



MATERIAL SAFETY DATA SHEET
(According to Regulation 1272/2008/EC)

1. IDENTIFICATION OF THE SUBSTANCE AND OF THE SUPPLIER	
Product name	Trientine Hydrochloride USP
Product use	Treatment for Wilson's disease treatment
Manufacturer's name	MSN Organics Private Limited,
Address	Sy. No. 224/A, Bibinagar (Village), Bibinagar (Mandal), Yadadri Bhuvanagiri District, Telangana, Pincode: 508 126, India.
Emergency phone no.	+91-40-38265290
Fax number	+91-40-38265299
Alternate Fax	+91-40-30438799

2. HAZARDS IDENTIFICATION	
Classification of the substance: According to Regulation (EC) No1272/2008 [EU-GHS] : Acute toxicity, oral (Category 5) Hazard Statement : Harmful if swallowed. GHS Pictogram: Labeling according to Regulation (EC) No 1272/2008 [EU-GHS/CLP]	
	
Signal Word	Warning
Hazard Statement:	
H302	May be Harmful if swallowed
H312	May be Harmful in contact with skin
H332	May be Harmful if inhaled
Precautionary Statements:	
P264	Wash...thoroughly after handling
P270	Do not eat, drink or smoke when using this product
P301 + P312	If swallowed: immediately call a POISON CENTER or doctor/physician
P280	Wear protective gloves /protective clothing /eye protection /face protection
P501	Dispose of contents/container to hazardous or special waste collection point
Other hazards :	None.

CONFIDENTIAL & UNCONTROLLED

Sign:..... 

Date:..... 22/09/22

MATERIAL SAFETY DATA SHEET
(According to Regulation 1272/2008/EC)

3. COMPOSITION / INFORMATION ON INGREDIENTS				
Synonyms	N,N'-Bis(2-aminoethyl)ethane-1,2-diamine dihydrochloride			
Molecular Formula	C ₆ H ₁₈ /N ₄ .2HCl			
Molecular Weight	219.2			
CAS. No	EC. No	Index. No	Classification	Concentration
38260-01-4	1272/2008	-----	H302-Harmful R/20/21/22	99-100%

4. FIRST-AID MEASURES	
If Inhaled	Remove to fresh air. If not breathing ,give CPR (cardiopulmonary resuscitation). If breathing is difficult ,give oxygen. Get medical attention immediately.
In case of skin contact	Wash with soap and water. Get medical attention if irritation develops.
In case of eye contact	In case of eye contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention immediately.
Ingestion	Do NOT induce vomiting unless direct to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention if symptoms appear.

**CONFIDENTIAL &
UNCONTROLLED**

5. FIRE FIGHTING MEASURES	
Suitable extinguishing media	Use fire-extinguishing media appropriate for surrounding materials. Water. Foam. Dry chemical or CO ₂ .
Specific hazards arising from the chemical	No unusual fire or explosion hazards noted
Special protective equipment and precautions for fire fighters	Wear suitable protective equipment.
Fire-fighting equipment /instructions	Use water spray to cool unopened containers. As with all fires, evacuate personnel to a safe area. Firefighters should use self-contained breathing equipment and protective clothing.



MATERIAL SAFETY DATA SHEET
(According to Regulation 1272/2008/EC)

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation. Avoid inhalation of dust from the spilled material. Wear appropriate personal protective equipment.

Methods and materials for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid the generation of dusts during clean-up. Clean surface thoroughly to remove residual contamination.

7. HANDLING AND STORAGE

Precautions for safe handling:

As a general rule, when handling USP Reference Standards, avoid all contact and inhalation of dust, mists, and/or vapors associated with the material. Clean equipment and work surfaces with suitable detergent or solvent after use. After removing gloves, wash hands and other exposed skin thoroughly.

Conditions for safe storage:

Preserve under an inert gas in tight, light-resistant containers and store in refrigerator (5°C±3°C).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Trientine Hydrochloride USP	OEL {TWA}	0.5 mg/m ³
-----------------------------	-----------	-----------------------

CONFIDENTIAL & UNCONTROLLED

Personal protective equipment:

Glasses, Gloves, Respirator, Particulate etc.

Appropriate engineering controls:

Airborne exposure should be controlled primarily by engineering controls such as general dilution ventilation, local exhaust ventilation, or process enclosure. Local exhaust ventilation is generally preferred to general exhaust because it can control the contaminant at its source, preventing dispersion into the work area. An industrial hygiene survey involving air monitoring may be used to determine the effectiveness of engineering controls. Effectiveness of engineering controls intended for use with highly potent materials should be assessed by use of nontoxic surrogate materials. Local exhaust ventilation such as a laboratory fume hood or other vented enclosure is recommended, particularly for grinding, crushing, weighing, or other dust-generating procedures.

