

SAFETY DATA SHEET

Issue Date 10-Jun-2025
Revision Number 1.05

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier**Product Name** N,N,N',N'-Tetramethyl-1,6-hexanediamine**Other means of identification****Product Code(s)** 200-06623,204-06626**Recommended use of the chemical and restrictions on use****Recommended Use** For research use only.**Uses advised against** Seek expert judgment when using for purposes other than those recommended.**Details of the supplier of the safety data sheet****Manufacturer Address**

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2. HAZARDS IDENTIFICATION

GHS classification**Classification of the substance or mixture****Flammable liquids**

Category 4

Acute aquatic toxicity

Category 3

Chronic aquatic toxicity

Category 3

Pictograms**Signal word**

Warning

Hazard statements

H227 - Combustible liquid

H402 - Harmful to aquatic life

H412 - Harmful to aquatic life with long lasting effects

Precautionary statements-(Prevention)

Avoid release to the environment Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking Wear protective gloves/protective clothing/eye protection/face protection

Precautionary statements-(Response)

In case of fire: Use suitable extinguishing media for extinction

Precautionary statements-(Storage)

Store in a well-ventilated place. Keep cool

Precautionary statements-(Disposal)

Dispose of contents/container to an approved waste disposal plant

Others**Other hazards**

Not available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Single Substance or Mixture

Substance

Formula(CH₃)₂N(CH₂)₆N(CH₃)₂

Chemical Name	Molecular weight	CAS RN	Weight-%
N,N,N',N'-Tetramethyl-1,6-hexanediamine	172.31	111-18-2	98.0

Impurities and/or Additives: Not applicable

4. FIRST AID MEASURES

First aid measures

Eye contact Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.

Skin contact Wash skin with soap and water.

Inhalation Remove to fresh air.

Ingestion Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician or poison control center immediately. Do not induce vomiting without medical advice.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing media

Carbon dioxide (CO₂). Foam. Extinguishing powder. Sand.

Specific hazards arising from the chemical

Thermal decomposition can lead to release of irritating and toxic gases and vapors.

Explosion data

Sensitivity to Mechanical none.

Impact

Sensitivity to Static Discharge none.

Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions, protective equipment and emergency procedures Ensure adequate ventilation, especially in confined areas.

Environmental precautions

Environmental precautions See Section 12 for additional ecological information.

Methods and material for containment and cleaning up

Methods and material for containment and cleaning up Absorb dry sand, earth, sawdust and the waste. Collect empty container that can be sealed.

Methods for cleaning up Pick up and transfer to properly labeled containers.

7. HANDLING AND STORAGE

Precautions for safe handling

Technical measures Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use with local exhaust ventilation.

Protective measures Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage conditions Keep container protect from light, store in well-ventilated place at room temperature (preferably cool). Keep container tightly closed.

Packaging materials Glass.

Incompatible materials Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering controls

In case of indoor workplace, seal the source or use a local exhaust system. Provide the safety shower facility, and hand- and eye-wash facility. And display their position clearly.

Exposure limits Not applicable

Personal protective equipment

Respiratory protection Protective mask

Hand protection chemical protective gloves (JIS T 8116)

Eye protection protective eyeglasses or chemical safety goggles (JIS T 8147)

Skin and body protection Long-sleeved work clothes

General hygiene considerations

Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form

Color Colorless - slightly yellow

Turbidity clear

Appearance liquid

Odor

Pungent odor

pH

no data available

Melting point/freezing point

129 °C

Boiling point, initial boiling point and boiling range

210 °C

Flash point

75 °C

Evaporation rate:

no data available

Flammability (solid, gas):

no data available

Upper/lower flammability or explosive limits

Upper:

no data available

Lower:

no data available

Vapour pressure

no data available

Vapour density

no data available

Specific Gravity / Relative density

0.797 – 0.804 g/m L (20°C)

Solubilities

water : Very soluble . Ethanol , acetone : soluble .

n-Octanol/water partition coefficient:(log Pow)

no data available

Auto-ignition temperature:

no data available

Decomposition temperature:	no data available
Viscosity (coefficient of viscosity)	no data available
Dynamic viscosity	no data available
Particle characteristics	no data available

10. STABILITY AND REACTIVITY

Stability

Chemical stability	May be altered by light.
Reactivity	no data available

Hazardous reactions

None under normal processing

Conditions to avoid

Extremes of temperature and direct sunlight, Heat, flames and sparks, static electricity, spark

Incompatible materials

Strong oxidizing agents

Hazardous decomposition products

Carbon monoxide (CO), Carbon dioxide (CO₂), Nitrogen oxides (NO_x)

