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

1.1 Product Identifiers
Product Number  R061
Product Name  *Ammonium Buffer Solution
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.  +91-22-25002468
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]
Skin corrosion or irritation, (Category 1B), H314
Specific target organ toxicity, single exposure, Respiratory tract irritation, (Category 3), H335
Hazardous to the aquatic environment, long term hazard, (Category 1), H410

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

Pictogram
Signal word  Danger
Hazard Statement(s)
H314  Causes severe skin burns and eye damage
H335  May cause respiratory irritation
H410  Very toxic to aquatic life with long lasting effects
Precautionary Statement(s)
P273  Avoid release to the environment.
P280  Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353  IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

P304 + P340  IF INHALED: Remove person to fresh air and Keep comfortable for breathing.

P310  Immediately call a POISON CENTER or doctor/physician.

P305+P351+P338  IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P391  Collect spillage.

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 chloride</td>
<td>As Per EC Regulation 1272/2008</td>
<td>&gt;=3 - &lt;=10%</td>
</tr>
<tr>
<td>CAS No. : 12125-02-9</td>
<td>Acute Tox.oral 4; Eye Irrit. 2A H302; H319</td>
<td></td>
</tr>
<tr>
<td>EC No. : 235-186-4</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Index-No : 017-014-00-8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Refer Section 16 for complete statement of H codes & 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
Nature of decomposition products unknown

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 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>Colorless, clear solution</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>No data available</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

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.

Specific target organ toxicity - single exposure
No data available

Specific target organ toxicity - repeated exposure
No data available

Potential Health Effects

Inhalation
REFER SECTION II

Skin
REFER SECTION II

Eyes
REFER SECTION II

Ingestion
REFER SECTION II

11.2 Components

Ammonium Chloride
Acute Oral Toxicity
Rat LD50: 1,650 mg/kg
Irritation and corrosion
Skin - rabbit - No skin irritation
Eyes - rabbit - Eye irritation
Sensitisation - Non sensitizer

Chronic exposure
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.

Signs and Symptoms of Exposure
No data available

Potential Health Effects
Inhalation
May be harmful if inhaled. May cause respiratory tract irritation.
Skin
May be harmful if absorbed through skin. May cause skin irritation.
Eyes
Causes eye irritation.
Ingestion
Harmful if swallowed

12 Ecological Information
12.1 Toxicity
Components
Ammonium chloride
Toxicity to fish
Oncorhynchus mykiss (rainbow trout) LC50: 42.91 mg/l; 96 h (AS per ECHA)
Cyprinus carpio (Carp) LC50: 209.00 mg/l; 96 h
Lepomis macrochirus (Bluegill sunfish) EC10: 4.28 mg/l; 30 d (AS per ECHA)
Toxicity to daphnia and other aquatic invertebrates
Daphnia magna (Water flea) EC50: > 100 mg/l; 48 h (AS per ECHA)
Daphnia magna (Water flea) LC50: 161 mg/l - 48 h
Toxicity to algae
Chlorella vulgaris (Fresh water algae) EC50: 1,300 mg/l; 5 d (AS per ECHA)
Toxicity to bacteria
EC50 activated sludge: 1,310 mg/l; 0.5 h (OECD Test Guideline 209)

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 preparation contains no substance considered to be persistent, bioaccumulating or 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 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**
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**
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
H302 Harmful if swallowed
H319 Causes serious eye irritation
Acute Tox.oral 4 Acute toxicity, oral, Category 4
Eye Irrit. 2A Serious eye damage or eye irritation, Category 2A

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.