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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 : T0205200005
 Identification of the product : 2,2,6,6 TETRAMETHYPIPERIDINE -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)

R Phrase(s)	: R34 : Causes burns.
S Phrase(s)	: 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


Signal words	: Danger
Hazard statements	: H314 : Causes severe skin burns and eye damage.
Precautionary statements	
• Prevention	: 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.
• Response	: 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.
• Storage	: 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.
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3. Composition/information on ingredients

Substance / Preparation	: 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)
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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. Immediately call a POISON CENTER or doctor.
Skin contact	: Immediately call a POISON CENTER or doctor. Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing.
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	: 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.
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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. Thermal decomposition generates : Corrosive vapours.
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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

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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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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 ³]	: 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 ² /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.
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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

Hazardous decomposition products	: Fumes. Carbon monoxide. Carbon dioxide. Thermal decomposition generates : Corrosive vapours.
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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.
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Irritation	: Based on available data, the classification criteria are not met.
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Sensitization	: Based on available data, the classification criteria are not met.
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Mutagenicity	: Based on available data, the classification criteria are not met.
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Carcinogenicity	: Based on available data, the classification criteria are not met.
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MATERIAL SAFETY DATA SHEET (MSDS)
2,2,6,6 TETRAMETHYPIPERIDINE-1-OXYL (FREE RADICAL) (TEMPO)
11. Toxicological information (continued)

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.

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)

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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 : 859
 instruction
 - Passenger and Cargo - Maximum : 15 kg
 Quantity/Packing
 IATA - Cargo only : ALLOWED

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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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