

## Section 1 – Product and Company Information

**Product Name:** Ricin Toxin B Subunit, from *Ricinus communis* Seeds

**Catalog Number:** NR-2620

**Company:**

American Type Culture Collection  
10801 University Boulevard  
Manassas, Virginia, 20110-2204, USA

**Telephone:** 800-638-6597 or 703-365-2700

**Fax:** 703-365-2745

**24 hour Emergency Number:** 703-365-2710 or 800-424-9300 (Chemtrec - transport only)

**Product Use:** This material is authorized for research, non-commercial purposes only. It is not intended for use on human subjects.

## Section 2 – Composition/Information on Ingredient

**Substance Name:** Ricin Toxin B Subunit, from *Ricinus communis* Seeds

**CAS#:** Not available

**Alternate CAS#:** Not applicable

**RTECS #:** Not available

**Synonym or Cross Reference:** Ricin B Chain, *Ricinus communis* Toxin Chain B

## Section 3 – Hazards Identification

**Health Hazards:** Ricin Toxin B Subunit, from *Ricinus communis* Seeds contain no hazardous chemicals as defined by the Occupational Safety and Health Standards, 29 CFR Part 1910.1200, Appendix A at reportable concentrations according to 29 CFR 1910.1200(e)(i). The OSHA Hazcom Standard is available online at [http://www.osha.gov/pls/oshaweb/owadisp.show\\_document?p\\_table=STANDARDS&p\\_id=10099](http://www.osha.gov/pls/oshaweb/owadisp.show_document?p_table=STANDARDS&p_id=10099).

**Biosafety:** Handle as biohazardous material under at least Biosafety Level 1 containment.

**Chemical safety:** Ricin Toxin B Subunit, from *Ricinus communis* Seeds

**HMIS Rating:**

Health: 1  
Flammability: 0  
Reactivity: 0

**NFPA Rating:**

Health: 1  
Flammability: 0  
Reactivity: 0

## Section 4 – First Aid Measures

**In case of any exposure, seek medical attention immediately.**

**Eye Exposure:** With clean hands remove any contact lenses. Immediately flush with copious amounts of water, including under the eyelids, for at least 15 minutes. Then report to your safety officer and seek medical attention.

**Biodefense and Emerging Infections Research Resources Repository**

P.O. Box 4137  
Manassas, VA 20108-4137 USA  
[www.beiresources.org](http://www.beiresources.org)

800-359-7370

Fax: 703-365-2898

E-mail: [contact@beiresources.org](mailto:contact@beiresources.org)

**Dermal Exposure:** Remove contaminated clothes. Rinse skin with plenty of water and soap if available. Then report to your safety officer and seek medical attention.

**Inhalation Exposure:** If victim is having trouble breathing or stops breathing seek emergency medical help. Do not perform CPR unless it can be done safely and you are a certified individual.

**Oral Exposure:** If a person is unconscious never give them anything to drink and seek emergency medical help. Do not induce vomiting unless directed by medical personnel. If victim begins to vomit, turn on side or stomach to prevent backflow into respiratory tract.

## Section 5 – Fire Fighting Measures

**Flammability:** Not flammable.

**Suitable Extinguishing Media:** Water spray, carbon dioxide, dry chemical powder, Halon (where regulations permit), or appropriate foam.

### Firefighting

**Protective Equipment:** Wear self-contained breathing apparatus and protective clothing to prevent inhalation, ingestion, skin and eye contact.

**Specific Hazard(s):** Emits toxic fumes under fire conditions. Responders should take into consideration the biohazard risk associated with responding to a fire in the area where the material may be stored or handled.

## Section 6 – Accidental Release Measures

**Procedure(s) of Personal Precaution(s):** At a minimum use PPE listed in Section 8. Wear laboratory coat, gloves and eye protection. Avoid contact with skin.

### Methods for Cleaning Up

**Patient/Victim:** Wash with soap and water. Work clothes should be laundered separately. Launder contaminated clothing before re-use. Do not take clothing home.

**Equipment/Environment:** Allow aerosols to settle; wearing protective clothing, gently cover spill with paper towel and apply 1% sodium hypochlorite, starting at perimeter and working towards the center; allow sufficient contact time before clean up (30 min).

**Note:** The use of additional PPE may be necessary for cleaning solutions.

## Section 7 – Handling and Storage

**Handling/User Exposure:** Handle in accordance with at least Biosafety Level 1 practices. Keep closed or covered when not in use. Wear appropriate PPE. Avoid direct contact. Avoid tasks that may create aerosols. Never lyophilize the enclosed solution.

**Suitable Storage:** The product is provided frozen on dry ice and should be stored at -20°C or colder immediately upon arrival.

