

Material Safety Data Sheet

LD Activator (R2)

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: LD Activator, R2

Catalog Number: 7500-220

Use: This reagent is intended for the in vitro quantitative determination of Lactate Dehydrogenase in human serum

THERMO ELECTRON
189 - 199 Browns Rd
NOBLE PARK VIC 3174
AUSTRALIA
Tel: +61 3 9790 4100
Fax: +61 3 9790 4155
E-mail: info.clinicalchemistry@thermo.com

THERMO ELECTRON
331 South 104th Street
LOUISVILLE, CO 80027
U.S.A
Tel: (303) 581 6428
Fax: (303) 581 6429
E-mail: info.clinicalchemistry@thermo.com

Contact Point

Australia

Quality Assurance Manager:
Tel: +61 3 9790 4100
Mon – Fri 9:00am to 5:00pm

U.S.A

Chemtel
24 Hour Emergency Assistance
1-800-255-3924

2. HAZARD IDENTIFICATION

CLASSIFIED AS HAZARDOUS ACCORDING TO EU CRITERIA

Hazard Classification: HAZARDOUS SUBSTANCE, DANGEROUS GOODS.

Hazard Category: Toxic

RISK PHRASES

R25 Toxic if swallowed.

R32 Contact with acids liberates very toxic gas.

SAFETY PHRASES

S28 After contact with skin, wash immediately with plenty of soap and water.

Poison Schedule: None allocated.

3. COMPOSITION / INFORMATION ON INGREDIENTS

SUBSTANCE NAME	Proportion	CAS Number
SODIUM AZIDE	~ 2 %	26628-22-8

All other ingredients determined not to be hazardous according to the EU criteria.

4. FIRST AID MEASURES

Swallowed:

If swallowed, **DO NOT** induce vomiting. If conscious, give 1 to 2 glasses of water to drink. Seek urgent medical assistance.

Eye:

If material is splashed into eyes, flush with plenty of water for at least 15 minutes, ensuring eye lids are held open. Immediately transport to hospital or doctor.

Skin:

If material is splashed onto the skin, remove any contaminated clothing and wash skin thoroughly soap and water. Urgently transport to hospital or doctor.

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4. FIRST AID MEASURES (continued)

Inhaled:

Remove victim to fresh air. Do not use mouth-to-mouth method if victim inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult.

First Aid Facilities:

Eye wash fountain, safety shower and normal wash room facilities.

Advice to Doctor:

Treat symptomatically.

In case of poisoning, contact Poisons Information Centre

In Australia call Tel: 131126

In New Zealand Tel: 034747000

5. FIRE-FIGHTING MEASURES

Fire/Explosion Hazard

EXTINGUISHING MEDIA: Use dry chemical, carbon dioxide, foam or water fog.

SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus (SCBA) required for fire-fighting personnel. Use water spray to spray to cool fire-exposed surfaces and to protect personnel.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

Fire or heat will produce irritating and noxious smoke.

Flammability

Material does not burn. Runoff will pollute waterways, drains or sewers.

6. ACCIDENTAL RELEASE MEASURES

Walk cautiously. Ventilate area. Wear protective equipment to prevent skin and eye contact, as outlined under personal protection in this MSDS. Bund or dike area using vermiculite - to prevent run off into drains and waterways. Place absorbent (vermiculite or kitty litter) onto spill. Use HEPA vacuum cleaner if available, if not, use a shovel, and seal in properly labeled containers for disposal.

7. HANDLING AND STORAGE

Store in a cool place and out of direct sunlight. Store away from oxidizing agents. Keep containers closed, when not using the product. Store at 2-8°C and the reagent will be stable until the expiry date stated on the bottle and kit box labels. Store in original packages as approved by manufacturer.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Standards

No exposure standards are available for this product, however, the following exposure standards have been assigned by the National Occupational Health & Safety Commission (NOHSC) to the following component of the product:

SODIUM AZIDE

(Worksafe Australia)

[TWA]0.11 ppm 0.3 mg/m³

[STEL]Peak limitation

References: H

Peak Limitation: For some rapidly acting substances and irritants, the averaging of the airborne concentration over an eight hour period is inappropriate. These substances may induce acute effects after relatively brief exposure to high concentrations and so the exposure standard for these substances represents a maximum or "peak concentration" to which workers may be exposed.

Engineering Controls

Toxic material. Single significant exposure may cause death. Maintain adequate ventilation at all times.

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8. EXPOSURE CONTROLS / PERSONAL PROTECTION (continued)

Personal Protection Equipment

GLOVES: Nitrile or neoprene.

EYES: Chemical goggles or faceshield to protect eyes.

RESPIRATORY PROTECTION: Avoid breathing of mists. Select and use respirators in accordance with AS/NZS 1715/1716. The use of a half-face organic vapour respirator is recommended. Filter capacity and respirator type depends on exposure levels and type of contaminant. If entering spaces where the airborne concentration of a contaminant is unknown then the use of a Self-contained breathing apparatus (SCBA) with positive pressure air supply complying with AS/NZS 1715 / 1716, or any other acceptable International Standard is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: White to off white powder with no odour.

Boiling Point: Not available.

Vapour Pressure: Not available.

Specific Gravity: Not available.

Flash Point: Not applicable.

Flammability Limits: Not applicable.

Solubility in Water: Completely soluble.

Other Properties

pH: 5.73 - 6.14 @ 19 - 22°C

10. STABILITY AND REACTIVITY

STABILITY:

Stable under normal conditions of use.

