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## MATERIAL SAFETY DATA SHEET (MSDS)

### TETRA METHYL AMMONIUM CHLORIDE (FOR SYNTHESIS)

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

##### 1.1. Product identifier

Trade name : TETRA METHYL AMMONIUM CHLORIDE (FOR SYNTHESIS)

Product code : T0204800500

Identification of the product : TETRAMETHYL AMMONIUM CHLORIDE 98%  
 CAS No: 75-57-0

##### 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 : T; R25  
 Xn; R21  
 Xi; R36/37/38

##### 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  
 Acute toxicity, Oral - Category 3 - Danger (CLP : Acute Tox. 3) H301  
 Skin irritation - Category 2 - Warning (CLP : Skin Corr. 2) H315  
 Eye irritation - Category 2A - Warning (CLP : Eye Irrit. 2) H319  
 Acute toxicity, dermal - Category 4 - Warning (CLP : Acute Tox. 4) H312

##### 2.2. Label elements

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

**MATERIAL SAFETY DATA SHEET (MSDS)**
**TETRA METHYL AMMONIUM CHLORIDE (FOR SYNTHESIS)**
**2. Hazards identification -DSD (continued)**
**Symbol(s)**

**Symbol(s)**

: T : Toxic

**R Phrase(s)**

 : R21 : Harmful in contact with skin.  
 R25 : Toxic if swallowed.  
 R36/37/38 : Irritating to eyes, respiratory system and skin.

**S Phrase(s)**

 : S26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
 S28 : After contact with skin, wash immediately with  
 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 when possible).

**Labelling Regulation EC 1272/2008 (CLP)**
**Hazard pictograms**

**Signal words**

: Danger

**Hazard statements**

 : H301 : Toxic if swallowed.  
 H312 : Harmful in contact with skin.  
 H319 : Causes serious eye irritation.  
 H315 : Causes skin irritation.  
 H335 : May cause respiratory irritation.

**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.  
 P264: Wash thoroughly after handling.  
 P270: Do not eat, drink or smoke when using this product.

**• Response**

 : P301+P310: IF SWALLOWED : Immediately call a POISON CENTER or doctor.  
 P302+P352: IF ON SKIN : Wash with plenty of soap and water.  
 P332+P313: If skin irritation occurs : Get medical advice.  
 P305+P351+P338: IF IN EYES : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 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**

**MATERIAL SAFETY DATA SHEET (MSDS)**
**TETRA METHYL AMMONIUM CHLORIDE (FOR SYNTHESIS)**
**2. Hazards identification -DSD (continued)**

**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** : TETRAMETHYL AMMONIUM CHLORIDE 98%

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** : Call a POISON CENTER or doctor if you feel unwell. Remove to fresh air and keep at rest in a position comfortable for breathing.

**Skin contact** : Immediately call a POISON CENTER or doctor. Specific treatment (see on this label). Wash with plenty of soap and water. If skin irritation occurs : Wash contaminated clothing before reuse. Get medical advice.

**Eye contact** : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists : Get medical advice.

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

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

**Symptoms relating to use** : Swallowing a small quantity of this material will result in serious health hazard. Repeated exposure to this material can result in absorption through skin causing significant health hazard.  
Causes serious eye irritation.  
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).

**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.

**MATERIAL SAFETY DATA SHEET (MSDS)**
**TETRA METHYL AMMONIUM CHLORIDE (FOR SYNTHESIS)**
**5. Fire-fighting measures (continued)**
**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.

**6.3. Methods and material for containment and cleaning up**

**Clean up methods** : On land, sweep or shovel into suitable containers. Minimize generation of dust.  
Store away from other materials.

**6.4. Reference to other sections**

See section 8. Exposure controls/personal protection

**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.  
Wash thoroughly after handling. Use only outdoors or in a well-ventilated area.

