

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 29.05.2024

Version number 5

Revision: 29.05.2024

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

· **1.1 Product identifier**

· **Trade name:** Cetyltrimethylammonium-bromide

· **Synonyma**

CTAB

Cetrimide

Hexadecyltrimethylammonium bromide

· **Article number:** 16530

· **CAS Number:**

57-09-0

· **EC number:**

200-311-3

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

No further relevant information available.

· **Application of the substance / the mixture:** Laboratory chemicals

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

SERVA Electrophoresis GmbH

Carl-Benz-Str. 7

D-69115 Heidelberg

Tel.: +49 6221 13840-0

FAX: +49 6221 13840-10

msds.info@serva.de

· **Information department:** Product Safety Department Tel.: +49 6221 13840-35

· **1.4 Emergency telephone number:**

Emergency medical information in case of poisoning

Poison Information Centre Mainz-Tel: +49 (0) 6131 19240

(Counselling in German and English)

**SERVA**  
serving scientists

**SECTION 2: Hazards identification**

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008:**



GHS08

STOT RE 2

H373 May cause damage to organs through prolonged or repeated exposure.



GHS05

Eye Dam. 1

H318 Causes serious eye damage.



GHS09

Aquatic Acute 1 H400 Very toxic to aquatic life.

Aquatic Chronic 1 H410 Very toxic to aquatic life with long lasting effects.



GHS07

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Acute Tox. 4      H302 Harmful if swallowed.  
 Skin Irrit. 2      H315 Causes skin irritation.  
 STOT SE 3      H335 May cause respiratory irritation.

### · 2.2 Label elements

#### · Labelling according to Regulation (EC) No 1272/2008:

The substance is classified and labelled according to the GB CLP regulation.

#### · Hazard pictograms: GHS05, GHS07, GHS08, GHS09

#### · Signal word: Danger

#### · Hazard statements:

H302 Harmful if swallowed.  
 H315 Causes skin irritation.  
 H318 Causes serious eye damage.  
 H335 May cause respiratory irritation.  
 H373 May cause damage to organs through prolonged or repeated exposure.  
 H410 Very toxic to aquatic life with long lasting effects.

#### · Precautionary statements

P273      Avoid release to the environment.  
 P280      Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.  
 P301+P312      IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
 P302+P352      IF ON SKIN: Wash with plenty of water.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P362+P364      Take off contaminated clothing and wash it before reuse.

#### · Labelling of packages where the contents do not exceed 125 ml

#### · Hazard pictograms GHS05, GHS07, GHS08, GHS09

#### · Signal word Danger

#### · Hazard statements

H318 Causes serious eye damage.

#### · Precautionary statements

P280      Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.  
 P301+P312      IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.  
 P302+P352      IF ON SKIN: Wash with plenty of water.  
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

### · 2.3 Other hazards

#### · Results of PBT and vPvB assessment:

#### · PBT: PBT - Assessment not available.

#### · vPvB: vPvB - Assessment not available.

#### · Determination of endocrine-disrupting properties No further relevant information available.

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## SECTION 3: Composition/information on ingredients

### · 3.1 Substances

#### · CAS No. Description:

57-09-0 cetrimonium bromide

#### · Identification number(s):

#### · EC number: 200-311-3

#### · Description:

#### · Empirical formula: C<sub>19</sub>H<sub>42</sub>BrN

#### · MW: 364.5

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**· Regulation (EC) No 648/2004 on detergents / Labelling for contents**

cationic surfactants

≥30%

### SECTION 4: First aid measures

#### · 4.1 Description of first aid measures

##### · General information:

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

· **After inhalation:** Supply fresh air; consult doctor in case of complaints.

##### · After skin contact:

Wash off immediately with soap and water and rinse thoroughly. In case of complaints, consult a doctor.

##### · After eye contact:

Rinse opened eye for several minutes with running water. Remove contact lenses if possible and continue rinsing. Consult an ophthalmologist immediately.

##### · After swallowing:

Rinse out mouth and consult a doctor.

Do not induce vomiting!

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

No further relevant information available.

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

No further relevant information available.

### SECTION 5: Firefighting measures

#### · 5.1 Extinguishing media

##### · Suitable extinguishing agents:

CO<sub>2</sub>, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

#### · 5.2 Special hazards arising from the substance or mixture:

Formation of hazardous vapours and gases possible during heating or in case of fire.

In case of fire, the following can be formed, but not limited to:

Nitrogen oxides (NO<sub>x</sub>)

Carbon monoxide and carbon dioxide

Hydrogen bromide (HBr)

Ammonia (NH<sub>3</sub>)

NH<sub>3</sub>

#### · 5.3 Advice for firefighters

· **Protective equipment:** Wear self-contained breathing apparatus.

### SECTION 6: Accidental release measures

#### · 6.1 Personal precautions, protective equipment and emergency procedures

Wear protective clothing.

Ensure adequate ventilation

Avoid formation of dust.

· **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

#### · 6.3 Methods and material for containment and cleaning up

Dispose contaminated material as waste according to section 13.

Pick up mechanically.

