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

1.1 Product Identifiers
- Product Number: M350
- Product Name: Bushnell Haas Broth
- 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 India
- Tel. No.: +91-22-2500 0970, +91-22-2500 1607
- Fax No.: +91-22-2500 2468
- Mail Id: info@himedialabs.com
- Website: www.himedialabs.com

1.4 Emergency Tel. No.
- 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]
  - Oxidising solids, (Category 2), H272
  - Skin corrosion or irritation, (Category 2), H315
  - Serious eye damage or eye irritation, (Category 2A), H319
  - Specific target organ toxicity, single exposure, Respiratory tract irritation, (Category 3), H335

2.2 Label elements
- Labeling according to Regulation (EC) No.1272/2008

Pictogram
Signal word: Warning
Hazard Statement(s)
- H272: May intensify fire; oxidizer
- H315: Causes skin irritation
- H319: Causes serious eye irritation
- H335: May cause respiratory irritation

Precautionary Statement(s)
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>Ammonium nitrate</td>
<td>As Per EC Regulation 1272/2008</td>
<td>&gt;=30 - &lt;=40%</td>
</tr>
<tr>
<td>CAS No. : 6484-52-2</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC No. : 229-347-8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Calcium chloride, anhydrous</td>
<td>As Per EC Regulation 1272/2008</td>
<td>&gt;=0.1 - &lt;=1.0%</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>
<tr>
<td>Ferric chloride</td>
<td>As Per EC Regulation 1272/2008</td>
<td>&gt;=1.0 - &lt;=5.0%</td>
</tr>
<tr>
<td>CAS No. : 7705-08-0</td>
<td></td>
<td></td>
</tr>
<tr>
<td>EC No. : 231-729-4</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 with plenty of soap and 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
Nitrogen oxides (NOx), Sulphur oxides, Oxides of phosphorus, Potassium oxides, Hydrogen chloride gas, Magnesium oxides, Iron 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 absorbent material. 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 2016/425/EEC and the standard EN ISO 374-1/2016 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>White to Cream coloured homogenous 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>6.80 - 7.20</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>
</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
Strong oxidizing agents

10.6 Hazardous decomposition products
Refer Section 5.2. Other Decomposition products not known.

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
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
REFER SECTION 2

Ingestion
REFER SECTION 2

Additional Information
RTECS : No data available

11.2 Components

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: Methaemoglobinemia 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.

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
Rabbit
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

**Ferric chloride**
Acute oral toxicity
Rat LD50: 3,200mg/kg (As per OECD Guideline 401)
Acute inhalation toxicity
No data available
Acute dermal toxicity
Rabbit LD50: > 559mg/kg (As per EPA OPP 81-2)
Skin irritation
Rabbit Result: Non Irritant (As per OECD Guideline 404)
Eye irritation
Rabbit Result: Irreversible effects on the eye (ECHA)
Sensitisation
Guinea pig Result: Not sensitising
Genetic toxicity (in-vitro)
Mammalian cell gene mutation assay
Mouse lymphoma cells Result: Negative
Genetic toxicity (in-vivo)
Mouse Result: Positive (ECHA)
Carcinogenicity
No data available
Toxicity to Reproduction
No data available
Teratogenicity
No data available

Additional information:
RTECS: LJ9100000

12  Ecological Information
12.1  Toxicity
No data available
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
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
Algae IC50 : 3,130 mg/l; 120 h
(As per IUCLID)

Components:
Ferric chloride
Toxicity to microorganisms
Activated sludge IC50: ca. 170 mg/L (ECHA)

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
No data available

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 disposal 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
14.2 UN proper shipping name
ADNR : Oxidizing solid, n.o.s.
ADR : Oxidizing solid, n.o.s.
IATA_C : Oxidizing solid, n.o.s.
IATA_P : Oxidizing solid, n.o.s.
IMDG : Oxidizing solid, n.o.s.
RID : Oxidizing solid, n.o.s.

14.3 Transport hazard class(es)
ADNR : 5.1 ADR : 5.1 IATA_C : 5.1 IATA_P : 5.1 IMDG : 5.1 RID : 5.1

14.4 Packaging group

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
No data available

15 Regulatory Information
This safety datasheet 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
Text of H codes and classification mentioned in section 3

H272 May intensify fire; oxidizer
H290 May be corrosive to metals
H302 Harmful if swallowed
H315 Causes skin irritation
H318 Causes serious eye damage
H319 Causes serious eye irritation
H335 May cause respiratory irritation
Acute Tox.oral 4 Acute toxicity, oral, Category 4
Eye Dam. 1 Serious eye damage or eye irritation, Category 1
Eye Irrit. 2A Serious eye damage or eye irritation, Category 2A
Met. Corr. 1 Corrosive to metals, Category 1
Ox. Sol. 3 Oxidising solids, Category 3
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
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