



Material Safety Data Sheet

1M DTT

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name:	1M DTT		
Synonyms/Generic Names:	Dithiothreitol		
Product Use:	Laboratory use		
Manufacturer:	Roche NimbleGen, Inc. 500 S. Rosa Rd, Madison, WI 53719		
For More Information Call:	608-218-7600 x4 (Monday – Friday 8:00-4:30)	IN CASE OF EMERGENCY CALL: (24 Hours/Day, 7 Days/Week)	CHEMTREC 800-424-9300

2. COMPOSITION/INFORMATION ON INGREDIENTS

Weight %	Component	CAS #	EINECS# / ELINCS#	EC Classification*
14-18%	DL-Dithiothreitol	3483-12-3	Not Listed	Not Classified

* Symbol and R phrase according to EC Annex1

3. HAZARDS IDENTIFICATION

Clear, colorless solution

Routes of Entry: Skin, inhalation, ingestion.

Ingredients found on carcinogen lists:

INGREDIENT NAME	NTP STATUS	IARC STATUS	OSHA LIST	ACGIH
DL-Dithiothreitol	Not Listed	Not Listed	Not Listed	Not Listed

4. FIRST AID INFORMATION

MAY BE HARMFUL IF SWALLOWED OR ABSORBED THROUGH SKIN IN LARGE QUANTITIES.

Inhalation: May cause respiratory tract irritation. Inhalation may also cause rhinitis, sneezing, coughing. Move casualty to fresh air and keep at rest. Get medical attention.

Eyes: Irritating to eyes. Causes eye irritation, lacrimation, redness, and pain, blurred vision and conjunctivitis. In case of eye contact, rinse with plenty of water and seek medical attention.

Skin: Irritating to skin. Causes skin irritation, reddening and itching, inflammation. Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention if irritation persists or gets worse.

Ingestion: **Do Not Induce Vomiting!** Irritant. Causes gastrointestinal tract irritation, coughing, nausea, abdominal pain, vomiting, diarrhea. Wash out mouth with water and give 1-2 glasses of water or milk. Get medical attention immediately.

5. FIRE-FIGHTING MEASURES

NON-FLAMMABLE

Flash Point:	Not Applicable
Flash Point method:	Not Applicable
Autoignition Temperature:	Not Applicable
Upper Flame Limit (volume % in air):	Not Applicable
Lower Flame Limit (volume % in air):	Not Applicable

Extinguishing Media: Use suitable material for surrounding fire.

Special fire-fighting procedures: Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.

Hazardous combustion products: Emits toxic fumes under fire conditions. (See also Stability and Reactivity section).

Unusual fire and explosion hazards: None



6. ACCIDENTAL RELEASE MEASURES

Personal precautions: See section 8 for recommendations on the use of personal protective equipment.

Environmental precautions: Cleanup personnel need personal protection from inhalation and skin/eye contact. Evacuate and ventilate the area.

Absorb spill with vermiculite or other inert absorbent material, then place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Any release to the environment may be subject to federal/national or local reporting requirements.

Dispose of all waste or cleanup materials in accordance with local regulations. Containers, even when empty, will retain residue and vapors.

7. HANDLING AND STORAGE

Normal handling: See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use.

Storage: Store in cool, dry well ventilated area. Keep away from incompatible materials (see section 10 for incompatibilities).

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational exposure controls: (consult local authorities for acceptable exposure limits)

Chemical name	Regulatory List	Value and type
DL-Dithiothreitol	UK OES	Not Available
	USA OSHA PEL	Not Available
	USA ACGIH	Not Available
	USA NIOSH	Not Available
	OSHA IDLH	Not Available

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

Ventilation: Provide local exhaust, preferably mechanical.

Respiratory protection: If necessary use an approved respirator with organic vapor cartridges.

Eye protection: Wear chemical safety glasses.

Skin and body protection: Wear nitrile or rubber gloves, apron and other protective clothing appropriate to the risk of exposure.