HAZARDOUS DECOMPOSITION PRODUCTS:

Emits toxic fumes when heated to decomposition.

HAZARDOUS POLYMERIZATION:

Will not occur.

INCOMPATIBILITIES:

Strong mineral acids (Sulfuric, Nitric and Hydrochloric) and oxidizing agents. Lead and copper salts, when mixed with sodium azide (in solution), will produce highly unstable and explosive compounds.

CONDITIONS TO AVOID:

Strong acids and incompatibles.

11. TOXICOLOGICAL INFORMATION

There is no toxicological information available for this product, however, for the ingredient:

Sodium azide:

Oral LD50(rat): 27 mg/kg

Dermal LD50(rabbit): 20 mg/kg

Oral LDLo(human): 143 mg/kg

Systemic effects: CNS disorders, cardiovascular failure, tachycardia, drop in blood pressure, coughing, dyspnoea, spasms, headache, dizziness, nausea, vomiting, collapse, unconsciousness.

A several gram dose ingested of sodium azide produced collapse and death within 40 minutes in an adult. Pathologic findings were limited to swelling of the brain, lungs and mild fatty degeneration of liver.

ACUTE HEALTH EFFECTS

Swallowed:

Toxic if swallowed. Over exposure to sodium azide will include headache, nausea, blurred vision, dizziness, vomiting and low blood pressure. May cause irritation to mouth, throat and stomach.

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11. TOXICOLOGICAL INFORMATION (continued)

Eye:

May cause irritation to the eyes, with effects including: tearing, pain, stinging and blurred vision.

Skin:

May cause irritation to the skin, with effects including; Redness and itchiness.

Inhaled:

Mists from the product may cause irritation to the nose, throat and respiratory system with effects including: Cough, discomfort, difficulty breathing and shortness of breath.

Chronic:

Prolonged or repeated skin contact may lead to dermatitis. Prolonged or repeated exposure may lead to irreversible damage to health.

12. ECOLOGICAL INFORMATION

Environmental Degradation: Dissipation of azides in soil is not by microbial action but is strictly a chemical process, which is accelerated by increased acidity and elevated temperatures. This reaction appears to occur rapidly in soils by oxidation or by reaction of hydrazoic acid with soil organic acids to form azides of these acids which then decompose by a Curtius Rearrangement. Sodium azide appears to be stable in water in the absence of light, however, it appears to be susceptible to photo-decomposition by UV radiation. Photolysis of sodium azide may result in metal nitrides initially, with the eventual formation of the free metal and nitrogen gas.

13. DISPOSAL CONSIDERATIONS

Refer to appropriate authority in your State. Normally suitable for disposal by approved waste disposal agent.

14. TRANSPORT INFORMATION

Road Transport:

UN Number: 2811

Proper Shipping Name: TOXIC SOLID, ORGANIC, N.O.S.(Contains SODIUM AZIDE)

Dangerous Goods Class: 6.1

Packing Group: III

Emergency information(Transport):

For TOXIC AND/OR CORROSIVE SUBSTANCES - Guide No: 36

Marine Transport:

UN Number: UN2811

Proper Shipping Name: TOXIC SOLID, ORGANIC, N.O.S.(Contains SODIUM AZIDE)

Dangerous Goods Class: 6.1

Packing Group: III

Labels: TOXIC

Air Transport:

UN No: UN2811

PROPER SHIPPING NAME: TOXIC SOLID, ORGANIC, N.O.S.(Contains SODIUM AZIDE)

CLASS: 6.1

PACK GROUP: III

LABELS: TOXIC

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15. REGULATORY INFORMATION

Poison Schedule: None allocated

Inventory Status:

Australia (AICS)	Y
United States (TSCA)	Y
Canada (DSL)	Y
Europe (EINECS/ELINCS)	P
Japan (MITI)	Y
South Korea (KECL)	Y

Y = all ingredients are on the inventory.

16. OTHER INFORMATION

Date of Preparation:

Issue date: August, 2004

Key Legend Information:

NOHSC - National Occupational Health & Safety Commission [Aust]

TWA - Time Weighted Average [Int]

STEL - Short Term Exposure Limit [Int]

AICS - Australian Inventory of Chemical Substances

EPA - Environmental Protection Agency [Int]

NIOSH - National Institute for Occupational Safety and Health [US]

AS/NZS 1715 - Selection, use and maintenance of respiratory protective devices. [Aust/NZ]

AS/NZS 1716 - Respiratory protective devices. [Aust/NZ]

SAA/SNZ HB76:1997 Dangerous Goods - Initial Emergency Response Guide (IERG) [Aust/NZ]

IATA - International Aviation Transport Authority [Int]

ICAO - International Civil Aviation Organization

IMO - International Maritime Organisation. [Int]

IMDG - International Maritime Dangerous Goods

United Nations Recommendations for the Transport of Dangerous Goods and Globally Harmonized System for the classification and labelling of Chemicals. {Road Transport} [Int]

EU - European Union

[Aust/NZ] = Australian/New Zealand

[Int] = International

[US] = United States of America

Principal References:

Information supplied by manufacturer, reference sources including the public domain.

Disclaimer

This MSDS summarises our best knowledge of the health and safety hazard information of the product and how to safely handle and use the product in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace including in conjunction with other products. If clarification or further information is needed to ensure that an appropriate risk assessment can be made, the user should contact this company.

Our responsibility for products sold is subject to our standard terms and conditions which are available on request.

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END OF MSDS