

CHAITANYA CHS, 2<sup>nd</sup> FLOOR, OFFICE # 206, SIDDHARTH NAGAR, S.V.ROAD, GOREGAON (W), MUMBAI 400062, MH, INDIA.  
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### MATERIAL SAFETY DATA SHEET (MSDS)

## HEXADECYLTRIMETHYLAMMONIUM BROMIDE (CTAB)

#### 1. Identification of the substance/mixture and of the company/undertaking

##### 1.1. Product identifier

Trade name : HEXADECYLTRIMETHYLAMMONIUM BROMIDE (CTAB)

Product code : H0106700500

Identification of the product : CetyltrimethylammoniumBromide  
CAS No: 57-09-0  
EC No :200-311-3

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

Use : Industrial. For professional use only.

##### 1.3. Details of the supplier of the safety data sheet

Company identification : SUVCHEM  
Chaitanya Tower, 2nd Floor, Office # 206,  
Siddharth Nagar, S.V. Road,  
Goregaon (West), Mumbai - 400062,  
Maharashtra, India.  
Contact: +91 22 28725393 / 94 / 95  
Email ID: info@suvchem.com/care@suvchem.com

##### 1.4. Emergency telephone number

Phone no. : + 91 22 28725393 / 94 / 95 (9:00am - 6:00 pm) [ Office hours ]

#### 2. Hazards identification -DSD

##### 2.1. Classification of the substance or mixture

##### Classification EC 67/548 or EC 1999/45

Classification : Xn; R22  
Xi; R37/38-41  
N; R50

##### Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)

Health hazards : Specific Target Organ Toxicity - Single exposure - Respiratory tract irritation -  
Category 3 - Warning (CLP : STOT SE 3) H335  
Serious eye damage - Category 1 - Danger (CLP : Eye Dam. 1) H318  
Acute toxicity, Oral - Category 4 - Warning (CLP : Acute Tox. 4) H302  
Skin irritation - Category 2 - Warning (CLP : Skin Corr. 2) H315

Environmental hazards : Hazardous to the aquatic environment - Acute hazard - Category 1 - Warning (CLP :  
Aquatic Acute 1) H400

## MATERIAL SAFETY DATA SHEET (MSDS)

### HEXADECYLTRIMETHYLAMMONIUM BROMIDE (CTAB)

#### 2. Hazards identification -DSD (continued)

##### 2.2. Label elements

##### Labelling EC 67/548 or EC 1999/45

##### Symbol(s)



##### Symbol(s)

: Xn : Harmful  
 N : Dangerous for the environment

##### R Phrase(s)

: R22 : Harmful if swallowed.  
 R37/38 : Irritating to respiratory system and skin.  
 R41 : Risk of serious damage to eyes.  
 R50 : Very toxic to aquatic organisms.

##### S Phrase(s)

: S26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
 S39 : Wear eye/face protection.  
 S61 : Avoid release to the environment. Refer to special instructions/Safety data sheets.

##### Labelling Regulation EC 1272/2008 (CLP)

##### Hazard pictograms



##### Signal words

: Danger

##### Hazard statements

: H318 : Causes serious eye damage.  
 H302 : Harmful if swallowed.  
 H315 : Causes skin irritation.  
 H335 : May cause respiratory irritation.  
 H400 : Very toxic to aquatic life.

##### Precautionary statements

##### • Prevention

: P280: Wear protective gloves, protective clothing, eye protection, face protection.  
 P271: Use only outdoors or in a well-ventilated area.  
 P261: Avoid breathing dust, fume, gas, mist, vapours, spray.  
 P273: Avoid release to the environment.  
 P264: Wash thoroughly after handling.  
 P270: Do not eat, drink or smoke when using this product.

##### • Response

: P302+P352: IF ON SKIN : Wash with plenty of soap and water.  
 P301+P312: IF SWALLOWED : Call a POISON CENTER or doctor if you feel unwell.  
 P332+P313: If skin irritation occurs : Get medical advice.  
 P391: Collect spillage.  
 P305+P351+P338: IF IN EYES : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

## MATERIAL SAFETY DATA SHEET (MSDS)

### HEXADECYLTRIMETHYLAMMONIUM BROMIDE (CTAB)

#### 2. Hazards identification -DSD (continued)

- P304+P340: IF INHALED : Remove to fresh air and keep at rest in a position comfortable for breathing.  
P363: Wash contaminated clothing before reuse.
- **Storage** : P403+P233: Store in well-ventilated place. Keep container tightly closed.  
P405: Store locked up.
  - **Disposal considerations** : P501: Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

#### 2.3. Other hazards

- Other hazards** : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

#### 3. Composition/information on ingredients

**Substance / Preparation** : CetyltrimethylammoniumBromide

EC No :200-311-3  
Substance.