**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**

**MATERIAL SAFETY DATA SHEET (MSDS)**
**TETRA METHYL AMMONIUM CHLORIDE (FOR SYNTHESIS)**
**7. Handling and storage (continued)**

**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.

**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.

**9. Physical and chemical properties**
**9.1. Information on basic physical and chemical properties**

**Physical state at 20 °C** : Solid.

**Colour** : White crystalline

**Odour** : Odorless

**Odour threshold** : No data available.

**pH value** : Not applicable.

**Melting point [°C]** : > 300 °C

**Decomposition point [°C]** : N/A

**Critical temperature [°C]** : N/A

**Auto-ignition temperature [°C]** : N/A

**Flammability (solid, gas)** : N/A

**Flash point [°C]** : N/A

**Boiling point [°C]** : N/A

**Initial boiling point [°C]** : N/A

**Final boiling point [°C]** : N/A

**MATERIAL SAFETY DATA SHEET (MSDS)**
**TETRA METHYL AMMONIUM CHLORIDE (FOR SYNTHESIS)**
**9. Physical and chemical properties (continued)**

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]	: Soluble in water
Solubility in water	: N/A
Log Pow octanol / water at 20°C	: No data available.
Solubility	: 6 - 8
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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**10.4. Conditions to avoid**

Conditions to avoid	: Direct sunlight. Extremely high or low temperatures.
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**10.5. Incompatible materials**

Materials to avoid	: Strong acids. Strong bases.
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**10.6. Hazardous decomposition products**

**MATERIAL SAFETY DATA SHEET (MSDS)**
**TETRA METHYL AMMONIUM CHLORIDE (FOR SYNTHESIS)**
**10. Stability and reactivity (continued)**

**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** : Harmful in contact with skin.
- **Ingestion** : Toxic if swallowed.

**Corrosion**

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

**Irritation**

: Causes serious eye 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** : Not established.

**12.2. Persistence - degradability**

**Persistence - degradability** : Biodegradable.

**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.



**MATERIAL SAFETY DATA SHEET (MSDS)**
**TETRA METHYL AMMONIUM CHLORIDE (FOR SYNTHESIS)**
**12. Ecological information (continued)**
**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.

**Special precautions** : Hazardous waste due to toxicity.

**14. Transport information**
**14.1. Land transport (ADR-RID)**

**Proper shipping name** : TOXIC SOLID, ORGANIC, N.O.S.  
**UN N°** : 2811  
**H.I. nr** : 60  
**ADR - Class** : 6.1  
**Labelling - Transport** : 6.1 : Toxic substances.



**ADR - Classification code** : T2  
**ADR - Group** : II  
**ADR - Packing instructions** : P002  
**ADR - Limited Quantity** : 500 G  
**ADR - Tunnel code**



: D/E : Bulk or tank carriage: Passage forbidden through tunnels of category D and E. Other carriage: Passage forbidden through tunnels of category E.

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

**Proper shipping name** : TOXIC SOLID, ORGANIC, N.O.S.



**MATERIAL SAFETY DATA SHEET (MSDS)**
**TETRA METHYL AMMONIUM CHLORIDE (FOR SYNTHESIS)**
**14. Transport information (continued)**

UN N° : 2811  
 IMO-IMDG - Class or division : 6.1 : Toxic substances.  
 IMO-IMDG - Packing group : II  
 IMO-IMDG - Packing instructions : P002  
 IMO-IMDG - Limited quantities : 500 g  
 IMO-IMDG - Marine pollution : No  
 EMS-Nr : F-A S-A

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

Proper shipping name : TOXIC SOLID, ORGANIC, N.O.S.  
 UN N° : 2811  
 IATA - Class or division : 6.1 : Toxic substances.  
 IATA - Packing group : II  
 IATA - Passenger and Cargo Aircraft : ALLOWED  
   - Passenger and Cargo - Packing instruction : 669  
   - Passenger and Cargo - Maximum Quantity/Packing : 25 kg  
 IATA - Cargo only : ALLOWED  
   - Cargo only - Packing instruction : 676  
   - Cargo only - Maximum Quantity/Packing : 100 kg  
 IATA - Limited Quantities : 1 kg  
 ERG-Nr : 6L

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

Safety, health and environmental regulations/legislation specific for the substance or mixture : Ensure all national/local regulations are observed.  
 REACH Restrictions - Annex XVII : The components of this product are not subject to restrictions.  
 REACH Authorisation - Annex XIV : The components of this product are not subject to authorization.

**15.2. Chemical Safety Assessment**

Chemical Safety Assessment : It has not been carried out.

**MATERIAL SAFETY DATA SHEET (MSDS)**

**TETRA METHYL AMMONIUM CHLORIDE (FOR SYNTHESIS)**

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**