



MATERIAL SAFETY DATA SHEET

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Issue Date:

1- Chemical Product Information and Company Identification.

Product Name: : D-(-)-Cystine reference standard, Anstan[®].
Synonym: : D-(+)-3,3'-Dithiobis(2-aminopropanoic acid).
Product code: : BS13965.
CAS Number: : 349-46-2.
Company Name: : Briti Scientific.
Company Address: : Plot No:78/B/13, SY-79,Phase-VI, Jeedimetla,Hyderabad-500 055.
Telangana, India.

Section 2- Composition / Information on Ingredients.

CAS No.	Chemical Name	Mol. Formula
349-46-2.	D-(+)-3,3'-Dithiobis(2-aminopropanoic acid).	C ₆ H ₁₂ N ₂ O ₄ S ₂ .

Section 3- Hazards Identification.

Classification

Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Acute oral toxicity: Category 4
Skin Corrosion/Irritation: Category 2
Serious Eye Damage/Eye Irritation: Category 2
Specific target organ toxicity (single exposure): Category 3
Target Organs - Respiratory system.

Label Elements

Signal Word: Warning

Hazard Statements

Harmful if swallowed.
Causes skin irritation.
Causes eye irritation.
May cause respiratory irritation.



USA: #1004, Boston, Massachusetts, 02116, United States. India: Jeedimetla, Hyderabad-500 055, Telangana.

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Precautionary Statements

Prevention

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

Use only outdoors or in a well-ventilated area.

Do not eat, drink or smoke when using this product.

Avoid breathing dust/fume/gas/mist/vapors/spray.

Wash face, hands and any exposed skin thoroughly after handling.

Response

Call a POISON CENTER or doctor/physician if you feel unwell.

Inhalation

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

Skin

IF ON SKIN: Wash with plenty of soap and water.

Take off contaminated clothing and wash before reuse.

If skin irritation occurs: Get medical advice/attention.

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing If eye irritation persists: Get medical advice/attention.

Ingestion

Rinse mouth

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.

Storage

Store locked up.

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

Disposal

Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC)

Other hazards

May be harmful in contact with skin. May be harmful if inhaled.

Section 4- First Aid Measures.

Eye Contact: Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if symptoms occur.

Skin Contact: Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.

Ingestion: Do NOT induce vomiting. Get medical attention.

Most important symptoms and effects: No information available.

Notes to Physician: Treat symptomatically.





Section 5- Fire Fighting Measures.

Suitable Extinguishing Media: Water spray, carbon dioxide (CO₂), dry chemical, alcohol-resistant foam

Unsuitable Extinguishing Media: No information available.

Flash Point: No information available.

Method - No information available.

Autoignition Temperature: No information available.

Explosion Limits

Upper No data available

Lower No data available

Sensitivity to Mechanical Impact: No information available.

Sensitivity to Static Discharge: No information available.

Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products

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

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.

NFPA

Health	Flammability	Instability	Physical hazards
2	1	0	N/A

Section 6- Accidental Release Measures.

Personal Precautions: Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation.

Environmental Precautions: Should not be released into the environment. See Section 12 for additional Ecological Information.

Methods for Containment and Clean Up:

Sweep up and shovel into suitable containers for disposal. Avoid dust formation.

Section 7- Handling and Storage.

Handling: Ensure adequate ventilation. Wear personal protective equipment/face protection. Avoid contact with skin, eyes or clothing. Avoid ingestion and inhalation. Avoid dust formation.

Storage: Keep containers tightly closed in a dry, cool and well-ventilated place. Incompatible Materials. Strong oxidizing agents.





Section 8- Exposure Control/Personal Protection.

Exposure Guidelines: This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Engineering Measures: Ensure adequate ventilation, especially in confined areas. Ensure that eye wash stations and safety showers are close to the workstation location.

Personal Protective Equipment

Eye/face Protection: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin and body protection: Wear appropriate protective gloves and clothing to prevent skin exposure.

Respiratory Protection: No protective equipment is needed under normal use conditions.

Hygiene Measures:

Handle in accordance with good industrial hygiene and safety practice.

Section 9- Physical and Chemical Properties.

Appearance:	White powder to crystal.
Odor:	No information available.
Odor Threshold:	No information available.
pH:	No information available.
Melting Point/Range:	265°C.
Boiling Point/Range:	No information available.
Flash Point:	No information available.
Evaporation Rate:	No information available.
Flammability (solid,gas):	Not applicable
Flammability or explosive limits:	
Upper	No information available.
Lower	No information available.
Vapor Pressure	No information available.
Density	No information available.
Solubility	Soluble in water.
Partition coefficient; n-octanol/water:	No data available.
Autoignition Temperature:	No data available.
Decomposition Temperature:	No data available.
Viscosity:	No data available.
Molecular formula:	$C_6H_{12}N_2O_4S_2$.
Molecular Weight:	240.30g/mol.





Section 10- Stability and Reactivity.

Reactive Hazard: None known, based on information available

Stability: Stable under normal conditions.

Conditions to Avoid: Incompatible products. Keep away from open flames, hot surfaces and sources of ignition.

Incompatible Materials: Strong oxidizing agents

Hazardous Decomposition Products: Nitrogen oxides (NO_x), Carbon monoxide (CO), Carbon dioxide (CO₂), Sulfur oxides.

Hazardous Polymerization: Hazardous polymerization does not occur.

Hazardous Reactions: None under normal processing.

Section 11- Toxicological Information.

Acute Toxicity

Product Information: No acute toxicity information is available for this product.

Toxicologically Synergistic Products: No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation: Irritating to eyes, respiratory system and skin.

Sensitization: No information available.

Mutagenic Effects: No information available.

Reproductive Effects: No information available.

Developmental Effects: No information available.

Teratogenicity: No information available.

STOT - single exposure: Respiratory system.

STOT - repeated exposure: None known.

Aspiration hazard: No information available.

Symptoms / effects, both acute and delayed: No information available.

Endocrine Disruptor Information: No information available.

Other Adverse Effects: The toxicological properties have not been fully investigated.

Section 12- Ecological Information.

Ecotoxicity: Do not empty into drains.

Persistence and Degradability: Soluble in water Persistence is unlikely based on information available.

Bioaccumulation/ Accumulation: No information available.

Mobility: Will likely be mobile in the environment due to its water solubility.





Section 13- Disposal Considerations.

Waste Disposal Methods: Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

Section 14- Transport Information.

DOT: Not regulated
TDG: Not regulated
IATA: Not regulated
IMDG/IMO: Not regulated

Section 15- Regulatory Information.

Legend:

TSCA - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

TSCA 12(b) - Notices of Export: Not applicable.

U.S. Federal Regulations

SARA 313: Not applicable.

SARA 311/312 Hazard Categories See section 2 for more information

CWA (Clean Water Act): Not applicable.

Clean Air Act: Not applicable.

OSHA - Occupational Safety and Health Administration: Not applicable.

CERCLA: Not applicable.

California Proposition 65: This product does not contain any Proposition 65 chemicals.

Section 16- Other Information.

Briti Scientific 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. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

