



Expedeon Ltd.,
Unit 1A, Button End,
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MATERIAL SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

Trade Name: RunBlue[®] DTT Reducer all volumes

Manufacturer/Supplier:

Expedeon Ltd, Button End Unit 1A, Harston, Cambridgeshire, CB22 7GX, United Kingdom

Information department: Technical Services, customer support. Telephone number: +44 1223 873364

2. COMPOSITION / INFORMATION OF COMPONENTS

Mixture of the following substances with non-hazardous additions:

Chemical Name	%	CAS #	EINECS #
Dithiothreitol	2 to 15%	3483-12-3	248-531-9

3. HAZARDS IDENTIFICATION

Potential Health Effects:

Eye: IRRITANT

Direct contact can cause irritation, blurred vision, tearing and reddening.

Skin: IRRITANT

Can cause moderate skin irritation, resulting in reddening, itching, and inflammation. May be harmful if absorbed through the skin.

Inhalation:

HARMFUL by inhalation. May cause irritation to the respiratory tract.

Ingestion:

Irritating to mouth, throat and stomach. Can cause nausea, vomiting and headache. May be toxic if swallowed. May cause target organs failure and / or death.

Chronic:

Contains a substance that is a possible cancer hazard based on high dose animal studies and/or human study. Contains a substance(s) that is a possible reproductive system hazard based on high dose tests with laboratory animals.



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Special Toxic Effects

CAUTION! THE TOXICOLOGICAL PROPERTIES OF THIS MATERIAL HAVE NOT BEEN FULLY INVESTIGATED.

4. FIRST AID MEASURES

Eye:

Flush eyes with plenty of water for at least 20 minutes retracting eyelids often. Tilt the head to prevent chemical from transferring to the uncontaminated eye. Get medical attention if irritation persists.

Skin:

Wash with soap and water under a drench shower. Remove contaminated clothing, launder immediately and discard contaminated leather goods. Get medical attention immediately.

Inhalation:

Remove to fresh air. If breathing is difficult, have a trained individual administer oxygen. If not breathing, give artificial respiration and have a trained individual administer oxygen. Get medical attention immediately.

Ingestion:

If swallowed, wash out mouth with water provided person is conscious. Get medical attention immediately.

Note to Physician:

Treat symptomatically.

5. FIRE FIGHTING MEASURES

Flashpoint	ND
Lower Flammable Limit %	ND
Autoignition Temperature	ND

Extinguishing Media:

Use extinguisher media appropriate for surrounding fire.

Firefighting Techniques / Equipment: As in any fire, wear self-contained breathing apparatus pressure-demand (MHSA/NIOSH approved or equivalent) and full protective gear. Evacuate the area and fight fire from a safe distance.

Hazardous Combustion Products:

MAY EMIT TOXIC FUMES UNDER FIRE CONDITIONS.



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6. ACCIDENTAL RELEASE MEASURES

Accidental releases may be subject to special reporting requirements and other regulatory mandates. Refer to section 8 for personal protection equipment recommendations.

Spill Cleanup:

Exposure to the spilled material may be irritating. Follow personal protective equipment recommendations found in Section 8 of this MSDS. Vacuum or sweep up material and place in a disposal container. After removal, wash the contaminated area with detergent and flush thoroughly with water. Absorb liquid and place in the disposal container. Do not flush to sewer.

7. HANDLING AND STORAGE

Storage pressure: Ambient.

Handling Procedures:

DO NOT GET IN EYES, ON SKIN OR CLOTHING. Wash hands thoroughly before eating, drinking or smoking.

Storage Procedures:

Store in the refrigerator. Keep container(s) closed. The material is suitable for most general chemical storage areas, including refrigerators, but not to be stored with food.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits:

Component	OSHA PEL (ppm)	AGCIH TWA (ppm)
Dithiothreitol	ND	ND

Engineering Controls:

Use this product in a chemical fume hood to avoid overexposure.



