SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers
   Product name: Tetra-N-Butyl Ammonium Hydroxide 40% in Methanol
   Product Code: 896530

1.2 Relevant identified uses of the substance or mixture and uses advised against
   Identified uses: Laboratory chemicals, Industrial & for professional use only.

1.3 Details of the supplier of the safety data sheet
   Company: Central Drug House (P) Ltd
   7/28 Vardaan House
   New Delhi -110002
   INDIA
   Telephone: +91 11 49404040
   Email: care@cdhfinechemical.com

1.4 Emergency telephone number
   Emergency Phone #: +91 11 49404040 (9:00am - 6:00 pm) [Office hours]

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
   Classification according to Regulation (EC) No 1272/2008
   Flammable liquids (Category 2), H225
   Acute toxicity, Oral (Category 3), H301
   Acute toxicity, Inhalation (Category 3), H331
   Acute toxicity, Dermal (Category 3), H311
   Skin corrosion (Category 1B), H314
   Specific target organ toxicity - single exposure (Category 1), H370
   For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements
   Labelling according Regulation (EC) No 1272/2008
   Pictogram
   Signal word: Danger
   Hazard statement(s):
   H225: Highly flammable liquid and vapour.
   H301 + H311 + H331: Toxic if swallowed, in contact with skin or if inhaled
   H314: Causes severe skin burns and eye damage.
H370 Causes damage to organs.

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/doctor.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 Immediately call a POISON CENTER/doctor.

Supplemental Hazard Statements

2.3 Other hazards - none

SECTION 3: Composition/information on ingredients

3.1 Mixtures

Formula : $C_{17}H_{39}NO$
Molecular weight : 273.50 g/mol

Hazardous ingredients according to Regulation (EC) No 1272/2008

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methanol</td>
<td>Flam. Liq. 2; Acute Tox. 3;</td>
<td>&gt;= 50 - &lt; 75 %</td>
</tr>
<tr>
<td>CAS-No.</td>
<td>67-56-1</td>
<td>STOT SE 1; H225, H301, H331, H311, H370</td>
</tr>
<tr>
<td>EC-No.</td>
<td>200-659-6</td>
<td>STOT SE 1, H370;</td>
</tr>
<tr>
<td>Index-No.</td>
<td>603-001-00-X</td>
<td>3 - &lt; 10 %: STOT SE 2, H371;</td>
</tr>
<tr>
<td>Registration number</td>
<td>01-2119433307-44-XXXX</td>
<td>Concentration limits:</td>
</tr>
</tbody>
</table>

Tetrabutylammonium hydroxide

CAS-No. 2052-49-5 Skin Corr. 1B; H314 >= 35 - < 50 %

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 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
Remove to fresh air and keep at rest in a position comfortable for breathing. Specific treatment (see on this label). Immediately call a POISON CENTER or doctor.

In case of skin contact
Specific treatment (see on this label). Immediately call a POISON CENTER or doctor. Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing. Wash contaminated clothing before reuse.

In case of eye contact
Immediately call a POISON CENTER or doctor. Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes.

If swallowed
Do NOT induce vomiting. Rinse mouth. Specific treatment (see on this label). Immediately call a POISON CENTER or doctor.

4.2 Most important symptoms and effects, both acute and delayed

Symptoms relating to use: Repeated exposure to this material can result in absorption through skin causing significant health hazard. Danger of serious damage to health by prolonged exposure through inhalation. Swallowing a small quantity of this material will result in serious health hazard. Causes damage to organs. Causes severe skin burns and eye damage.
4.3 **Indication of any immediate medical attention and special treatment needed**

Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible). Call a POISON CENTER or doctor. Specific treatment (see on this label).

SECTION 5: Firefighting measures

5.1 **Extinguishing media**

*Suitable extinguishing media:* Foam, Dry powder, carbon dioxide, water spray, sand.

*Unsuitable extinguishing media:* Do not use a heavy water stream.

**Surrounding fires:** Use water spray or fog for cooling exposed containers.

5.2 **Special hazards arising from the substance or mixture**

Under fire conditions, hazardous fumes will be present. Thermal decomposition Generates: Corrosive vapours.

5.3 **Advice for firefighters**

**Protection against fire:** Do not enter fire area without proper protective equipment, including respiratory protection.

**Special procedures:** Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

5.4 **Further information**

No data available

SECTION 6: Accidental release measures

6.1 **Personal precautions, protective equipment and emergency procedures**

*For emergency responders:* Equip cleanup crew with proper protection. Ventilate area.

