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## MATERIAL SAFETY DATA SHEET (MSDS)

### 2,2,6,6 TETRAMETHYPIPERIDINE-1-OXYL (FREE RADICAL) (TEMPO)

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

##### 1.1. Product identifier

**Trade name** : 2,2,6,6 TETRAMETHYPIPERIDINE-1-OXYL (FREE RADICAL) (TEMPO)  
**Product code** : T0205200025  
**Identification of the product** : 2,2,6,6 TETRAMETHYLPIPRIDINE -1-OXYL (TEMPO)  
 CAS No: 2564-83-2

##### 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** : C; R34

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

**Health hazards** : Skin corrosion - Category 1B - Danger (CLP : Skin Corr. 1B) H314

##### 2.2. Label elements

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

**Symbol(s)**



**Symbol(s)** : C : Corrosive

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

<b>R Phrase(s)</b>	: R34 : Causes burns.
<b>S Phrase(s)</b>	: S26 : In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S36/37/39 : Wear suitable protective clothing, gloves and eye/face protection. 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**


<b>Signal words</b>	: Danger
<b>Hazard statements</b>	: H314 : Causes severe skin burns and eye damage.
<b>Precautionary statements</b>	
• <b>Prevention</b>	: P280: Wear protective gloves, protective clothing, eye protection, face protection. P260: Do not breathe dust, fume, gas, mist, vapours, spray. P264: Wash thoroughly after handling.
• <b>Response</b>	: P301+P330+P331: IF SWALLOWED : Rinse mouth. Do NOT induce vomiting. 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. P303+P361+P353: IF ON SKIN (or hair) : Remove immediately all contaminated clothing. Rinse skin with water/shower. P363: Wash contaminated clothing before reuse.
• <b>Storage</b>	: P405: Store locked up.
• <b>Disposal considerations</b>	: 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**

<b>Other hazards</b>	: The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.
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**3. Composition/information on ingredients**

<b>Substance / Preparation</b>	: 2,2,6,6 TETRAMETHYLPIDRIDINE -1-OXYL (TEMPO)
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Substance.

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

**MATERIAL SAFETY DATA SHEET (MSDS)**
**2,2,6,6 TETRAMETHYPIPERIDINE-1-OXYL (FREE RADICAL) (TEMPO)**
**4. First aid measures**
**4.1. Description of first aid measures**

<b>Inhalation</b>	: Remove to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor.
<b>Skin contact</b>	: Immediately call a POISON CENTER or doctor. Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing.
<b>Eye contact</b>	: 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.
<b>Ingestion</b>	: Immediately call a POISON CENTER or doctor. Rinse mouth. Do NOT induce vomiting.

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

**Symptoms relating to use** : Causes severe skin burns and eye damage.

**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**

<b>Suitable extinguishing media</b>	: Foam. Dry powder. Carbon dioxide. Water spray. Sand.
<b>Unsuitable extinguishing media</b>	: Do not use a heavy water stream.
<b>Surrounding fires</b>	: 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. Thermal decomposition generates : Corrosive vapours.

**5.3. Advice for fire-fighters**

<b>Protection against fire</b>	: Do not enter fire area without proper protective equipment, including respiratory protection.
<b>Special procedures</b>	: 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**

**MATERIAL SAFETY DATA SHEET (MSDS)**
**2,2,6,6 TETRAMETHYPIPERIDINE-1-OXYL (FREE RADICAL) (TEMPO)**
**6. Accidental release measures (continued)**

**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** : Do not breathe dust, fume, gas, mist, vapours, spray. Wash thoroughly after handling. Wash contaminated clothing before reuse.

**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)**

**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.

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**2,2,6,6 TETRAMETHYPIPERIDINE-1-OXYL (FREE RADICAL) (TEMPO)**
**8. Exposure controls/personal protection (continued)**

- Eye protection : Chemical goggles or face shield.
- 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	: Reddish crystals
Odour	: N/A
Odour threshold	: No data available.
pH value	: Not applicable.
Melting point [°C]	: 36 - 39 °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]	: 67 °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]	: N/A
Solubility in water	: N/A
Log Pow octanol / water at 20°C	: No data available.
Solubility	: N/A
Viscosity at 40°C [mm <sup>2</sup> /s]	: N/A

**9.2. Other information**

Explosive properties : N/A

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**9. Physical and chemical properties (continued)**

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.

**10.2. Chemical stability**

Chemical stability : Stable under recommended storage conditions.

**10.3. Possibility of hazardous reactions**

Hazardous reactions : Not established.

**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.  
Thermal decomposition generates : Corrosive vapours.

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

**Corrosion**

: Causes severe skin burns and eye damage.

**Irritation**

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

**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.

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**11. Toxicological information (continued)**

<b>Toxic for reproduction</b>	: Based on available data, the classification criteria are not met.
<b>STOT-single exposure</b>	: Based on available data, the classification criteria are not met.
<b>STOT-repeated exposure</b>	: Based on available data, the classification criteria are not met.
<b>Aspiration hazard</b>	: 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.

**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)**

**MATERIAL SAFETY DATA SHEET (MSDS)**
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**14. Transport information (continued)**

Proper shipping name : CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.  
 UN N° : 3263  
 H.I. nr : 80  
 ADR - Class : 8  
 Labelling - Transport : 8 : Corrosive substance.



ADR - Classification code : C8  
 ADR - Group : II  
 ADR - Packing instructions : P002  
 ADR - Limited Quantity : 1 KG  
 ADR - Tunnel code



: E : Passage forbidden through tunnels of category E.

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

Proper shipping name : CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.  
 UN N° : 3263  
 IMO-IMDG - Class or division : 8 : Corrosive substance.  
 IMO-IMDG - Packing group : II  
 IMO-IMDG - Packing instructions : P002  
 IMO-IMDG - Limited quantities : 1 kg  
 IMO-IMDG - Marine pollution : No  
 EMS-Nr : F-A S-B

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

Proper shipping name : CORROSIVE SOLID, BASIC, ORGANIC, N.O.S.  
 UN N° : 3263  
 IATA - Class or division : 8 : Corrosive substance.  
 IATA - Packing group : II  
 IATA - Passenger and Cargo Aircraft : ALLOWED  
   - Passenger and Cargo - Packing instruction : 859  
   - Passenger and Cargo - Maximum Quantity/Packing : 15 kg  
 IATA - Cargo only : ALLOWED

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**2,2,6,6 TETRAMETHYPIPERIDINE-1-OXYL (FREE RADICAL) (TEMPO)**

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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