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Personal Protective Equipment:

Eye:

An eye wash station must be available where this product is used. Wear chemically resistant safety glasses with side shields when handling this product. Wear additional eye protection such as chemical splash goggles and/or face shield when the possibility exists for eye contact with splashing or spraying liquid, or airborne material. Do not wear contact lenses. Have an eye wash station available.

Skin:

Wear protective gloves. Inspect gloves for chemical break-through and replace at regular intervals. Clean protective equipment regularly. Wash hands and other exposed areas with mild soap and water before eating, drinking, smoking and when leaving work. Have a safety shower available.

Respiratory:

No special equipment is required.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance/physical state:	Liquid solution / suspension
Odour:	Strong thiol odor.
Boiling point (°C):	ND
Melting Point (°C):	ND
Solubility in water:	ND
pH: 7.6 to 8.4	
Vapor Pressure:	ND
Vapor Density:	ND
Specific Gravity/Density:	ND
Octanol/water Partition Coeff:	ND
Volatiles:	ND
Evaporation Rate:	ND
Viscosity:	ND

10. STABILITY AND REACTIVITY

Stability:

May become unstable at elevated temperatures and/or pressure.

Conditions to avoid:

Strong oxidizing agents. Strong alkalis. Strong acids. Temperatures above the high flash point of this combustible material in combination with sparks, open flames, or other sources of ignition. Mechanical shock.



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Hazardous Decomposition Products:

Nitrogen oxides, Carbon dioxide. Carbon monoxide. Ammonia. Hydrogen. Ultraviolet light.

Hazardous Polymerization:

May violently polymerize and result in fire and explosion.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity: There are no known acute toxicity effects from this product.

Dermal / Skin: ND

Inhalation/respiratory: ND

Oral/Ingestion: The oral LD50 is 400mg/kg (rats) for Dithiothreitol

Target Organs: Eyes. Skin. Nervous system.

Mutagens: ND

Carcinogenicity: ND

Other Toxicological Information: CAUTION! THE TOXICOLOGICAL PROPERTIES OF THIS MATERIAL HAVE NOT BEEN FULLY INVESTIGATED. FOLLOW GOOD LABORATORY PRACTICES WHEN HANDLING

12. ECOLOGICAL INFORMATION

Ecotoxicological Information: No ecological information available.

Environmental Fate (Degradation, Transformation, and Persistence): Bioconcentration is not expected to occur. Biodegrades at a moderate rate.



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13. DISPOSAL CONSIDERATIONS

Regulatory Information:
Not applicable.

Disposal Method:
Clean up and dispose of waste in accordance with all federal, state, and local environmental regulations. Dispose of by incineration following Federal, State, Local, or Provincial regulations.

14. TRANSPORT INFORMATION

Proper Shipping Name: NOT REGULATED
Hazard Class: NA
Subsidiary Hazards: NA
ID number: NA
Packaging Group: NA

15. REGULATORY INFORMATION

European Union:
Product Risk Phrases: None assigned.
Product Safety Phrases: None assigned.
Product Classification: Not classified.

EINECS Number: See page 1 of this document.

United States TSCA: This product is solely for research and development purposes. It may only be handled by technically qualified individuals.

CA State Regulations: Based on available information, this material does not contain any components currently known to the State of California to cause cancer, birth defects or reproductive harm at levels which would be subject to Proposition 65.

Canada DSL/NDSL: ND

NFPA Ratings: ND

WHMIS: ND



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16. OTHER INFORMATION

HMIS rating 0 – 4:

Fire:	0
Health:	2
Reactivity:	0
Personal protection equipment	I

Abbreviations:

ND-	Not Determined
NA-	Not Applicable
SARA-	Superfund and Reauthorization Act
HMIS-	Hazard Material Information System
WHMIS-	Workplace Hazard Materials Information System
NTP-	National Toxicology Program
OSHA-	Occupational Health and Safety Administration
IARC-	International Agency for Research on Cancer
PROP 65-	California Safe Drinking Water and Toxic Enforcement Act Of 1986
EINECS-	European Inventory of Existing Commercial Chemical Substances

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.