Individual protection measures, such as personal protective equipment

Eye/face protection

Safety glasses with side shields are recommended. Face shields or goggles may be required if splash potential exists or if corrosive materials are present. Approved eye protection (e.g., bearing the ANSI Z87 or CSA stamp) is preferred. Maintain eyewash facilities in the work area.

Skin protection, Hand protection

Chemically compatible gloves. For handling solutions, ensure that the glove material is protective against the solvent being used. Use handling practices that minimize direct hand contact. Employees who are sensitive to natural rubber (latex) should use nitrile or other synthetic non latex gloves. Use of powdered latex gloves should be avoided due to the risk of latex allergy.

Other: For handling of laboratory scale quantities, a cloth lab coat is recommended. Where significant quantities are handled, work clothing may be necessary to prevent take-home



MATERIAL SAFETY DATA SHEET
(According to Regulation 1272/2008/EC)

contamination.

9. PHYSICAL AND CHEMICAL PROPERTIES	
Appearance:	White to pale yellow crystalline powder.
Physical state:	Solid
Odor:	No data available
pH:	7 - 8.5 (1% aqueous solution)
Melting point/freezing point:	121 - 123 °C
Boiling point:	No data available
Ignition temperature:	No data available
Lower explosion limit:	No data available
Upper explosion limit:	No data available
Solubility:	Freely soluble in water

**CONFIDENTIAL &
UNCONTROLLED**

10. STABILITY AND REACTIVITY	
Chemical stability:	Stable under recommended storage conditions
Conditions to avoid:	No data available.
Hazardous decomposition products:	Irritating and/or toxic fumes or gases. Emits toxic fumes under fire conditions. NOx. Cl-
Possibility of hazardous reactions	No dangerous reaction known under conditions of normal use.
Incompatible materials	Strong oxidizing agents

11. TOXICOLOGICAL INFORMATION	
Lethal Dose LD ₅₀ Oral (Rat): 2285mg/kg.	
Inhalation: May cause irritation to the respiratory system. May cause allergy or asthma symptoms or breathing difficulties if inhaled.	
Skin contact: May cause an allergic skin reaction.	

MATERIAL SAFETY DATA SHEET
(According to Regulation 1272/2008/EC)

Eye contact: Causes serious eye irritation.

Respiratory or skin sensitization:

No data available.

Carcinogenicity:

Trientine HCl USP was not carcinogenic.

Mutagenicity:

Trientine HCl USP was not mutagenic.

Reproductive toxicology & Teratogenicity:

Trientine HCl USP was not teratogenic.

Specific target organ toxicity - single exposure:

No data available.

Specific target organ toxicity - repeated exposure:

No data available.

Aspiration hazard:

No data available.

Potential health effects:

Inhalation: May be harmful if inhaled.

Ingestion: May be harmful if swallowed.

Skin: May be Harmful in contact with skin.

**CONFIDENTIAL &
UNCONTROLLED**

12. ECOLOGICAL INFORMATION

Eco toxicity: No ecotoxicity data noted for the ingredient(s).

Persistence and degradability: No data is available on the degradability of this product.

Bio-accumulative potential: Not available.

Mobility in soil: Not available.

Other adverse effects: Not available.

13. DISPOSAL CONSIDERATIONS

Product residues: This material and its container must be disposed of in a safe manner.

Contaminated packaging: Empty containers should be taken to an approved waste handling site



MATERIAL SAFETY DATA SHEET
(According to Regulation 1272/2008/EC)

for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

14. TRANSPORT INFORMATION

Not regulated for transport under USDOT, IATA, or IMDG regulations.

15. REGULATORY INFORMATION

This safety data sheet complies with the requirements of Regulation (EC) No. 1272/2008.

16. OTHER INFORMATION

Text of H-code(s) and R-phrase(s) mentioned in Section 3

H302 : May be Harmful if swallowed

R20/21/22 : Harmful by inhalation, in contact with skin and if swallowed.

Notice: The information and recommendations in this safety data sheet are to the best of our knowledge, accurate at the date of issue. Nothing herein shall be deemed to create any warranty expressed or implied. It is the responsibility of the user to determine the applicability of this information and the suitability of the material for any particular purpose.

**CONFIDENTIAL &
UNCONTROLLED**