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

1.1 Product Identifiers
Product Code: AS090
Product Name: N-N-Dimethylformamide, Hi-AR™

1.2 Relevant identified uses of the substance or mixture and uses advised against
Identified uses: Laboratory chemicals, Manufacture of substances

1.3 Details of the supplier of the safety data sheet
Produced by: HiMedia Laboratories Pvt. Ltd.
Address: 23, Vadhani Indl. Estate, LBS Marg, Mumbai 400 086, India.
Tel. No.: +91-22-2500 0970, +91-22-2500 1607
Fax No.: +91-22-2500 2468

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
Classification according to Regulation (EC) No. 1272/2008 [EU-GHS/CLP]
Flammable liquids (Category 3)
Acute toxicity, dermal (Category 4)
Serious eye damage/eye irritation (Category 2A)
Acute toxicity, inhalation (Category 4)

Classification according to EU Directives 67/548/EEC or 1999/45/EC
May cause harm to the unborn child.
Harmful by inhalation and in contact with skin.
Irritating to eyes.

2.2 Label elements
Labelling according Regulation (EC) No. 1272/2008 [CLP]
Pictogram

Signal word: Danger

Hazard Statement(s)
H226 Flammable liquid and vapour
H312 Harmful in contact with skin
H319 Causes serious eye irritation
H332 Harmful if inhaled

Precautionary Statement(s)
P201 Obtain special instructions before use.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313 IF exposed or concerned: Get medical advice/attention.

3. Composition/Information on Ingredients

3.1 Substances

Synonym: DMF

Molecular Formula: C₃H₇NO
Molecular Weight: 73.09

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>N-N-Dimethylformamide, Hi-AR™</td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>68-12-2</td>
</tr>
<tr>
<td>EC-No.</td>
<td>200-679-5</td>
</tr>
<tr>
<td>Index-No.</td>
<td>616-001-00-X</td>
</tr>
</tbody>
</table>

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 thoroughly with plenty of water for at least 15 minutes and 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.

5.2 Special hazards arising from the substance or mixture
Rapidly absorbed through skin.

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 vapors, 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 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.

7.3 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: Store below 30°C

7.3 Specific end uses  
No data available

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 product.

Personal protective equipment  
Hygiene measure  
Immediately change contaminated clothing. Apply preventive skin protection. Wash hands face after working with the substance

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 of 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 work place.

Respiratory protection  
Where risk assessment shows air-purifying respirators are appropriate use a fullface respirator with multi-purpose combination (US) or type ABEK(EN 14387) respirator cartridges as a backup to the 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

**Appearance** Clear colorless liquid

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odour</td>
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</tr>
<tr>
<td>Odour Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>Odour Threshold</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>58°C</td>
</tr>
<tr>
<td>Vapour pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Vapour density</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>
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</tr>
<tr>
<td>Decomposition Temperature</td>
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</tr>
<tr>
<td>Viscosity</td>
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</tr>
<tr>
<td>Explosive properties</td>
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<tr>
<td>Oxidizing properties</td>
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</table>

9.2 Other safety information

<table>
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<th>Value</th>
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</thead>
<tbody>
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</table>

10 Stability and Reactivity

10.1 Reactivity

<table>
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<tr>
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<th>Value</th>
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</table>

10.2 Chemical stability

<table>
<thead>
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<th>Value</th>
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<tbody>
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</table>

10.3 Possibility of hazardous reactions

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
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</table>

10.4 Conditions to avoid

<table>
<thead>
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</table>

10.5 Incompatible materials

<table>
<thead>
<tr>
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<th>Value</th>
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<tbody>
<tr>
<td>Strong oxidizing agents</td>
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10.6 Hazardous decomposition products

<table>
<thead>
<tr>
<th>Property</th>
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<tbody>
<tr>
<td>Other decomposition products</td>
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11 Toxicological Information

11.1 Information on toxicological effects

<table>
<thead>
<tr>
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<th>Value</th>
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<tbody>
<tr>
<td>Acute toxicity</td>
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<tr>
<td>Skin corrosion/irritation</td>
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<tr>
<td>Serious eye damage/eye irritation</td>
<td>No data available</td>
</tr>
<tr>
<td>Respiratory or skin sensitisation</td>
<td>No data available</td>
</tr>
<tr>
<td>Germ cell mutagenicity</td>
<td>No data available</td>
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<tr>
<td>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.</td>
<td></td>
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<tr>
<td>Reproductive toxicity</td>
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<tr>
<td>Specific target organ toxicity- single exposure</td>
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<tr>
<td>Aspiration hazard</td>
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</table>

<table>
<thead>
<tr>
<th>Property</th>
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<tbody>
<tr>
<td>No data available</td>
<td></td>
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</tbody>
</table>
Potential Health Effects

Inhalation.
Refer Section 2

Skin
Refer Section 2

Eyes
Refer Section 2

Ingestion
Refer Section 2

Additional Information

RTECS: LQ2100000

12 Ecological Information

12.1 Toxicity
No data available

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 of this material.

13.2 Contaminated packaging
Dispose of as unused product.

14 Transport Information

14.1 UN-No.
ADR/RID: 2265  IMDG: 2265  IATA: 2265

14.2 UN proper shipping name
ADR/RID : N-N-Dimethylformamide, Hi-AR™
IMDG : N-N-Dimethylformamide, Hi-AR™
IATA : N-N-Dimethylformamide, Hi-AR™

14.3 Transport hazard class(es)
ADR/RID: 3  IMDG: 3  IATA: 3

14.4 Packaging group
ADR/RID: 3  IMDG: 3  IATA: 3

14.5 Environmental hazards
ADR/RID: No  IMDG: Marine Pollutant:No  IATA: 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