#### · 6.4 Reference to other sections

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling:**
  - Ensure good ventilation/exhaustion at the workplace.
  - Open and handle receptacle with care.
  - Avoid contact with eyes and skin.
- **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
  - **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
  - **Information about storage in one common storage facility:** Not required.
  - **Further information about storage conditions:** Store containers tightly closed and dry.
- **7.3 Specific end use(s):** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **8.2 Exposure controls**
- **Appropriate engineering controls:** No further data; see section 7.
- **Individual protection measures, such as personal protective equipment:**
- **General protective and hygienic measures:**
  - Keep away from foodstuffs, beverages and feed.
  - Store protective clothing separately.
  - Immediately remove all soiled and contaminated clothing
  - Avoid contact with the eyes and skin.
  - Wash hands before breaks and at the end of work.
- **Breathing equipment:**
  - Short term filter device:
  - Filter P2.
- **Hand protection:**
  - The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
  - Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
  - Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **Material of gloves:**
  - The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.
- **Penetration time of glove material:**
  - The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**
  - Nitrile rubber, NBR
  - Natural rubber, NR
- **Eye/face protection:** Tightly sealed goggles.
- **Body protection:** Protective work clothing.

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### SECTION 9: Physical and chemical properties

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

##### · General Information:

· Physical state:	Solid.
· Colour:	white to almost white
· Odour:	Weak, characteristic
· Odour threshold:	Not determined.
· Melting point/freezing point:	No information available
· Boiling point or initial boiling point and boiling range:	No information available
· Flammability:	No information available
· Lower and upper explosion limit:	
· Lower:	No information available
· Upper:	No information available
· Flash point:	No information available
· Decomposition temperature:	No information available
· pH:	No information available
· Viscosity:	
· Kinematic viscosity:	No information available
· Dynamic viscosity:	No information available
· Solubility:	
· Water:	Barely soluble in water
· Partition coefficient n-octanol/water (log value):	No information available
· Vapour pressure:	No information available
· Density and/or relative density:	
· Density:	No information available
· Relative density:	No information available
· Particle characteristics	No information available

#### · 9.2 Other information

Further physico-chemical data are not available.

##### · Appearance:

Powder

##### · Important information on protection of health and environment, and on safety:

· Explosive properties: The product is not explosive, but the formation of explosive dust/air mixtures is possible.

· Molecular weight 364.5 g/mol

### SECTION 10: Stability and reactivity

· 10.1 Reactivity: No further relevant information available.

· 10.2 Chemical stability:

· Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.

· 10.3 Possibility of hazardous reactions: No further relevant information available.

· 10.4 Conditions to avoid: High temperatures

· 10.5 Incompatible materials:

Avoid contact with:

Strong oxidizers

Strong acids

· 10.6 Hazardous decomposition products: In case of fire: see section 5

### SECTION 11: Toxicological information

· 11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:

· Acute toxicity: Harmful if swallowed.

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**· LD/LC50 values that are relevant for classification:**

Oral	LD50	410 mg/kg (rat)
	LC50/96h	0.3 mg/l (fish)

- **Skin corrosion/irritation:** Causes skin irritation.
- **Serious eye damage/irritation:** Causes serious eye damage.
- **Respiratory or skin sensitisation:** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity:** Based on available data, the classification criteria are not met.
- **Carcinogenicity:** Based on available data, the classification criteria are not met.
- **Reproductive toxicity:** Based on available data, the classification criteria are not met.
- **STOT-single exposure:** May cause respiratory irritation.
- **STOT-repeated exposure:** May cause damage to organs through prolonged or repeated exposure.
- **Aspiration hazard:** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards:**
- **Endocrine disrupting properties:** No relevant information available

### SECTION 12: Ecological information

**· 12.1 Toxicity:**
**· Aquatic toxicity:**

EC50/72h	0.01 mg/l (algae)
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- **12.2 Persistence and degradability:** No further relevant information available.
- **12.3 Bioaccumulative potential:** No further relevant information available.
- **12.4 Mobility in soil:** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment:**
- **PBT:** PBT - assessment not available.
- **vPvB:** vPvB - assessment not available.
- **12.6 Endocrine disrupting properties:** For information on endocrine disrupting properties see section 11.
- **12.7 Other adverse effects:**
- **Additional ecological information:**
- **General notes:**
- Do not allow product to reach ground water, water course or sewage system.
- Water danger class 3 (German Regulation) (Assessment by list): extremely hazardous for water.

### SECTION 13: Disposal considerations

**· 13.1 Waste treatment methods**
**· Recommendation**

Dispose of in accordance with official regulations.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

**· Uncleaned packagings:**
**· Recommendation:**

Uncleaned packaging must be disposed of in the same way as the product in accordance with official regulations.

