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

1.1 Product Identifiers
Product Code: RM2465
Product Name: Tetrabutyl ammonium hydroxide (0.1M solution in 2 Propanol/Methanol)

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 2)
- Acute toxicity, oral (Category 4)
- Aspiration hazard (Category 1)
- Acute toxicity, dermal (Category 4)
- Skin corrosion/irritation (Category 2)
- Serious eye damage/eye irritation (Category 1)
- Acute toxicity, inhalation (Category 4)
- Specific target organ toxicity, single exposure; Narcotic effects (Category 3)
- Specific target organ toxicity, single exposure (Category 1)
- Specific target organ toxicity, repeated exposure (Category 2)

Classification according to EU Directives 67/548/EEC or 1999/45/EC
- Possible risk of harm to the unborn child.
- Highly flammable.
- Toxic by inhalation, in contact with skin and if swallowed.
- Irritating to skin.
- Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
- Harmful: danger of serious damage to health by prolonged exposure through inhalation.
- Harmful: may cause lung damage if swallowed.

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
- H304: May be fatal if swallowed and enters airways
- H312: Harmful in contact with skin
- H315: Causes skin irritation
- H318: Causes serious eye damage
H332 Harmful if inhaled
H336 May cause drowsiness or dizziness
H370 Causes damage to organs
H373 Causes damage to organs through prolonged or repeated exposure

Precautionary Statement(s)
P210 Keep away from heat/sparks/open flames/hot surfaces. # No smoking.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P310 IF SWALLOWED: 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.
P307 + P311 IF exposed: call a POISON CENTER or doctor/physician.


Symbol(s)

R-Phrase(s)
R63 Possible risk of harm to the unborn child.
R11 Highly flammable.
R23/24/25 Toxic by inhalation, in contact with skin and if swallowed.
R38 Irritating to skin.
R39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed.
R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
R65 Harmful: may cause lung damage if swallowed.

S-Phrase(s)
S16 Keep away from sources of ignition No smoking.
S36/37 Wear suitable protective clothing and gloves.
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).
S62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

2.3 Other hazards -

3. Composition/Information on Ingredients
3.1 Substances

Molecular Formula \( C_{16}H_{37}NO \)
Molecular Weight. 259.47

<table>
<thead>
<tr>
<th>Component</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tetrabutyl ammonium hydroxide (0.1M solution in 2 Propanol/Methanol)</td>
<td>CAS-No. 2052-49-5</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, nitrogen oxides (NOx)

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.

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### 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>Colourless to light yellow liquid</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>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>Upper/lower flammability or explosive limits</td>
<td>No data available</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>
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</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>Decomposition 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>
</tbody>
</table>

#### 9.2 Other safety information

No data available

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### 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
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 : Not Available

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.

14.2 UN proper shipping name
ADR/RID: Tetrabutyl ammonium hydroxide (0.1M solution in 2 Propanol/Methanol)
IMDG: Tetrabutyl ammonium hydroxide (0.1M solution in 2 Propanol/Methanol)
IATA: Tetrabutyl ammonium hydroxide (0.1M solution in 2 Propanol/Methanol)

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

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
Further information
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