



Material Safety Data Sheet

1. Identification of the substance/preparation and of the company/undertaking

Identification of the product

Product name: Triethylenetetramine

Manufacturer/supplier identification

Company: Guangdong Guanghua Sci-Tech Co.,Ltd

Address: No.295 Daxue Road,Shantou

PostCode:515061

E-mail: export@jinhuada.com

Emergency telephone No.: +86-754-82515813.

Fax No.: +86-754-88221999

2. Hazards identification

Classification of the substance or mixture

Acute toxicity, Oral (Category 5)

Acute toxicity, Skin (Category 3)

Skin corrosion (Category 1B)

Serious eye damage (Category 1)

Skin sensitization (Category 1)

Chronic aquatic toxicity (Category 3)

According to European Directive 67/548/EEC as amended.

Harmful if swallowed. Toxic in contact with skin. Risk of serious damage to skin and eyes. May cause sensitization by skin contact. Harmful to aquatic organisms.

Label elements

Pictogram



Signal word dangerous

Hazard statement(s)

H312 Harmful in contact with skin.

H314 Causes severe skin burns and eye damage.

H317 May cause an allergic skin reaction.

H412 Harmful to aquatic life with long lasting effects.

Precautionary statement(s)

P273 Avoid release to the environment.

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

Supplemental Hazard Statements

none

3. Composition/information on ingredients

Synonyms

Triethylenetetramine

CAS-No.: 112-24-3



Material Safety Data Sheet

M: 146.23 g/mol

Molecular formula: $C_6H_{18}N_4$

4. First aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed

5. Fire-fighting measures

Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters

Carbon oxides, Nitrogen oxides (NO_x)

Advice for firefighters

Wear self contained breathing apparatus for fire fighting if necessary.

6. Accidental release measures

Personal precautions

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Avoid breathing dust.

Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

7. Handling and storage

Precautions for safe handling

Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

8. Exposure controls/personal protection

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).



Material Safety Data Sheet

Eye protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Hygiene measures

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

9. Physical and chemical properties

Form: clear, viscous liquid

Colour: buff

Odour: not available

pH value: not available

Melting point: 12

Boiling point: 266

Ignition temperature: not available

Flash point: not available

Autoignition temperature: not available

Explosion limits

lower: not available

upper: not available

Density (25 °C) : 0.982

Bulk density: not available

Solubility in

water (20 °C) : not available

diluted acids (20 °C) : not available

Thermal decomposition: not available

10. Stability and reactivity

Chemical stability

Stable under recommended storage conditions

Conditions to avoid

no data available

Materials to avoid

Oxidizing agents

Hazardous decomposition products

Other decomposition products - no data available

11. Toxicological information

Acute toxicity

LD50 Oral - Rat - 2,500 mg/kg(Triethylenetetramine)

LD50 Dermal - Rabbit - 550 mg/kg(Triethylenetetramine)

Skin corrosion/irritation

Skin - Rabbit(Triethylenetetramine)

Result: Severe skin irritation - 24 h



Material Safety Data Sheet

Serious eye damage/eye irritation
Eyes - Rabbit(Triethylenetetramine)
Result: Severe eye irritation
Respiratory or skin sensitization
May cause allergic skin reaction.
Germ cell mutagenicity

no data available

Carcinogenicity

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Specific target organ toxicity - single exposure

no data available

Specific target organ toxicity - repeated exposure

no data available

Aspiration hazard

no data available

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin., Cough, Shortness of breath, Headache, Nausea(Triethylenetetramine)

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.(Triethylenetetramine)

12. Ecological information

Toxicity

no data available

Persistence and degradability

no data available

Bioaccumulative potential

no data available

Mobility in soil

no data available

PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Other adverse effects

Harmful to aquatic life.

13. Disposal considerations

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product.

14. Transport information

ADR/RID

UN-Number: 2259 Class: 8 Packing group: II

Proper shipping name: TRIETHYLENETETRAMINE

IMDG

UN-Number: 2259 Class: 8 Packing group: II

Proper shipping name: TRIETHYLENETETRAMINE



Material Safety Data Sheet

Marine pollutant: no

IATA

UN-Number: 2259 Class: 8 Packing group: II

Proper shipping name: Triethylenetetramine

15. Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

16. Other information

General update.

Regional representation:

This information is given on the authorised Safety Data Sheet for your country.