### SECTION 14: Transport information

**· 14.1 UN number or ID number**
**· ADR, IMDG, IATA**

UN3077

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<ul style="list-style-type: none"> <li>· <b>14.2 UN proper shipping name</b></li> <li>· <b>ADR</b></li> <li>· <b>IMDG</b></li> <li>· <b>IATA</b></li> </ul>	<p>3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (cetrimonium bromide)</p> <p>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (cetrimonium bromide), MARINE POLLUTANT</p> <p>ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (cetrimonium bromide)</p>
<ul style="list-style-type: none"> <li>· <b>14.3 Transport hazard class(es)</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>  <ul style="list-style-type: none"> <li>· <b>Class:</b></li> <li>· <b>Label:</b></li> </ul>	<p>9 Miscellaneous dangerous substances and articles.</p> <p>9</p>
<ul style="list-style-type: none"> <li>· <b>14.4 Packing group</b></li> <li>· <b>ADR, IMDG, IATA</b></li> </ul>	<p>III</p>
<ul style="list-style-type: none"> <li>· <b>14.5 Environmental hazards</b></li> <li>· <b>Marine pollutant:</b></li> <li>· <b>Special marking (ADR):</b></li> <li>· <b>Special marking (IATA):</b></li> </ul>	<p>Yes (P)</p> <p>Symbol (fish and tree)</p> <p>Symbol (fish and tree)</p> <p>Symbol (fish and tree)</p>
<ul style="list-style-type: none"> <li>· <b>14.6 Special precautions for user</b></li> <li>· <b>Hazard identification number (Kemler code):</b></li> <li>· <b>EMS Number:</b></li> <li>· <b>Stowage Category</b></li> <li>· <b>Stowage Code</b></li> </ul>	<p>Warning: Miscellaneous dangerous substances and articles.</p> <p>90</p> <p>F-A,S-F</p> <p>A</p> <p>SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.</p>
<ul style="list-style-type: none"> <li>· <b>14.7 Maritime transport in bulk according to IMO instruments</b></li> </ul>	<p>Not applicable.</p>
<ul style="list-style-type: none"> <li>· <b>Transport/Additional information:</b></li> </ul>	<p>Not dangerous according to the above specifications.</p>
<ul style="list-style-type: none"> <li>· <b>ADR</b></li> <li>· <b>Limited quantities (LQ)</b></li> <li>· <b>Excepted quantities (EQ)</b></li> <li>· <b>Transport category</b></li> <li>· <b>Tunnel restriction code</b></li> </ul>	<p>5 kg</p> <p>Code: E1</p> <p>Maximum net quantity per inner packaging: 30 g</p> <p>Maximum net quantity per outer packaging: 1000 g</p> <p>3</p> <p>E</p>
<ul style="list-style-type: none"> <li>· <b>IMDG</b></li> <li>· <b>Limited quantities (LQ)</b></li> <li>· <b>Excepted quantities (EQ)</b></li> </ul>	<p>5 kg</p> <p>Code: E1</p> <p>Maximum net quantity per inner packaging: 30 g</p> <p>Maximum net quantity per outer packaging: 1000 g</p>
<ul style="list-style-type: none"> <li>· <b>UN "Model Regulation":</b></li> </ul>	<p>UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (CETRIMONIUM BROMIDE), 9, III</p>

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### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Poisons Act**
- **Regulated explosives precursors** Substance is not listed.
- **Regulated poisons** Substance is not listed.
- **Reportable explosives precursors** Substance is not listed.
- **Reportable poisons** Substance is not listed.
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **Seveso category E1** Hazardous to the Aquatic Environment
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 100 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**  
Substance is not listed.
- **REGULATION (EU) 2019/1148**
- **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**  
Substance is not listed.
- **Annex II - REPORTABLE EXPLOSIVES PRECURSORS** Substance is not listed.
- **Regulation (EC) No 273/2004 on drug precursors** Substance is not listed.
- **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**  
Substance is not listed.
- **National regulations:**
- **Water hazard class:** Water danger class 3 (Assessment by list): extremely hazardous for water.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Product Safety Department
- **Contact:** +49 6221 13840-35
- **Date of previous version:** 22.03.2018
- **Abbreviations and acronyms:**
  - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
  - ICAO: International Civil Aviation Organisation
  - PBT: persistent, bioaccumulative, toxic substance (UK REACH)
  - vPvB: very persistent, very bioaccumulative substance (UK REACH)
  - UK REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
  - GB CLP: Regulation on classification, labelling and packaging of substances and mixtures
  - bw: body weight
  - ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)
  - IMDG: International Maritime Code for Dangerous Goods
  - IATA: International Air Transport Association
  - P: Marine Pollutant
  - GHS: Globally Harmonised System of Classification and Labelling of Chemicals
  - EINECS: European Inventory of Existing Commercial Chemical Substances
  - CAS: Chemical Abstracts Service (division of the American Chemical Society)
  - LC50: Lethal concentration, 50 percent
  - LD50: Lethal dose, 50 percent
  - PBT: Persistent, Bioaccumulative and Toxic
  - vPvB: very Persistent and very Bioaccumulative
  - Acute Tox. 4: Acute toxicity – Category 4
  - Skin Irrit. 2: Skin corrosion/irritation – Category 2
  - Eye Dam. 1: Serious eye damage/eye irritation – Category 1

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*STOT SE 3: Specific target organ toxicity (single exposure) – Category 3**STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2**Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1**Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1*

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