

CHAITANYA CHS, 2nd FLOOR, OFFICE # 206, SIDDHARTH NAGAR, S.V.ROAD, GOREGAON (W), MUMBAI 400062, MH, INDIA.
CONTACT: +9122 28725393 /94/ 95 | EMAILID: CARE@SUVCHEM.COM

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 : H0106705000

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

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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.

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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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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

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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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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 ³]	: 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 ² /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.

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