MATERIAL SAFETY DATA SHEET

Section 1 - Product and Company In formation

Product Name: (2S)-2-tert-Butoxycarbonylamino-pent-4-enoic acid ethyl ester

Product Number: 05R0945 Company: J & W PharmLab, LLC Street Address: 3930 Nebraska Ave

City, Stat e, Zip, Country: Levittown, PA 19056, USA

Phone: 1.215.945.6595 Fax: 1.215.945.6597

Section 2 - Composition/Information on Ingredient

CAS #: [1028191-70-9] Formula: C12H21NO4

Section 3 - Hazards Identification

Emergency Overview: Irritating to eyes and respiratory system. Lachrymator.

For additional information on toxicity, please refer to

Section 11.

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Section 4 - First Aid Measures

Oral Exposure: If swallowed, wash out mouth with water provided person is conscious. Call a physician.

Inhalation Exposure: If inhaled, remove to fresh air. If no t breathing give

artificial respiration. If breathing is difficult, give oxygen.

Dermal Exposure: In case of contact, immediately wash skin with soap and

copious amounts of water.

Eve Exposure: Assure adequate flushing of the eves by separating the evelids

with fingers.

Section 5 - Fire Fighting Measures

Flash Point: N/A

Autoignition Temperature: N/A

Flammability: N/A

Extinguishing Media: Water spray, Carbon dioxide, dry chemicals powder, or

appropriate foam.

Firefighting: Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes. Specific Hazard(s):

Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

Procedure(s) of personal Precaution(s): Wear respirator, chemical safety

goggles, rubber boots, and heavy rubber gloves.

Methods for Cleaning up: Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup i s complete.

Section 7 - Handling and Storage

Handling: User Exposure: Avoid inhalation. Avoid contact with eyes, skin, and

clothing. Avoid prolonged or repeated exposure.

Storage: Suitable: Keep tightly closed.



Section 8 - Exposure Controls / PPE

Engineering Controls: Safety shower and eye bath. Mechanical exhaust

required.

Personal Protective Equipment: Respiratory: Government approved respirator. Hand: Compatible chemical-resistant gloves. Eye: Chemical safety goggles. General Hygiene Measures: Wash thoroughly after handling. Wash

contaminated clothing before reuse.

Section 9 - Physical/Chemical Properties

Appearance For m: Colorless Liquid

Molecular Weight: 243.30 Melting/B oiling Point: N/A

Section 10 - Stability and Reactivity

Stability: Materials to avoid: Acids, Bases, Oxidizing agents Reducing agents.

Hazardous Decomposition Products:carbon monoxide, carbon dioxide, nitrogen oxides, gas

Section 11 - Toxicological Information

Rout e of Exposure: Multiple Routes: Harmful if swallowed, inhaled, or absorbed through skin. High concentrations are extremely destructive to tissues of the mucous membranes and upper respiratory tract, eyes, and skin.

Signs and Symptoms of Exposure: Material is destructive to tissue of the

mucous membranes and upper respiratory tract, eyes, and skin.

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

Appropriate Method of Disposal of Substance or Preparation: Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with a n afterburner and scrubber. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT: Not regulated TDG: Not regulated IATA: Not regulated IMDG/IMO: Not regulated

Section 15 - Regulatory Information

Not available

Section 16 - Other Information

Disclaimer: For R&D us e only. Not for drug, household or other uses. Warranty: The above information is believed to be correct but does not purport

to be all inclusive and shall be used only as a guide. J & W PharmLab, LLC, shall not be held li able for any damage resulting from handling or from con tact

with the above product.