

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name **Bortezomib**
Product Number **2204**
Identified Uses For Research Use Only (RUO). Not intended for use in humans or animals.
 Not intended for therapeutic or diagnostic procedures.

Manufacturer/Supplier Cell Signaling Technology, Inc.
 3 Trask Lane
 Danvers, MA 01923 USA

Phone #: 978-867-2300

2. HAZARDS IDENTIFICATION
Emergency Overview

Toxic. Contains a pharmaceutically active ingredient.
 Handling should only be performed by personnel trained and familiar with handling of potent active pharmaceutical ingredients.

Physical State

Solid

Potential Health Effects
Acute Toxicity

Eyes May cause moderate to severe irritation to eyes
 Skin May cause moderate to severe irritation to the skin
 Inhalation Toxic by inhalation
 Ingestion Toxic if swallowed

Chronic Effects

Carcinogenic effects No information available
 Mutagenic effects Substances which cause concern for man owing to possible mutagenic effects but for which the available information is not adequate for making satisfactory assessment

Reproductive toxicity No information available
 Sensitization No information available

Target organ effects No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS
Hazardous Ingredients

Chemical Name	CAS No.	Concentration
[(1S)-3-methyl-1-[[[(2R)-3-phenyl-2(pyrazine-2-carbonylamino)propanoyl]amino]butyl]boronic acid	179324-69-7	>95%

4. FIRST AID MEASURES

Eye Contact	Rinse immediately with plenty of water. Get medical attention.
Skin Contact	Rinse immediately with soap and plenty of water. Get medical attention.
Inhalation	Move to fresh air. Get medical attention.
Ingestion	Call Poison Control Center immediately. Never give anything by mouth to an unconscious person. Rinse mouth with water.
Notes to physician	Treat symptomatically.

5. FIRE FIGHTING MEASURES

Flash Point	See Section 9. Physical and Chemical Properties
Suitable Extinguishing Media	Use dry chemical powder or foam, water spray, or carbon dioxide
Special exposure hazards	Emits toxic fumes such as carbon monoxide, etc
Special protection for fire fighters	Wear self-contained breathing apparatus and protective unit
Other information	No data available

6. ACCIDENTAL RELEASE MEASURES

Personal precautions	Do not touch or walk through spilled material. Wear personal protective equipment
Environmental precautions	Do not let product enter drains.
Clean up methods	Soak up with absorbent material. Keep in suitable closed containers for disposal.
Other information	See sections 12 and 13 for additional information.

7. HANDLING AND STORAGE

Safe handling advice	Avoid contact with eyes and skin. Ensure adequate ventilation.
Storage conditions	Keep container tightly closed. Recommended storage temperature -20C.
Incompatibilities	No data available
Specific end uses	No data available

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Limits Ingredients with workplace control parameters

Chemical Name	OSHA PEL (TWA)	OSHA PEL (ceiling)	ACGIH OEL (TWA)	ACGIH OEL (STEL)
[(1S)-3-methyl-1-[[[(2R)-3-phenyl-2(pyrazine-2-carbonylamino)propanoyl]amino]butyl]boronic acid	-	-	-	-

Exposure Controls

Apply technical measures to comply with the occupational exposure limits.

Engineering Controls

Emergency eyewash and safety shower. Mechanical exhaust required.

Hygiene Measures

Do not eat, drink or smoke when handling product. Wash hands thoroughly after handling product. Wash contaminated clothing before reuse.

Personal Protective Equipment

Respiratory Protection:	In case of insufficient ventilation wear suitable respiratory equipment.
Eye Protection:	Safety glasses with side shields
Skin and body protection:	Wear suitable protective clothing, protective shoes or boots.
Hand protection:	Compatible chemical resistant gloves.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical State	solid powder
Appearance	white to beige
Odor	none
pH	no data available
Water Solubility	poorly soluble in water
Melting point/freezing point	124-140°C
Boiling point	no data available
Evaporation rate	no data available
Flash point	no data available
Autoignition temperature	no data available
Flammability limits in air	no data available
Explosive properties	none
VOC content	no data available
Decomposition temperature	no data available

10. STABILITY AND REACTIVITY

Stability	stable under normal conditions
Conditions/Materials to avoid	avoid strong oxidizing agents, protect from light and heat
Hazardous decomposition products	thermal decomposition may produce toxic gases such as carbon monoxide, carbon dioxide, nitrogen oxides

11. TOXICOLOGICAL INFORMATION

Acute Toxicity

No data available.

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

Routes of Exposure
Potential Health Effects
Acute Toxicity

Eyes	Risk of serious damage to eyes
Skin	Toxic in contact with skin
Inhalation	Toxic by inhalation
Ingestion	Toxic if swallowed

Chronic Effects

Carcinogenic effects	No information available
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Mutagenic effects	Substances which cause concern for man owing to possible mutagenic effects but for which the available information is not adequate for making satisfactory assessment
Reproductive toxicity	No information available
Sensitization	No information available
Target organ effects	no information available

12. ECOLOGICAL INFORMATION

Ecotoxicity	The environmental impact of this product has not been fully investigated.
Persistence and degradability	No data available
Bioaccumulation	No data available
Mobility	No data available

13. DISPOSAL CONSIDERATIONS

Waste Disposal Methods	Dispose of in accordance with all applicable environmental laws and regulations.
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14. TRANSPORT INFORMATION

IATA/DOT	
Proper Shipping Name	Toxic Solid, organic, n.o.s. (Bortezomib)
Hazard Class	6.1
Subsidiary Class	No information available
Packing Group	II
UN-No	UN2811

15. REGULATORY INFORMATION
International Inventories

TSCA	-
DSL/NDSL	-
EINECS/ELINCS	-
ENCS	-
IECSC	-
KECL	-
PICCS	-
AICS	-
NZIoC	-

U.S. Federal Regulations
SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product does not contain any substances regulated as hazardous air pollutants (HAPs) under Section 112 of the Clean Air Act Amendments of 1990.

U.S. State Regulations

This product does not contain any substances regulated by state right-to-know regulations.

California Proposition 65

This product does not contain any Proposition 65 chemicals.

WHMIS Hazard Class

Non-controlled

This product has been classified according to the hazard criteria of the CPR and the MSDS contains all of the information required by the CPR.

16. OTHER INFORMATION

Revision date 2012-05-22
Revision Note ***Indicates updated section

Disclaimer

The information provided on this material safety data sheet is to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.

End of Material Safety Data Sheet