



Research Products International Corp.

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL IDENTIFICATION

PRODUCT NAME: D,L-DITHIOTHREITOL [DTT] [CLELAND'S REAGENT]
COMMON NAME: DTT
RPI CATALOG #: D11000
SUPPLIER'S NAME: Research Products International Corp.
SUPPLIER'S ADDRESS: 410 N. Business Center Dr.
Mt. Prospect, IL 60056
EMERGENCY CONTACT: 1-800-424-9300
OTHER INFORMATION: 847-635-7330

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

CAS #: 3483-12-3
EINECES #: 248-531-9
MOLECULAR FORMULA: $C_4H_{10}O_2S_2$

SYNONYMS: 2,3-BUTANEDIOL, 1,4-DIMERCAPTO-, DL-THREO- * 2,3-BUTANEDIOL, 1,4-DIMERCAPTO-, (R*,R*)- (+)- (9CI) *
CLELAND'S REAGENT * DL-THREO-1,4-DIMERCAPTO-2,3-BUTANEDIOL * (R*,R*)-(+)-1,4-DIMERCAPTO-2,3-BUTANEDIOL *
DITHIOTHREITOL * DL-DITHIOTHREITOL * DL-1,4-DITHIOTHREITOL * RAC-DITHIOTHREITOL *

SECTION 3 - HAZARDS IDENTIFICATION

Label precautionary statements: Irritant. Irritating to eyes, respiratory system and skin. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing.

Target organ(s): central nervous system.

SECTION 4 - FIRST-AID MEASURES

If swallowed, wash out mouth with water provided person is conscious. Call a physician. If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately wash skin with soap and copious amounts of water. In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

SECTION 5 - FIRE FIGHTING MEASURES

Extinguishing media: carbon dioxide, dry chemical powder or appropriate foam.

Special fire fighting procedures: wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Use water spray to cool fire-exposed containers.

Unusual fire and explosions hazards: emits toxic fumes under fire conditions.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Evacuate area. Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves. Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

SECTION 7 - HANDLING AND STORAGE

Refer to section 8.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Wear appropriate NIOSH/MSHA-approved respirator, chemical-resistant gloves, safety goggles, other protective clothing. Use only in a chemical fume hood. Safety shower and eye bath. Do not breathe dust. do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure. Wash thoroughly after handling. Discard contaminated clothing and shoes. Keep tightly closed. Store in a cool dry place.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Physical Properties:

Melting Point:	41 - 44°C	Flash Point:	235°F
Solubility:	water	pH:	4.0 - 6.0

SECTION 10 - STABILITY AND REACTIVITY

Stability: stable. May decompose on exposure to moist air or water.

Incompatibilities: bases, oxidizing agents, reducing agents, alkali metals.

Hazardous combustion or decomposition products: carbon monoxide, carbon dioxide, sulfur oxides, hydrogen sulfide gas.

Hazardous polymerization: will not occur.

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute effects: material is irritating to mucous membranes and upper respiratory tract. May be harmful by inhalation, ingestion, or skin absorption. Causes eye and skin irritation. Exposure can cause nausea, headache and vomiting, CNS depression. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. RTECS #: XO8576500. Only selected registry of toxic effects of chemical substances (RTECS) data is presented here. See actual entry in RTECS for complete information.

Target organ(s): central nervous system.

Toxicity data:

IPR-MUS LD ₅₀ :169 MG/KG	JMCMAR 15,600,1972
SCU-MUS LD ₅₀ :333 MG/KG	ARZNAD 22,1434,1972
IVN-MUS LD ₅₀ :94 MG/KG	ARZNAD 22,1434,1972

SECTION 12 - ECOLOGICAL INFORMATION

Data not yet available.

SECTION 13 - DISPOSAL CONSIDERATIONS

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state and local environmental regulations.

SECTION 14 - TRANSPORT INFORMATION

Non-Regulated.

SECTION 15 - REGULATORY INFORMATION

European information: Irritant. R 36/37/38, irritating to eyes, respiratory system and skin. S 26, in case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S 36, wear suitable protective clothing. Reviews, standards, and regulations OEL=MAK. NOES 1983: HZD X2950; NIS 1; TNF 35; NOS 3; TNE 627.

SECTION 16 - OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Research Products International Corp. shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.