

## PRODUCT AND COMPANY IDENTIFICATION

**GHS Product Name:** Bortezomib  
**Product code:** h-311  
**Company:** PharmSintez.Lab  
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### 1.1 Product identifiers

Product name:	Bortezomib
Product Catalogue Number:	h-311
Band:	PharmSintez.Lab
CAS-No:	179324-69-7

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses:	Laboratory chemicals, Synthesis of substances.
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## Section 2: HAZARDS IDENTIFICATION

### 2.1. Classification of the substance or mixture

*Regulation (EC) No 1272/2008*

Acute toxicity - Oral	Category 2 - (H300)
Acute toxicity - Dermal	Category 2 - (H310)
Acute toxicity - Inhalation (Dusts/Mists)	Category 2 -
(H330) Specific target organ toxicity (repeated exposure)	Category 1 -
(H372)	

*Classification according to 67/548/EEC*

Hazard symbols	T+ - Very toxic
R-code(s)	Repr. cat. 2;R60 - Repr. cat. 2;R61 - T+;R26/27/28 - T;R48/23/24/25 - Xi;R36/38 - Xi;R41

### 2.2. Label Elements

Contains Bortezomib  
Signal word  
Symbols/Pictograms

Danger



Hazard statements

H300 - Fatal if swallowed  
H310 - Fatal in contact with skin  
H372 - Causes damage to organs through prolonged or repeated exposure  
H330 - Fatal if inhaled

Precautionary Statements - EU (§28, 1272/2008)  
POISON

P301 + P310 - IF SWALLOWED: Immediately call a  
CENTER or doctor/physician  
P321 - Specific treatment (see Emergency Phone Number  
on this label)  
P280 - Wear eye protection/ face protection  
P361 - Remove/Take off immediately all contaminated  
clothing P322 - Specific measures (see Emergency Phone  
Number on this label)  
P310 - Immediately call a POISON CENTER or  
doctor/physician P304 + P340 - IF INHALED: Remove  
victim to fresh air and keep at rest in a position  
comfortable for breathing  
P403 + P233 - Store in a well-ventilated place. Keep  
container tightly closed  
P320 - Specific treatment is urgent (see Emergency  
Phone Number on this label)  
P260 - Do not breathe dust/fume/gas/mist/vapors/spray

### 2.3. Other Hazards

General Hazards

Not applicable

## Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Molecular Weight 384.24  
Formula C19H25BN4O4

### 3.1 Substances

Chemical Name	EC No	CAS No	Weight %	Classification according to 67/548/EEC	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Bortezomib	-	179324-	100	Xi:R36/38-41 T+;R26/27/28 T;R48/23/24/25- Repr.Cat.3;R62-63 Repr.Cat.2;R60-61	Acute Tox. 2 Acute Tox. 2 Acute Tox. 2 STOT RE 1

Full text of R-phrases: see section 16

Full text of H- and EUH-phrases: see section 16

## Section 4: FIRST AID MEASURES

### 4.1. Description of first aid measures

General advice  
physician.  
Inhalation

Immediate medical attention is required. If symptoms persist, call a

Immediate medical attention is required. Remove to fresh air. If not breathing, give artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. Move to fresh air in case of accidental inhalation of vapors. If symptoms persist, call a physician.

Skin Contact

Immediate medical attention is required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Wash

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Eye contact	contaminated clothing before reuse. Wash off immediately with plenty of water. If skin irritation persists, call a physician. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. Call a physician immediately. Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. If symptoms persist, call a physician.
Ingestion	Do NOT induce vomiting. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person. Drink plenty of water. Clean mouth with water and drink afterwards plenty of water. Call a physician.
Self-protection of the first aider clothing.	Use personal protective equipment as required. Avoid contact with skin, eyes or  Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination.

**4.2. Most important symptoms and effects, both acute and delayed**

Symptoms No information available.

**4.3. Indication of any immediate medical attention and special treatment needed**

Note to physicians Treat symptomatically.

**Section 5: FIRE FIGHTING MEASURES****5.1. Extinguishing media**

Suitable Extinguishing Media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**5.2. Special hazards arising from the substance or mixture**

Specific hazards arising from the chemical No information available

Hazardous combustion products Carbon oxides. Nitrogen oxides (NOx).