*For non-emergency personnel:* Evacuate unnecessary personnel.

6.2 **Environmental precautions**

Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

6.3 **Methods and materials for containment and cleaning up**

**Clean up methods:** Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Store away from other materials. Collect spillage.

6.4 **Reference to other sections**

See section 8. Exposure controls/personal protection

SECTION 7: Handling and storage

7.1 **Precautions for safe handling**

**Handling:** Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Do not breathe dust, fume, gas, mist, vapours, spray. Avoid contact during pregnancy or while nursing.

**Technical protective measures:** Provide good ventilation in process area to prevent formation of vapour.

7.2 **Conditions for safe storage, including any incompatibilities**

**Storage:** Keep only in the original container in a cool, well ventilated place. Keep container closed when not in use.

**Storage regulation:** Comply with applicable regulations.

**Storage-away from:** Strong bases, strong acids, sources of ignition, direct sunlight.

7.3 **Specific end use(s)**

None

SECTION 8: Exposure controls/personal protection

8.1 **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

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.

Body Protection
Complete suit protecting against chemicals, Flame retardant antistatic protective clothing. 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 (US) or type ABEK (EN 14387) respirator cartridges as a backup to enginee 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).

Control of environmental exposure
Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| a)  | Appearance         | Form: clear, liquid |
|     |                    | Colour: colourless to pale yellow |
| b)  | Odour              | No data available |
| c)  | Odour Threshold    | No data available |
| d)  | pH                 | No data available |
| e)  | Melting point/freezing point | No data available |
| f)  | Initial boiling point and boiling range | No data available |
| g)  | Flash point        | 11 °C - closed cup |
| h)  | Evaporation rate   | No data available |
| i)  | Flammability (solid, gas) | No data available |
| j)  | Upper/lower flammability or explosive limits | No data available |
| k)  | Vapour pressure    | No data available |
| l)  | Vapour density     | No data available |
| m)  | Relative density   | 0.87 – 0.88 g/cm³ |
| n)  | Water solubility   | soluble |
| o)  | Partition coefficient: n-octanol/water | No data available |
| p)  | Auto-ignition temperature | No data available |
| q)  | Decomposition temperature | No data available |
9.2  Other safety information
No data available

SECTION 10: Stability and reactivity

10.1  Reactivity
No data available

10.2  Chemical stability
Stable under recommended storage conditions.

10.3  Possibility of hazardous reactions
No data available

10.4  Conditions to avoid
Avoid moisture.
Heat, flames and sparks. Extremes of temperature and direct sunlight.

10.5  Incompatible materials
Reducing agents

10.6  Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx)
Other decomposition products - No data available
In the event of fire: see section 5

SECTION 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

Specific target organ toxicity - repeated exposure
No data available

Aspiration hazard
No data available

Additional Information
RTECS: Not available
Gastrointestinal disturbance. May cause convulsions. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

SECTION 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 Results of PBT and vPvB assessment
The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

12.6 Other adverse effects
Environmental precautions: Avoid release to the environment.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Product
Burn in a chemical incinerator equipped with an afterburner and scrubber b highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging
Dispose of as unused product.

SECTION 14: Transport information

14.1 UN number
ADR/RID: 3286
IMDG: 3286
IATA: 3286

14.2 UN proper shipping name
ADR/RID: FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (Methanol, Tetrabutylammonium hydroxide)
IMDG: FLAMMABLE LIQUID, TOXIC, CORROSIVE, N.O.S. (Methanol, Tetrabutylammonium hydroxide)
IATA: Flammable liquid, toxic, corrosive, n.o.s. (Methanol, Tetrabutylammonium hydroxide)

14.3 Transport hazard class(es)
ADR/RID: 3 (6.1, 8)
IMDG: 3 (6.1, 8)
IATA: 3 (6.1, 8)

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

14.5 Environmental hazards
ADR/RID: no
IMDG Marine pollutant: no
IATA: no

14.6 Special precautions for user
No data available

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment
For this product a chemical safety assessment was not carried out
SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H225  Highly flammable liquid and vapour.
H301  Toxic if swallowed.
H301 + H311 +  Toxic if swallowed, in contact with skin or if inhaled
H331  Toxic in contact with skin.
H314  Causes severe skin burns and eye damage.
H331  Toxic if inhaled.
H370  Causes damage to organs.
H371  May cause damage to organs.

Further information
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. Central Drug House (P) Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.cdhfinechemical.com for additional terms and conditions of sale.