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

1.1 Product Identifiers

Product Code  RM2019
Product Name  Diacetyl

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses  Laboratory chemicals

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 2)
Acute toxicity, oral (Category 4)
Skin corrosion/irritation (Category 2)
Serious eye damage/eye irritation (Category 1)
Acute toxicity, inhalation (Category 3)
Specific target organ toxicity, single exposure; Respiratory tract irritation (Category 3)

Classification according to EU Directives 67/548/EEC or 1999/45/EC
Highly flammable.
Harmful by inhalation and if swallowed.
Irritating to respiratory system and skin
Risk of serious damage to eyes.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 [CLP]

Pictogram

Signal word  Danger

Hazard Statement(s)
H225  Highly Flammable liquid and vapour
H302  Harmful if swallowed
H315  Causes skin irritation
H318  Causes serious eye damage
H331  Toxic if inhaled
H335  May cause respiratory irritation

Precautionary Statement(s)
P210  Keep away from heat/sparks/open flames/hot surfaces. # No smoking.
P261  Avoid breathing dust/fume/gas/mist/vapours/spray.
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.
P311 Call a POISON CENTER or doctor/physician.


Symbol(s)

R-Phrase(s)
- R11 Highly flammable.
- R20/22 Harmful by inhalation and if swallowed.
- R37/38 Irritating to respiratory system and skin
- R41 Risk of serious damage to eyes.

S-Phrase(s)
- S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- S39 Wear eye/lace protection.

2.3 Other hazards - Stench (Strong odour)

3. Composition/Information on Ingredients

3.1 Substances
Synonym: Biacetyl; 2,3-Butanedione

- Molecular Formula: \( \text{C}_4\text{H}_6\text{O}_2 \)
- Molecular Weight: 86.09

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Diacetyle</td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>431-03-8</td>
</tr>
<tr>
<td>EC-No.</td>
<td>207-069-8</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
Carbon 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 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 at 2 - 8°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: Yellow to yellow-green liquid.

- Odour: No data available
- Odour Threshold: No data available
- Melting/freezing point: No data available
- Initial boiling point and boiling range: No data available
- Flash point: No data available
- Upper/lower flammability or explosive limits: No data available
- Vapour pressure: No data available
- Vapour density: No data available
- Relative density: No data available
- Water Solubility: No data available
- Partition coefficient: n-octanol/Water: No data available
- Autoignition Temperature: No data available
- Decomposition Temperature: No data available
- Viscosity: No data available
- Explosive properties: No data available
- Oxidizing properties: No data available

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
Other decomposition products - No data available

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
Refer Section 2
Ingestion
Refer Section 2

Additional Information
RTECS : EK2625000

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: 2346  IMDG: 2346  IATA: 2346

14.2 UN proper shipping name
ADR/RID : Diacetyl
IMDG : Diacetyl
IATA : Diacetyl

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

14.4 Packaging group
ADR/RID: 2  IMDG: 2  IATA: 2

14.5 Environmental hazards
ADR/RID: No  IMDG: Marine Pollutant:No  IATA: No
EMS Code : F-E, S-D

14.6 Special precautions for use
No data available

15 Regulatory Information
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
Further information
Copyright 2010 HiMedia Laboratories Pvt. Ltd. License granted to make unlimited paper copies for internal use only. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Himedia Laboratories, shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.