**5.3. Advice for firefighters**

Special protective equipment for fire-fighters Wear self-contained breathing apparatus and protective suit. Wear self contained breathing apparatus for fire fighting if necessary.

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## Section 6: ACCIDENTAL RELEASE MEASURES

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### 6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions upwind of Use personal protective equipment as required. Keep people away from and spill/leak. Evacuate personnel to safe areas.

For emergency responders Use personal protection recommended in Section 8.

### 6.2. Environmental precautions

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. See Section 12 for additional Ecological Information.

### 6.3. Methods and material for containment and cleaning up

Methods for containment sheet or tarp to minimize spreading. Dike far ahead of liquid spill for later disposal.

Methods for cleaning up sheet or tarp Use personal protective equipment as required. Cover powder spill with plastic to minimize spreading and keep powder dry. Take up mechanically, placing in appropriate containers for disposal. Avoid creating dust. Clean contaminated surface thoroughly. Soak up with inert absorbent material. Dam up. Pick up and transfer to properly labeled containers. Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water. Take precautionary measures against static discharges.

### 6.4. Reference to other sections

See Section 12: ECOLOGICAL INFORMATION.

## Section 7: HANDLING AND STORAGE

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### 7.1. Precautions for safe handling

Advice on safe handling required. Avoid contact with skin, eyes or clothing. Use personal protective equipment as required.

Wash contaminated clothing before reuse. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Use with local exhaust ventilation.

Corrosive hazard. Wear protective gloves/clothing and eye/face protection.

General Hygiene Considerations and When using do not eat, drink or smoke. Regular cleaning of equipment, work area clothing is recommended. Avoid contact with skin, eyes or clothing. Wash hands thoroughly after handling. Keep away from food, drink and animal feeding stuffs.

### 7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions reach of Keep container tightly closed in a dry and well-ventilated place. Keep out of the children. Keep containers tightly closed in a cool, well-ventilated place. Keep in properly labeled containers. Do not allow contact with air. Protect from moisture.

### 7.3. Specific end use(s)

Risk Management Methods (RMM) The information required is contained in this Material Safety Data Sheet.

## Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1. Control parameters**

Exposure Limits occupational	This product, as supplied, does not contain any hazardous materials with exposure limits established by the region specific regulatory bodies.
Derived No Effect Level (DNEL)	No information available
Predicted No Effect Concentration (PNEC)	No information available.

**8.2. Exposure controls**

Engineering Controls	Showers Eyewash stations Ventilation systems
Eye/face protection	Tight sealing safety goggles. Face protection shield.
Skin and Body Protection clothing.	Gloves made of plastic or rubber. Suitable protective clothing. Suitable protective Apron.
Respiratory protection	If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.
Environmental exposure controls	No information available.

**Section 9: PHYSICAL AND CHEMICAL PROPERTIES**

Physical State	Solid
Appearance	No information available
Odor	No information available

<b><u>Property</u></b>	<b><u>Values</u></b>
pH	No information available
Melting point/freezing point	139 °C
Boiling point	684.30 °C
Flash point	No information available
Density	1.21 g/cm <sup>3</sup>
Evaporation rate	No information available
Upper flammability limits	No information available
Lower flammability limit	No information available
Vapor pressure	No information available
Vapor density	No information available
Specific gravity	No information available
Water solubility	No information available
Solubility in other solvents	No information available
Partition coefficient	2.00
Autoignition temperature available	No information available
Decomposition temperature available	No information available
Kinematic viscosity available	No information available
Explosive properties	No information available
Oxidizing properties	No information available

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**Section 10: STABILITY AND REACTIVITY**

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**10.1. Reactivity**

Reactivity Not applicable

**10.2. Chemical stability**Stability Stable under recommended storage conditions. Sensitivity to Mechanical Impact No information available.  
Sensitivity to Static Discharge No information available.**10.3. Possibility of hazardous reactions**Hazardous polymerization No information available.  
Possibility of Hazardous Reactions None under normal processing.**10.4. Conditions to avoid**

Conditions to avoid Do not allow contact with air. Exposure to air or moisture over prolonged periods.

**10.5. Incompatible materials**

Incompatible materials Strong oxidizing agents.

