

SAFETY DATA SHEET

Issue Date 02-Dec-2025
Revision Number 2.06

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

Product identifier

Product Name Triethylenetetramine (mixture of ethyleneamine)
Other means of identification
Product Code(s) 206-02703,200-02706

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**

FUJIFILM Wako Pure Chemical Corporation
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Distributor

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2. HAZARDS IDENTIFICATION

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

Acute toxicity - Dermal	Category 3
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Skin sensitization	Category 1
Specific target organ toxicity (single exposure)	Category 3
Category 3 Respiratory irritation	
Acute aquatic toxicity	Category 3
Chronic aquatic toxicity	Category 2

Pictograms**Signal word**

Danger

Hazard statements

H314 - Causes severe skin burns and eye damage
 H318 - Causes serious eye damage
 H311 - Toxic in contact with skin
 H335 - May cause respiratory irritation
 H317 - May cause an allergic skin reaction
 H411 - Toxic to aquatic life with long lasting effects
 H402 - Harmful to aquatic life

Precautionary statements-(Prevention)

Do not breathe dust/fume/gas/mist/vapors/spray Wash face, hands and any exposed skin thoroughly after handling Wear protective gloves/protective clothing/eye protection/face protection Contaminated work clothing should not be allowed out of

the workplace Use only outdoors or in a well-ventilated area Avoid release to the environment

Precautionary statements-(Response)

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing Immediately call a POISON CENTER or doctor/physician

Call a POISON CENTER or doctor/physician if you feel unwell IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower If skin irritation or rash occurs: Get medical advice/attention Wash contaminated clothing before reuse

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing Call a POISON CENTER or doctor/physician if you feel unwell

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting

Collect spillage

Precautionary statements-(Storage)

Store in a well-ventilated place. Keep container tightly closed Store locked up

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 C₆H₁₈N₄

Chemical Name	Molecular weight	CAS RN	Weight-%
Triethylenetetramine	146.23	112-24-3	=<100

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. Store locked up.

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	characteristic odor
pH	no data available
Melting point/freezing point	12 °C
Boiling point, initial boiling point and boiling range	277.5 °C
Flash point	138 °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	5.1 (air=1)
Specific Gravity / Relative density	0.976 – 0.984 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:	338 °C
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 (CO ₂), Nitrogen oxides (NO _x)

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Triethylenetetramine	2500 mg/kg (Rat)	550 mg/kg (Rabbit)	N/A

Chemical Name	Acute toxicity -oral- source information	Acute toxicity -dermal- source information	Acute toxicity -inhalation gas- source information
Triethylenetetramine	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	Acute toxicity -inhalation dust-	Acute toxicity -inhalation mist-
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	vapor- source information	source information	source information
Triethylenetetramine	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
Triethylenetetramine	Based on the NITE GHS classification results.

Serious eye damage/ irritation

Chemical Name	Serious eye damage/irritation source information
Triethylenetetramine	Based on the NITE GHS classification results.

Respiratory or skin sensitization

Chemical Name	Respiratory or Skin sensitization source information
Triethylenetetramine	Based on the NITE GHS classification results.

Reproductive cell mutagenicity

Chemical Name	germ cell mutagenicity source information
Triethylenetetramine	Based on the NITE GHS classification results.

Carcinogenicity

Chemical Name	Carcinogenicity source information
Triethylenetetramine	Based on the NITE GHS classification results.

Reproductive toxicity

Chemical Name	Reproductive toxicity source information
Triethylenetetramine	Based on the NITE GHS classification results.

STOT-single exposure

Chemical Name	STOT -single exposure- source information
Triethylenetetramine	Based on the NITE GHS classification results.

STOT-repeated exposure

Chemical Name	STOT -repeated exposure- source information
Triethylenetetramine	Based on the NITE GHS classification results.

Aspiration hazard

Chemical Name	Aspiration Hazard source information
Triethylenetetramine	Based on the NITE GHS classification results.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Chemical Name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
Triethylenetetramine 112-24-3	ErC50 : Pseudokirchneriella subcapitata 27 mg/L 72 h	LC50 : Oryzias latipes var. > 110 mg/L 96 h	N/A	EC50 : Daphnia magna 31.1 mg/L 48 h

Persistence and degradability

No information available

Bioaccumulative potential

No information available

Mobility

no data available

Chemical Name	Partition coefficient
Triethylenetetramine 112-24-3	-1.4

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 UN2259
 Proper shipping name: Triethylenetetramine
 UN classification 8
 Subsidiary hazard class
 Packing group II
 Marine pollutant Yes

IATA

UN/ID No UN2259
 Proper shipping name: Triethylenetetramine
 UN classification 8
 Subsidiary hazard class
 Packing group II
 Environmentally Hazardous Substance Yes

IMDG

UN/ID No UN2259
 Proper shipping name: Triethylenetetramine
 UN classification 8
 Subsidiary hazard class
 Packing group II
 Marine pollutant (Sea) Yes

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 %
Triethylenetetramine - 112-24-3	112-24-3	=<100	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

Chemical Name	New Jersey	Massachusetts	Pennsylvania
Triethylenetetramine 112-24-3	X	X	X

U.S. EPA Label Information

EPA Pesticide Registration NumberNot applicable

16. OTHER INFORMATION

Issue Date 02-Dec-2025

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