

## 1. Identification of Substance/ Identification of Company

**Product:** Boc-Orn(2-Cl-Z)-OH  
**Catalog #:** ABO115  
**Chemical Formula:**  $C_{18}H_{25}ClN_2O_6$   
**Synonyms:** N $\alpha$ -Boc-N $\delta$ -(2-chloro-Z)-L-ornithine

**Supplier:** AAPPTec, LLC  
6309 Shepherdsville Road  
Louisville, Kentucky USA  
40228  
Telephone: 502-968-2223  
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## 2. Composition/ information on ingredients

**Substance/preparation:** Substance  
**Chemical Name:** N $\alpha$ -Boc-N $\delta$ -(2-chloro-Z)-L-ornithine  
**CAS #:** [118554-00-0]  
**EC #:** Not available

## 3. Hazards Identification

**Physical/chemical hazards:** No known hazards  
**Human health hazards:** No known hazards

## 4. First Aid Measures

### First Aid Measures

**Inhalation:** If inhaled, move person to fresh air. If not breathing, give artificial respiration.  
**Ingestion:** Never give anything by mouth to an unconscious person. Rinse mouth with water.  
**Skin Contact:** Wash off with soap and plenty of water.  
**Eye Contact:** Check for and remove any contact lenses. Flush eyes with water as a precaution.

### Effects and Symptoms

**Inhalation:** May be harmful if inhaled. May cause respiratory tract irritation.  
**Ingestion:** May be harmful if swallowed.  
**Skin Contact:** May be harmful if absorbed through skin. May cause skin irritation.  
**Eye contact:** May cause eye irritation

**Aggravating conditions:** Repeated or prolonged exposure is not known to aggravate medical condition.

## 5. Fire-fighting Measures

**Flammability of Product:** No data available

**Extinguishing Media (Small Fire):** Use a carbon dioxide or dry chemical extinguisher.

**Extinguishing Media (Large Fire):** Use water spray, fog, or foam. Do not use water jet.

**Hazardous thermal decomposition products:** Oxides of carbon (CO, CO<sub>2</sub>) and nitrogen (NO, NO<sub>2</sub>, ...) and hydrogen chloride (HCl).

**Special fire-fighting procedures:** Firefighters should wear positive pressure self-contained breathing apparatus (SCBA) and full turnout gear.

**Protection of fire-fighters:** Use an approved/certified respirator or equivalent.

## 6. Accidental Release Measures

**Personal Precautions:** Splash goggles. Full suit. Dust respirator. Boots. Gloves. A self-contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient, consult a specialist before handling this product.

**Small Spill or Leak:** Use appropriate tools to put spilled material into a convenient waste disposal container.

**Large Spill or Leak:** Use a shovel to put the spilled material into a convenient waste disposal container.

## 7. Handling and Storage

**Handling:** Keep away from heat. Keep away from sources of ignition. Do not breath dust.

**Storage:** Keep container tightly closed. Do not store above 5°C (41°F).

## 8. Exposure Controls/Personal Protection

**Engineering Measures:** Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume, or mist use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Hygiene Measures:** Wash hands after handling and before eating, smoking, using lavatory, and end of the day.

### Exposure Limits

**Ingredient Name:** N $\alpha$ -Boc-N $\delta$ -(2-chloro-Z)-L-ornithine

**Occupational Exposure Limit:** No data available

**Personal Protective Equipment**

**Skin and Body:** Lab coat

**Hands:** Gloves

**Eyes:** Safety glasses

## 9. Physical and Chemical Properties

**Physical State:** Solid

**Color:** White

**Molecular Weight:** 400.9

**Melting Point:** No data available

**Solubility:** No data available

**Flash Point:** No data available

**Explosive Properties**

Risk of explosion by mechanical impact: No data available

Risk of explosion by static discharge: No data available

## 10. Stability and Reactivity

**Stability:** Stable under recommended storage conditions.

**Conditions to Avoid:** Strong oxidizing reagents

**Hazardous Decomposition Products:** Oxides of carbon (CO, CO<sub>2</sub>) and nitrogen (NO, NO<sub>2</sub>, ...) and hydrogen chloride (HCl).

## 11. Toxicological Information

**RTECS #:** Not available

**Local Effects**

**Skin irritation:** No data available

**Acute Toxicity:** No data available

**Chronic Toxicity:** No data available

**Other Toxic Effects on Humans:** No data available

**Carcinogenic Effects:** No data available

**Mutagenic Effects:** No data available

**Reproductive Toxicity:** No data available

**Teratogenic Effects:** No data available

## 12. Ecological Information

**Ecotoxicity:** No data available

**Toxicity of the Products of Biodegradation:** This product itself and its degradation products are not toxic.

## 13. Disposal Considerations

**Methods of Disposal,**

**Waste Residues,**

**Contaminated Packaging:** Waste must be disposed of in accordance with federal, state and local environmental control regulations.

## 14. Transportation

### International Transport Regulations

#### Land-Road/Railway

**ADR/RID Class:** Not controlled under ARD

#### Sea

**IMDG Class:** Not controlled under IMDG

#### Air

**IATA-DGR Class:** Not controlled under IATA

**Special Provisions for Transport:** Not applicable

## 15. Regulatory Information

### EU Regulations

**Risk Phrases:** This product is not classified according to EU regulations.

### U.S. Federal Regulations

**TSCA:** No products were found

**SARA 302/304/311/312 extremely hazardous substances:** No products were found

**SARA 302/304 emergency planning and notification:** No products were found

**SARA 302/304/311/312 hazardous chemicals:** No products were found

**SARA 311/312 MSDS distribution-chemical inventory-hazard identification:** No products were found

**SARA 313 toxic chemical notification and release reporting:** No products were found

**Clean Water Act (CWA) 307:** No products were found

**Clean Water Act (CWA) 311:** No products were found

**Clean Air Act(CAA) 112 accidental release prevention:** No products were found

**Clean Air Act(CAA) 112 regulated flammable substances:** No products were found

**Clean Air Act (CAA) 122 regulated toxic substances:** No products were found

**HCS Classification:** Not controlled under the HCS (United States)

**State Regulations:**

**WHMIS (Canada):** Not controlled under WHMIS (Canada)

## 16. Other Information

### Hazardous Material Information System (U.S.A.)

|                     |   |
|---------------------|---|
| Health              | 0 |
| Fire Hazard         | 1 |
| Reactivity          | 0 |
| Personal Protection | A |

**National Fire Protection Association (U.S.A.)**



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