Contains no other components or impurities which will influence the classification of the product.

#### 4. First aid measures

##### 4.1. Description of first aid measures

- Inhalation** : Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.
- Skin contact** : Wash with plenty of soap and water. If skin irritation occurs : Get medical advice. Wash contaminated clothing before reuse. Specific treatment (see on this label).
- 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.
- Ingestion** : Obtain emergency medical attention. Do NOT induce vomiting. Call a POISON CENTER or doctor if you feel unwell. Rinse mouth.

##### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms relating to use** : Causes serious eye damage.  
Swallowing a small quantity of this material will result in serious health hazard.  
Causes skin irritation. May cause respiratory irritation.

##### 4.3. Indication of any immediate medical attention and special treatment needed

- General information** : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

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### HEXADECYLTRIMETHYLAMMONIUM BROMIDE (CTAB)

#### 5. Fire-fighting 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

- Hazardous combustion products** : Under fire conditions, hazardous fumes will be present.

##### 5.3. Advice for fire-fighters

- 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.

#### 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

- Environmental precautions** : Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.  
Avoid release to the environment.

##### 6.3. Methods and material 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

#### 7. Handling and storage

##### 7.1. Precautions for safe handling

## MATERIAL SAFETY DATA SHEET (MSDS)

### HEXADECYLTRIMETHYLAMMONIUM BROMIDE (CTAB)

#### 7. Handling and storage (continued)

Handling	: Wash thoroughly after handling. Wash thoroughly after handling. Use only outdoors or in a well-ventilated area. Do not eat, drink or smoke when using this product.
Technical protective measures	: Provide good ventilation in process area to prevent formation of vapour.
Special precautions	: Avoid breathing dust, fume, gas, mist, vapours, spray.

#### 7.2. Conditions for safe storage, including any incompatibilities

Storage	: Keep only in the original container in a cool, well ventilated place. Keep container tightly closed.
Storage - away from	: Strong bases. Strong acids. Sources of ignition. Direct sunlight.

#### 7.3. Specific end use(s)

Specific end use(s)	: None.
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#### 8. Exposure controls/personal protection

##### 8.1. Exposure controls

Personal protection	: Avoid all unnecessary exposure.
• Respiratory protection	: Wear approved mask.
• Hand protection	: Wear protective gloves.
• Skin protection	: Wear suitable protective clothing.
• Eye protection	: Chemical goggles or safety glasses.
• Others	: When using, do not eat, drink or smoke.

##### 8.2. Control parameters

Occupational Exposure Limits	: No data available.
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#### 9. Physical and chemical properties

##### 9.1. Information on basic physical and chemical properties

Physical state at 20 °C	: Solid.
Colour	: White powder
Odour	: Odorless
Odour threshold	: No data available.
pH value	: No data available.
Melting point [°C]	: 248 - 251 °C

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**HEXADECYLTRIMETHYLAMMONIUM BROMIDE (CTAB)**
**9. Physical and chemical properties (continued)**

Decomposition point [°C]	: N/A
Critical temperature [°C]	: N/A
Auto-ignition temperature [°C]	: N/A
Flammability (solid, gas)	: N/A
Flash point [°C]	: 244 °C
Boiling point [°C]	: N/A
Initial boiling point [°C]	: N/A
Final boiling point [°C]	: N/A
Evaporation rate	: N/A
Vapour pressure [20°C]	: N/A
Vapour pressure mm/Hg	: N/A
Vapour density	: N/A
Density [g/cm <sup>3</sup> ]	: N/A
Relative density, gas (air=1)	: N/A
Relative density, liquid (water=1)	: N/A
Solubility in water [% weight]	: 36.4 g/l at 20 °C -
Solubility in water	: N/A
Log Pow octanol / water at 20°C	: No data available.
Solubility	: 5 - 7
Viscosity at 40°C [mm <sup>2</sup> /s]	: N/A

**9.2. Other information**

Explosive properties	: N/A
Explosion limits - upper [%]	: N/A
Explosion limits - lower [%]	: N/A
Oxidising properties	: No data available.

