

Material Safety Data Sheet
Exotoxin A from *Pseudomonas aeruginosa*
Product #160**1. PRODUCT AND COMPANY INFORMATION**

Product Name : Exotoxin A from *Pseudomonas aeruginosa*
Synonym : Exo A
Product Number : 160

Company : List Biological Laboratories, Inc.
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Campbell, CA 95008-6906, USA

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24 Hour Emergency Phones : (800) 424-9300 Chemtrec® Domestic
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2. COMPOSITION / INFORMATION ON INGREDIENTS

Component	CAS No.	Percent (%)
Exotoxin A	N/A	~22
Sodium Chloride (NaCl)	7647-14-5	~33
Sodium Phosphate, monobasic, monohydrate	10049-21-5	~15
Sodium Phosphate, dibasic, heptahydrate	7782-85-6	~30

3. HAZARDS IDENTIFICATION**Emergency Overview**

Warning. Irritant. Harmful.

Avoid contact with eyes, skin and clothing. Avoid prolonged contact with eyes, skin and clothing. Do not ingest. Avoid breathing dust. Keep container closed. Use only with adequate ventilation. Wash thoroughly after handling.

NFPA Rating

Health Hazard: 4
Fire: 0
Reactivity Hazard: 0

HMIS Rating

Health Hazard: 4*
Fire: 0
Physical Hazard: 0

Potential Health Effects

Inhalation May be harmful if inhaled. Causes respiratory tract irritation

Skin	May cause skin irritation
Eyes	May cause eye irritation
Ingestion	May be harmful if swallowed

For additional information on toxicity, please refer to Section 11.

4. FIRST AID MEASURES

General Advice

Move affected person out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution. Consult a physician.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIREFIGHTING MEASURES

Flammability of the product

Not flammable or combustible.

Extinguishing media

Use extinguishing media appropriate to surrounding fire conditions.

Protective equipment for fire-fighters

Use an approved/certified respirator.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

Wear appropriate laboratory attire including lab coat, gloves and safety glasses. Nitrile gloves are recommended when handling lyophilized material.

Methods and materials for containment and cleaning up

In case of a spill or a release, take precautions to minimize worker exposure. For spills onto surface areas, the contaminated surface should be thoroughly sprayed or rinsed for at least five minutes with at least a 0.5% sodium hypochlorite solution (equivalent to a 1:10 dilution of household bleach), then wiped dry. Autoclaving may be applied to contaminated material which is in solution or to which the autoclave steam has access. Autoclaving at $\geq 121^{\circ}\text{C}$, ≥ 15 psi in a validated cycle will render the product safe.

Hold all material for appropriate disposal as described in Section 13 DISPOSAL CONDITIONS.

7. HANDLING AND STORAGE

Precautions for safe handling

Wear appropriate laboratory attire including lab coat, gloves and safety glasses. Nitrile gloves are recommended when handling lyophilized material.

Recommended storage temperature

Store at $2 - 8^{\circ}\text{C}$ prior to and following reconstitution.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Occupational Exposure Limit

None identified.

Personal Protective Equipment

Eyes

Wear safety goggles or glasses.

Skin

Handle with appropriate gloves. Wear nitrile gloves when handling the product in the lyophilized form. Wear appropriate laboratory clothing / lab coat.

Respiratory protection

Use respirators and components tested and approved under appropriate government standards; or, ensure adequate ventilation using engineering controls, such as, a biological safety cabinet or chemical fume hood.

Hygiene measures

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state and appearance	Powder. (Lyophilized in 0.01M Sodium Phosphate, 0.15M NaCl, pH 7.5)
Color	White
Solubility	Easily soluble in water.
Odor	Data not available
Odor threshold	Data not available
Melting point / freezing point	Data not available
Initial boiling point and boiling range	Data not available
Flash point	Data not available
Evaporation rate	Data not available
Flammability (solid, gas)	Data not available
Upper/Lower flammability limit	Data not available
Upper/Lower Explosive limit	Data not available
Vapor pressure	Data not available
Vapor density	Data not available
Relative density	Data not available
Partition coefficient: n-octanol/water	Data not available
Auto-ignition temperature	Data not available
Decomposition temperature	Data not available
Viscosity	Data not available

10. STABILITY AND REACTIVITY

Stability

Stable under recommended storage conditions.

Conditions to avoid

Not applicable for this product.

11. TOXICOLOGY INFORMATION

To the best of our knowledge, the chemical, physical and toxicological properties have not been fully investigated.

Toxicity Data

Estimated lethal amount for a 100 lb (45.5 kg) human – without treatment or vaccinations – extrapolated from animal studies:

4.55 µg iv

RTECS: LD₅₀ mice, 14 µg/kg ip

Signs and Symptoms of Exposure

No data available

Additional Information

RTECS: LF2991000

Toxicity Data Reference: Liu, P, J. Inf. Dis. **130(suppl.):S94**, 1974.

12. ECOLOGICAL INFORMATION

Product is unlikely to cause a concern to the environment.

13. DISPOSAL CONSIDERATIONS

Dispose of waste in accordance with appropriate Federal, state and local regulations or applicable governmental requirements.

14. TRANSPORT INFORMATION**IATA**

UN number: UN3462

Class: 6.1

Packing group: II

15. REGULATORY INFORMATION**OSHA Hazards**

Irritant

SARA 302

Not subject to reporting requirements and there are no Threshold Planning Quantities for this product.

WHMIS

D3 Biohazardous Infectious Material

Safety Phrases

S22 – Do not breathe dust

S24/25 – Avoid contact with skin and eyes

S36/37/39 – Wear suitable protective clothing, gloves and eye/face protection

Risk Phrases

R23/24/25 – Toxic by inhalation, in contact with skin and if swallowed

California Prop. 65 Components

This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other reproductive harm.

16. OTHER INFORMATION

Version: 1.0 / Issued Date: 07/2013

CAUTION – Not fully tested. For research use only. Not for human use.

The preceding information is based on available data and is believed to be correct, but does not purport to be all inclusive and should be used as a guide in handling this material. Users should make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials, the safety and health of employees and customers, and the protection of the environment. The absence of warning must not, under any circumstance, be taken to mean that no hazard exists. List Biological Laboratories, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.