Other Recommendations: Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear, colorless liquid
Physical state:	Liquid
Odor:	None
Odor Threshold:	Not Available
Specific Gravity:	1.000
pH:	Not Available
Melting Point/Freezing Point:	Not Available
Boiling Point/Range:	Not Available
Flammability:	Nonflammable (See section 5)
Flash point:	Nonflammable (See section 5)
Evaporation Rate (Butyl Acetate =1):	Not Available
Explosive Limits:	None (See section 5)
Vapor Pressure (at 20°C):	Not Available
Vapor Density (air =1):	Not Available
Solubility:	Completely soluble in water
Partition coefficient/n-octanol/water:	Not Available
% Volatile:	Not Available
Auto ignition Temperature:	Nonflammable (See section 5)

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10. STABILITY AND REACTIVITY

Stability: Stable

Conditions to avoid: Heat, incompatible materials.

Incompatibility: Bases, oxidizing agents, Reducing agents, Alkali metals.

Hazardous decomposition products: Carbon oxides, Sulfur oxides, Hydrogen Sulfide.

Hazardous polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Acute Effects: See section 4 for symptoms of exposure and effects. Likely routes of exposure are skin and ingestion.

Target organs: Central Nervous System.

Acute Toxicity Data:

DL-Dithiothreitol	LD50 [oral, rat]; 400 mg/kg
	LC50 [rat]; Not Available
	LD50 Dermal [rat]; Not Available

Chronic Effects: Unknown.

Teratogenicity: Not Available

Mutagenicity: Not Available

Embryotoxicity: Not Available

Synergistic Products/Effects: Not Available

12. ECOLOGICAL INFORMATION

Ecotoxicity (aquatic and terrestrial): Not Available

Persistence and Degradability: Not Available

Bioaccumulative Potential: Not Available

Mobility in Soil: Not Available

Other Adverse Effects: Not Available

13. DISPOSAL CONSIDERATIONS

RCRA: Hazardous waste? No RCRA ID number: None

Waste Residues: Carefully cleanup per spill procedures in section 6. Users should review their operations in terms of the applicable federal/nation or local regulations and consult with appropriate regulatory agencies before disposing of waste material.

Product containers: Containers, if thoroughly cleaned, preferably by rinsing three times and handling the rinse water as waste residues, may be disposed of or recycled as non-hazardous waste. Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies before discharging or disposing of waste material.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

14. TRANSPORTATION INFORMATION

DOT: Not regulated

TDG: Not regulated

PIN: Not Available

IDMG: Not regulated

Marine Pollutant: No

IATA/ICAO: Not regulated

RID/ADR: Not regulated

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15. REGULATORY INFORMATION

TSCA Inventory Status: All ingredients are listed on the TSCA inventory.

Federal and State Regulations:

RTK hazardous substances: None

SARA 302/304/311/312 extremely hazardous substances: No

SARA 313 toxic chemical notification and release reporting: No

CERCLA: Hazardous Substances: No

California Proposition 65: No

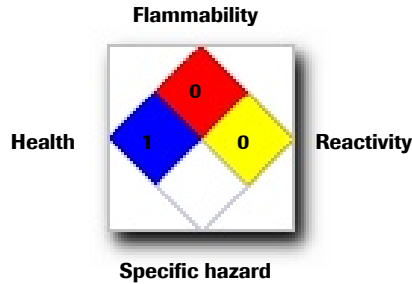
WHMIS Canada: Not regulated.

DSCL (EEC): Not regulated

HMIS (U.S.A.)

Health Hazard	1
Fire Hazard	0
Reactivity	0

National Fire Protection Association (U.S.A.)



Protective Equipment:



ADR (Europe):



TDG (Canada):



DSCL (Europe):



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16 OTHER INFORMATION

Current Issue Date: May 5, 2006
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Prepared by: Sherry Brock

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