**10. Stability and reactivity**
**10.1. Reactivity**

Reactivity	: Not established.
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**10.2. Chemical stability**

Chemical stability	: Stable under recommended storage conditions.
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**10.3. Possibility of hazardous reactions**

Hazardous reactions	: Not established.
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## MATERIAL SAFETY DATA SHEET (MSDS)

### HEXADECYLTRIMETHYLAMMONIUM BROMIDE (CTAB)

#### 10. Stability and reactivity (continued)

##### 10.4. Conditions to avoid

Conditions to avoid : Direct sunlight. Extremely high or low temperatures.

##### 10.5. Incompatible materials

Materials to avoid : Strong acids. Strong bases.

##### 10.6. Hazardous decomposition products

Hazardous decomposition products : Fumes. Carbon monoxide. Carbon dioxide.

#### 11. Toxicological information

##### 11.1. Information on toxicological effects

##### Acute toxicity

- Inhalation : Based on available data, the classification criteria are not met.
- Dermal : Based on available data, the classification criteria are not met.
- Ingestion : Harmful if swallowed.

Corrosion : Causes serious eye damage.

Irritation : Causes skin irritation.  
May cause respiratory irritation.

Sensitization : Based on available data, the classification criteria are not met.

Mutagenicity : Based on available data, the classification criteria are not met.

Carcinogenicity : Based on available data, the classification criteria are not met.

Toxic for reproduction : Based on available data, the classification criteria are not met.

STOT-single exposure : Based on available data, the classification criteria are not met.

STOT-repeated exposure : Based on available data, the classification criteria are not met.

Aspiration hazard : Based on available data, the classification criteria are not met.

#### 12. Ecological information

##### 12.1. Toxicity

Toxicity information : Very toxic to aquatic life.

##### 12.2. Persistence - degradability

Persistence - degradability : Biodegradable.

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#### 12. Ecological information (continued)

##### 12.3. Bioaccumulative potential

Bioaccumulative potential : Not established.

##### 12.4. Mobility in soil

Mobility in soil : Not established.

##### 12.5. Results of PBT and vPvB assessment

**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.

#### 13. Disposal considerations

##### 13.1. Waste treatment methods

**General** : Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations.  
 Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

#### 14. Transport information

##### 14.1. Land transport (ADR-RID)

**Proper shipping name** : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
**UN N°** : 3077  
**H.I. nr** : 90  
**ADR - Class** : 9  
**Labelling - Transport** : 9 : Miscellaneous dangerous substances and articles.



**ADR - Classification code** : M7  
**ADR - Group** : III



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**14. Transport information (continued)**

ADR - Packing instructions : P002 R001 LP002  
 ADR - Limited Quantity : 5 KG  
 ADR - Tunnel code



: E : Passage forbidden through tunnels of category E.

**14.2. Sea transport (IMDG), [English only]**

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
 UN N° : 3077  
 IMO-IMDG - Class or division : 9 : Miscellaneous dangerous substances and articles.  
 IMO-IMDG - Packing group : III  
 IMO-IMDG - Packing instructions : P002 LP02  
 IMO-IMDG - Limited quantities : 5 kg  
 IMO-IMDG - Marine pollution : Yes  
 EMS-Nr : F-A S-F

**14.3. Air transport (ICAO-IATA), [English only]**

Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
 UN N° : 3077  
 IATA - Class or division : 9 : Miscellaneous dangerous substances and articles.  
 IATA - Packing group : III  
 IATA - Passenger and Cargo Aircraft : ALLOWED  
 - Passenger and Cargo - Packing instruction : 956  
 - Passenger and Cargo - Maximum Quantity/Packing : 400 kg  
 IATA - Cargo only : ALLOWED  
 - Cargo only - Packing instruction : 956  
 - Cargo only - Maximum Quantity/Packing : 400 kg  
 IATA - Limited Quantities : 30 kg G  
 ERG-Nr : 9L

**15. Regulatory information**
**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

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**HEXADECYLTRIMETHYLAMMONIUM BROMIDE (CTAB)**

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

**DISCLAIMER:**

- **SUVCHEM** Products are to be used as Lab Chemicals for R&D only. Not for drug, medicinal, household or other uses.
- **SUVCHEM** shall not be responsible for any damage resulting from handling or from contact with the above product.
- **SUVCHEM** provides the information contained herein in good faith but makes no representation as to its comprehensiveness or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product.

**End of document**