NOEC

Component
Boric Acid
Toxicity to fish
Gambusia affinis LC50 : 5600 mg/l
Rainbow trout LC50: 150mg B/L; 24d
Goldfish LC50: 46mg; 7d
Toxicity to daphnia and other aquatic invertebrates
Daphnia EC50 : 115 mg/l

12.2 Persistence and degradability
No data available

12.3 Bioaccumulative potential
No data available

12.4 Mobility in soil
No data available

12.5 PBT and vPvB assessment
This substance or mixture contains no components considered to be persistent, bioaccumulating nor toxic (PBT) at levels of 0.1% or higher.

12.6 Other adverse effects
No data available

13 Disposal Considerations

13.1 Waste treatments methods
Product
Offer surplus and non-recyclable solutions to a licenced company. Contact a licenced professional waste disposal service to dispose off this material.

13.2 Contaminated packaging
Dispose of as unused product.

14 Transport Information

14.1 UN-No
ADNR : ADR : IATA_C : IATA_P : IMDG : RID :

14.2 UN proper shipping name
ADNR : Not dangerous goods
ADR : Not dangerous goods
IATA_C : Not dangerous goods
IATA_P : Not dangerous goods
IMDG : Not dangerous goods
RID : Not dangerous goods

14.3 Transport hazard class(es)
ADNR : - ADR : - IATA_C : - IATA_P : - IMDG : - RID : -

14.4 Packaging group
ADNR : ADR : IATA_C : IATA_P : IMDG : RID :

14.5 Environmental hazards
ADNR : No ADR : No IMDG : Marine Pollutant No IATA_C : No IATA_P : No RID : No

14.6 Special precautions for use
15 Regulatory Information
This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

15.1 Safety health and environment regulations/legislation specific for the substance or mixture
No data available

15.2 Chemical Safety Assessment
No data available

16 Other information

H272 May intensify fire; oxidizer
H315 Causes skin irritation
H318 Causes serious eye damage
H319 Causes serious eye irritation
H335 May cause respiratory irritation
H360 May damage fertility or the unborn child
Eye Dam. 1 Serious eye damage or eye irritation, Category 1
Eye Irrit. 2A Serious eye damage or eye irritation, Category 2A
Ox. Sol. 3 Oxidising solids, Category 3
Repr.Tox. 1A, 1B Reproductive toxicity, Category 1A, 1B
Skin Irrit. 2 Skin corrosion or irritation, Category 2
STOT SE 3 Specific target organ toxicity, single exposure, Respiratory tract irritation, Category 3

Further Information

Copyright 2016 HiMedia Laboratories Pvt. Ltd.
The information given in this safety data sheet is believed to be correct yet does not claim to be all inclusive. This document is intended only as a guide for appropriate precautionary handling of the material by properly trained individuals, information here being commensurate with the present state of our knowledge regarding the manner and conditions of use, handling, storage or disposal. The information provided herein shall not be considered as guarantee of the properties of the product. HiMedia Laboratories, shall not be held liable for any damage resulting from improper handling or contact with the above product. Unless explicitly stated on the product or in any of the documentation accompanying the product, it is intended for research or testing purpose only and is not to be used for any other purpose.