

MATERIAL SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

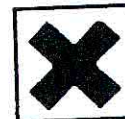
Product Name: Dithiothreitol
 Catalogue Number: **CD-4070-13, CD-4070-4**
 Synonyms: DL-1,4-Dithiothreitol; DTT; Cleland's Reagent.
 Chemical formula: $C_4H_{10}O_2S_2$
 Intended Use: Laboratory reagent
 Company Name: Denville Scientific Inc.
 Address: P.O. Box 4588, Metuchen, NJ 08840-4588, USA
 Telephone: 908-757-7577
 Fax: 908-757-7551
 Email: info@denvillescientific.com

2. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS Number	EC Number	Amount	Hazard Classification
Dithiothreitol	3483-12-3	222-468-7	98%	Xn: R20/21/22; Xi: R36/37/38

3. HAZARDS IDENTIFICATION

HARMFUL
 Harmful by inhalation, in contact with skin and if swallowed.
IRRITANT
 Irritating to eyes, respiratory system and skin.



4. FIRST AID MEASURES

Ingestion: Do not induce vomiting. Wash out mouth with water provided that the casualty is conscious. Seek medical attention.
Inhalation: Remove to fresh air and keep warm. Treat symptomatically. Seek medical attention if irritation or discomfort occurs.
Skin: Wash the affected area thoroughly with water. Remove contaminated clothing. Seek medical attention if irritation or discomfort occurs.
Eyes: Flush eyes with copious amounts of water for at least 15 minutes, lifting upper and lower lids. Seek medical attention.

5. FIRE-FIGHTING MEASURES

Extinguishing Media:
 Use any media appropriate for the surrounding fire.
Special Fire Fighting Instructions:
 Wear self-contained breathing apparatus and full protective clothing.
Hazardous Combustion Products:
 Emits toxic fumes under fire conditions.

6. ACCIDENTAL RELEASE MEASURES	
Precautions:	Evacuate the area. Wear Personal Protective Equipment appropriate for the scale of the spill and potential for exposure. (See Section 8). Avoid contact with skin and eyes. Do not breath dust. Prevent contamination of drains, sewers, watercourses and ponds.
Methods for Cleaning Up:	Small amounts of material should be wiped up with a damp cloth. Vacuum clean or sweep larger spills, working carefully to avoid the generation of dust. Place in a suitable container and store pending disposal. Ventilate the area and wash the spill site with water once all material has been picked up.

7. HANDLING AND STORAGE	
Handling:	Prevent contact with skin and eyes. Do not breath dust. Do not eat, drink or smoke in the working area. Work in an extracted enclosure wearing protective clothing as required. Wash hands and exposed skin thoroughly after handling this material.
Storage:	Store in the original, tightly closed container. To avoid deterioration of the product store below 4 °C.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION	
UK Occupational Exposure Limits:	None relevant.
Engineering Controls:	Work in an extracted enclosure.
Personal Protective Equipment (PPE):	Respiratory protection: Wear respirator fitted with particulate filter. Eye protection: Wear safety glasses. Hand protection: Wear protective gloves. Body protection: Wear overall or laboratory coat. The potential for, and extent of exposure should be taken into account when determining the appropriate PPE to wear.

9. PHYSICAL AND CHEMICAL PROPERTIES	
Appearance:	White solid
Odour:	Perceptible
Melting Point:	38 - 43 °C
pH	No data
Solubility in Water:	No data
Molecular weight:	154.25


10. STABILITY AND REACTIVITY	
Stability:	Stable at normal temperatures and pressures.
Materials to Avoid:	Strong acids and bases, strong oxidizing agents.
Conditions to Avoid:	Heat, sunlight, high temperatures.
Hazardous Decomposition Products:	Carbon monoxide, carbon dioxide, sulphur oxides (SOx).
Hazardous Polymerization:	Has not been reported.

11. TOXICOLOGICAL INFORMATION	
Acute toxicity:	No data
Health Effects:	
Ingestion:	Considered HARMFUL if swallowed.
Inhalation:	Considered HARMFUL by inhalation. May cause irritation of the respiratory tract.
Skin:	Considered HARMFUL in contact with skin. May cause skin irritation.
Eyes:	May cause irritation to eyes.
Chronic Effects:	No data.

12. ECOLOGICAL INFORMATION	
Do not allow to enter soil. Prevent contamination of drains, sewers, watercourses and ponds.	

13. DISPOSAL CONSIDERATIONS	
Treat chemical residues as Special Waste.	
Dispose via a licensed professional waste disposal service.	

14. TRANSPORT INFORMATION	
UN Number:	Not applicable
Class:	Not applicable
Proper Shipping Name:	Not applicable
Packing Group:	Not applicable

15. REGULATORY INFORMATION	
Classification: HARMFUL	
Risk Phrases:	
R20/21/22 Harmful by inhalation, in contact with skin and if swallowed.	
R36/37/38 Irritating to eyes, respiratory system and skin.	
Safety Phrases:	
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.	
S36 Wear suitable protective clothing.	

16. OTHER INFORMATION	
The information provided in this data sheet is correct to the best of our knowledge at the date of publication. It is intended to provide guidance in the safe handling, use, storage, transportation and disposal of the material. The information does not constitute the user's own assessment of workplace risk as required by UK legislation currently in force. Only competent persons within a suitably controlled environment should handle chemicals.	
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