**Special Requirements:** Follow established laboratory procedures when handling material.

## Section 8 – Exposure Controls/PPE

## AVOID DIRECT CONTACT

Work should be conducted under at least Biosafety Level 1. Appropriate safety procedures should always be used with this material. Laboratory safety is discussed in the following publication: U.S. Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, and National Institutes of Health.

Biosafety in Microbiological and Biomedical Laboratories. 5th ed. Washington, DC: U.S. Government Printing Office, 2007. This text is available online at <http://www.cdc.gov/od/ohs/biosfty/bmb15/bmb15toc.htm>.

**Engineering Controls:** If possible, use in a containment device such as Class I or II biological safety cabinet with easy access to a safety shower and eyewash. Avoid handling the material in a manner likely to create aerosols. Dispose all sharps in an approved sharps container.

**Respiratory Protection:** Consult your organization's Respiratory Protection Program and OSHA 1910.134 for respiratory protection guidance.

**Personal Protective Equipment:** Laboratory coat, gloves and safety glasses with side-shields should be worn.

**General Hygiene Measures:** Avoid direct contact with skin, eyes, nose or mouth. Do not swallow or inhale. Wash hands at completion of work.

## Section 9 – Physical/Chemical Properties

<b>Appearance/Physical State:</b>	Liquid (shipped as frozen solid)
<b>Molecular Weight:</b>	31.9 kDa
<b>Boiling Point/Range:</b>	Not available
<b>Melting Point/Range:</b>	Not available
<b>Specific Gravity:</b>	Not available
<b>Density:</b>	Not available
<b>Solubility:</b>	Soluble in water

## Section 10 – Stability and Reactivity

**Stability:** Ricin Toxin B Subunit, from *Ricinus communis* Seeds is stable under ambient conditions. Refer to Section 7 for handling and storage information.

**Conditions to Avoid:** None known

**Materials to Avoid:** None known

## Section 11 – Toxicological Information

### Route of Exposure

**Eye Contact:** Avoid eye contact.

**Skin Contact:** Avoid skin contact.

**Skin Absorption:** Avoid skin absorption.

**Inhalation:** Avoid inhalation.

**Ingestion:** Avoid ingestion.

**Parenteral Exposure:** Avoid parenteral exposure.

### Sensitization

**Skin:** Data not available

**Respiratory:** Data not available

**Target Organ(s) or System(s)**

Data not available

**Signs and Symptoms of Exposure**

**Skin and Mucous Membranes:** Data not available

**Inhalation:** Data not available

**Ingestion:** Data not available

**Respiratory:** Data not available

**General:** Data not available

**Toxicity Data:** CD-1 mice were injected with concentrations of NR-2620 that correspond to 10 and 100 LD<sub>50</sub> of ricin holotoxin (NR-720). No mouse injected with NR-2620 became sick or died, indicating that the ricin toxin subunit B preparation is not lethal to mice.

**Effects of Long Term or Repeated Exposure:** Data not available

**Chronic Exposure–Teratogen:** Data not available

**Chronic Exposure–Mutagen:** Data not available

**Chronic Exposure–Reproductive Hazard:** Data not available

**Section 12 – Ecological Information**

Ecotoxicological Information: No ecological information available

**Section 13 – Disposal Considerations**

Decontaminate all wastes before disposal (steam sterilization, chemical disinfection, and/or incineration).

Dispose of in accordance with applicable regulations.

**Section 14 – Transport Information**

Contact BEI Resources for transport information.

**Section 15 – Regulatory Information**

Ricin Toxin B Subunit, from *Ricinus communis* Seeds is not a Select Agent and hence is not required to be registered with the CDC.

**Section 16 – Other Information****Disclaimer of expressed and implied warranties**

The above information was compiled from sources believed to be reliable and is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge (newly discovered hazards are frequent) and is applicable to the product with regard to

appropriate safety precautions. It does not represent any guarantee of the properties of the product. ATCC<sup>®</sup>, BEI Resources and the U.S. Government shall not be held liable for any damage resulting from handling or from contact with the above product. See the appropriate Product Information Sheet, Certificate of Analysis and invoice for additional terms and conditions of sale.

## Abbreviations

ATCC – American Type Culture Collection  
BEI Resources – Biodefense and Emerging Infections Research Resources Repository  
CAS# – Chemical Abstract System Registry Number  
CDC – Center for Disease Control  
CFR – Code of Federal Regulations  
CPR – CardioPulmonary Resuscitation  
EPA – Environmental Protection Agency  
HHS – Health and Human Services  
HMIS – Hazard Material Information System  
kDa – Kilodalton  
LD<sub>50</sub> – Lethal Dose, 50%  
NIH – National Institutes of Health  
NFPA – National Fire Protection Association  
OSHA – Occupational Safety & Health Administration  
PPE – Personal Protective Equipment  
RTECS – Registry of Toxic Effects of Chemical Substances