**10.6. Hazardous decomposition products**

Hazardous Decomposition Products Carbon oxides. Nitrogen oxides (NOx).

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**Section 11: TOXICOLOGICAL INFORMATION**

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**11.1. Information on toxicological effects****Acute toxicity**

Product Information Product does not present an acute toxicity hazard based on known or supplied information. Unknown acute toxicity 0% of the mixture consists of ingredient(s) of unknown toxicity.

**The following values are calculated based on chapter 3.1 of the GHS document**ATEmix (oral) 5.01 mg/kg  
ATEmix (dermal) 50.01 mg/kg  
ATEmix (inhalation-dust/mist) 0.05 mg/l

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**Section 12: ECOLOGICAL INFORMATION**

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**12.1. Toxicity**Ecotoxicity May cause long lasting harmful effects to aquatic life.  
Unknown aquatic toxicity 100% of the mixture consists of components(s) of unknown hazards to the aquatic environment.**12.2. Persistence and degradability**

Persistence and degradability No information available.

**12.3. Bioaccumulative potential**

Bioaccumulation No information available.

**12.4. Mobility in soil**

Mobility No information available.

**12.5. Results of PBT and vPvB assessment**

PBT and vPvB assessment No information available.

### 12.6. Other adverse effects

Other adverse effects No information available

## Section 13: DISPOSAL CONSIDERATIONS

### 13.1. Waste treatment methods

Waste from residues/unused products Disposal should be in accordance with applicable regional, national and local laws and

regulations.  
 Contaminated packaging Do not reuse container.  
 Other Information Waste codes should be assigned by the user based on the application for which the product was used.

## Section 14: TRANSPORT INFORMATION

	<u>RID / ADR</u>	<u>IMDG</u>	<u>ICAO (air) / IATA</u>
14.1 UN/ID no	UN3249	UN3249	UN3249
14.2 Proper shipping name	Medicine, solid, toxic, n.o.s.	Medicine, solid, toxic, n.o.s.	Medicine, solid, toxic, n.o.s.
14.3 Hazard Class	6.1	6.1	6.1
14.3 Subsidiary hazard class / Labels available	No information	No information available	No information available
14.4 Packing Group	II	II	II
14.5 Environmental Hazard	Not applicable	Not applicable	Not applicable
14.6 Special Provisions	None	221	A3
	Classification code T2 Tunnel restriction code (D/E)	EmS-No F-A, S-A	

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## Section 15: REGULATORY INFORMATION

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### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### National Regulations

##### European Union

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

#### International Inventories

**All of the components in the product are on the following Inventory lists**

No information available

#### **X - Listed**

*TSCA - United States Toxic Substances Control Act Section 8(b) Inventory*

*DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List*

*EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances*

*ENCS - Japan Existing and New Chemical*

*Substances IECSC - China Inventory of Existing*

*Chemical Substances KECL - Korean Existing*

*and Evaluated Chemical Substances*

*PICCS - Philippines Inventory of Chemicals and Chemical Substances*

### 15.2. Chemical safety assessment

Chemical Safety Report

No information available

## Section 16: OTHER INFORMATION

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Full text of R-phrases referred to under sections 2 and 3

R61 - May cause harm to the unborn child  
 R60 - May impair fertility  
 R63 - Possible risk of harm to the unborn child  
 R62 - Possible risk of impaired fertility  
 R41 - Risk of serious damage to eyes  
 R26/27/28 - Also very toxic by inhalation, in contact with skin and if swallowed  
 R48/23/24/25 - Also toxic: danger of serious damage to health by prolonged exposure through inhalation, in contact with skin and if swallowed  
 R23/24/25 - Also toxic by inhalation, in contact with skin and if swallowed  
 R36/38 - Irritating to eyes and skin

Full text of H-Statements referred to under sections 2 and 3

H300 - Fatal if swallowed  
 H310 - Fatal in contact with skin  
 H330 - Fatal if inhaled  
 H372 - Causes damage to organs through prolonged or repeated exposure if inhaled  
 No information available.

Revision note

#### **Further information**

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information 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 and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Pharm-Sintez.Lab and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.

See [www.labphs.com](http://www.labphs.com) for additional terms and conditions of sale.

**Preparation Information**

PharmSintez.Lab

Product Safety – multiple

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