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
N,N,N',N'-Tetramethyl-1,6-hexanediamine	316 - 464 mg/kg (Rat)	> 400 mg/kg (Rabbit)	> 0.41 mg/L (Rat) 4 h

Chemical Name	Acute toxicity -oral- source information	Acute toxicity -dermal- source information	Acute toxicity -inhalation gas- source information
N,N,N',N'-Tetramethyl-1,6-hexanediamine	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Chemical Name	Acute toxicity -inhalation vapor- source information	Acute toxicity -inhalation dust- source information	Acute toxicity -inhalation mist- source information
N,N,N',N'-Tetramethyl-1,6-hexanediamine	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.	Based on the NITE GHS classification results.

Skin irritation/corrosion

Chemical Name	Skin corrosion/irritation source information
N,N,N',N'-Tetramethyl-1,6-hexanediamine	Based on the NITE GHS classification results.

Serious eye damage/ irritation

Chemical Name	Serious eye damage/irritation source information
N,N,N',N'-Tetramethyl-1,6-hexanediamine	Based on the NITE GHS classification results.

Respiratory or skin sensitization

Chemical Name	Respiratory or Skin sensitization source information
N,N,N',N'-Tetramethyl-1,6-hexanediamine	Based on the NITE GHS classification results.

Reproductive cell mutagenicity

Chemical Name	germ cell mutagenicity source information
N,N,N',N'-Tetramethyl-1,6-hexanediamine	Based on the NITE GHS classification results.

Carcinogenicity

Chemical Name	Carcinogenicity source information
N,N,N',N'-Tetramethyl-1,6-hexanediamine	Based on the NITE GHS classification results.

Reproductive toxicity

Chemical Name	Reproductive toxicity source information
N,N,N',N'-Tetramethyl-1,6-hexanediamine	Based on the NITE GHS classification results.

STOT-single exposure

Chemical Name	STOT -single exposure- source information
N,N,N',N'-Tetramethyl-1,6-hexanediamine	Based on the NITE GHS classification results.
STOT-repeated exposure	
Chemical Name	STOT -repeated exposure- source information
N,N,N',N'-Tetramethyl-1,6-hexanediamine	Based on the NITE GHS classification results.
Aspiration hazard	
Chemical Name	Aspiration Hazard source information
N,N,N',N'-Tetramethyl-1,6-hexanediamine	Based on the NITE GHS classification results.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
N,N,N',N'-Tetramethyl-1,6-hexanediamine 111-18-2	ErC50 : Pseudokirchneriella subcapitata 71 mg/L 72h	LC50 : Cyprinus carpio = 75mg/L 96 h	N/A	N/A

Persistence and degradability

No information available

Bioaccumulative potential

No information available

Mobility

Chemical Name	Partition coefficient
N,N,N',N'-Tetramethyl-1,6-hexanediamine 111-18-2	1.99

Mobility in soil

No information available

Other Data

No information available

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Disposal of wastes

Disposal should be in accordance with applicable regional, national and local laws and regulations.

Precautionary including method of disposing contaminated packaging Disposal should be in accordance with applicable regional, national and local laws and regulations.

14. TRANSPORT INFORMATION

DOT

UN/ID No

Not regulated

Proper shipping name:

Not applicable

UN classification

Subsidiary hazard class

Packing group

Marine pollutant

Not applicable

IATA

UN/ID No

Not regulated

Proper shipping name:

-

UN classification

Subsidiary hazard class
Packing group
Environmentally Hazardous Substance Not applicable

IMDG Not regulated
UN/ID No -
Proper shipping name:
UN classification
Subsidiary hazard class
Packing group
Marine pollutant (Sea) Not applicable

15. REGULATORY INFORMATION

US Federal Regulations

SARA 313
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	CAS RN	Weight-%	SARA 313 - Threshold Values %
N,N,N',N'-Tetramethyl-1,6-hexanediamine - 111-18-2	111-18-2	98.0	N/A

SARA 311/312 Hazard Categories

Acute health hazard No
Chronic Health Hazard No
Fire hazard No
Sudden release of pressure hazard No
Reactive Hazard No

CWA (Clean Water Act)
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

California Proposition 65
This product does not contain any chemicals regulated by Proposition 65

U.S. State Right-to-Know Regulations
This product does not contain any substances regulated by state right-to-know regulations

U.S. EPA Label Information
EPA Pesticide Registration NumberNot applicable

16. OTHER INFORMATION

Issue Date 05-Jun-2025
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Revision Note
No information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet