

SAFETY DATA SHEET

Santa Cruz Biotechnology, Inc. Revision date 21-Jun-2018 Version 2

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name Product Code (+)-Borneol SC-239408

Recommended use of the chemical and restrictions on use For research use only. Not intended for diagnostic or therapeutic use.

Details of the supplier of the safety data sheet

Santa Cruz Biotechnology, Inc. 10410 Finnell Street Dallas, TX 75220 831.457.3800 800.457.3801 scbt@scbt.com

Emergency telephone number Chemtrec 1.800.424.9300 (Within USA) +1.703.527.3887 (Outside USA)

2. HAZARDS IDENTIFICATION

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification Flammable solids

Label elements Signal word Hazard statements Symbols/Pictograms

Precautionary Statements - Prevention

Precautionary Statements - Response

Hazards not otherwise classified (HNOC)

Hazards not otherwise classified (HNOC)

Other Information

Unknown acute toxicity

NFPA	Health hazards	
	Flammability	
	Stability	
	Physical and chemical	
	properties	

Category 2

Warning Flammable solids



Keep away from heat/sparks/open flames/hot surfaces. — No smoking Ground/bond container and receiving equipment Use explosion-proof electrical/ ventilating/ lighting/ equipment Wear protective gloves/protective clothing/eye protection/face protection

IF exposed or concerned: Get medical advice/attention In case of fire: Use CO2, dry chemical, or foam for extinction

Not applicable

HMIS

0% of the mixture consists of ingredient(s) of unknown toxicity.



0

2 2

Health hazards	0
Flammability	2
Physical hazards	2
Personal protection	-



3. COMPOSITION/INFORMATION ON INGREDIENTS

464-43-7

CAS No Molecular Weight Formula		464-43-7 154.25 C10H18O			
Chemical name	CAS No.	Weight-%	Oral LD50	Dermal LD50	Inhalation LC50

4. FIRST AID MEASURES

(+)-Borneol

First Aid Measures	
General advice	Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).
Eye contact	Wash with plenty of water.
Skin Contact	Wash off immediately with plenty of water.
Inhalation	Remove to fresh air If breathing is difficult, give oxygen If not breathing, give artificial respiration
Ingestion	Never give anything by mouth to an unconscious person. Clean mouth with water.
Self-protection of the first aider	Remove all sources of ignition.

Most important symptoms and effects, both acute and delayed Symptoms No information available.

Indication of any immediate medical attention and special treatment needed Note to physicians Treat symptomatically.

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5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media Suitable Extinguishing Media	Use extinguishing measures that are appropriate to local circumstances and the	
Unsuitable Extinguishing Media	surrounding environment. No information available.	
Specific hazards arising from th Specific hazards arising from the chemical	e chemical No information available.	
Hazardous combustion products	Carbon oxides.	
Explosion data Sensitivity to Mechanical Impact Sensitivity to Static Discharge	No information available. No information available.	
Protective equipment and presentions for firefighters		

Protective equipment and precautions for firefighters

Protective equipment and precautions Wear self contained breathing apparatus for fire fighting if necessary. In the event of fire and/or explosion do not breathe fumes.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions

Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required.



Environmental precautions

Environmental precautions

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

Methods and material for containment and cleaning up

Methods for containment Methods for cleaning up Prevent further leakage or spillage if safe to do so. Use personal protective equipment as required. Cover powder spill with plastic sheet or tarp 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.

7. HANDLING AND STORAGE

Precautions for safe handling Advice on safe handling	Ensure adequate ventilation, especially in confined areas. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. All equipment used when handling the product must be grounded.	
Conditions for safe storage, including any incompatibilities		
Storage Conditions	Keep tightly closed in a dry and cool place. Keep in properly labeled containers. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Store at room temperature.	
Incompatible materials	None known based on information supplied.	

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters Exposure Guidelines	This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.
Appropriate engineering contro Engineering Controls	Is Ensure adequate ventilation, especially in confined areas
Individual protection measures, Eye/face protection Skin and Body Protection Respiratory protection	such as personal protective equipment Wear safety glasses with side shields (or goggles). Wear protective gloves and protective clothing. 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.
General Hygiene Considerations	When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	powder or crystalline chunks
Odor	Pungent



Property

pН Melting point/freezing point Boiling point Flash point Liquid Density Evaporation rate Upper flammability limits Lower flammability limit Vapor pressure Vapor density Specific gravity Water solubility Solubility in other solvents Partition coefficient Autoignition temperature Decomposition temperature Kinematic viscosity Explosive properties Oxidizing properties

Values

No information available 206 °C No information available 65 °C CC (closed cup) 1.0 g/cm³ No information available No information available No information available No information available 1 No information available No information available No information available 3.24 No information available No information available No information available No information available No information available

10. STABILITY AND REACTIVITY

ReactivityNot applicableChemical stabilityStable under recommended storage conditions.Possibility of Hazardous ReactionsNone under normal processing.Hazardous polymerizationNo information available.Conditions to avoidHeat, flames and sparks.Incompatible materialsStrong oxidizing agents.Hazardous Decomposition ProductsCarbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

No data available.
No data available.
No data available.
No data available.

Information on toxicological effects

No information available.

Delayed and immediate effects a	as well as chronic effects from short and long-term exposure
Chronic Toxicity	No information available.

Numerical measures of toxicity - Product Information

Unknown acute toxicity 0% of the mixture consists of ingredient(s) of unknown toxicity

12. ECOLOGICAL INFORMATION

Ecotoxicity

Symptoms

May cause long lasting harmful effects to aquatic life

100% of the mixture consists of components(s) of unknown hazards to the aquatic environment.



Persistence and degradability Bioaccumulation Mobility

No information available. No information available. No information available.

13. DISPOSAL CONSIDERATIONS

Disposal of wastes	Disposal should be in accordance with applicable regional, national and local laws and regulations.
Contaminated packaging	Do not reuse container.
US EPA Waste Number	D001

14. TRANSPORT INFORMATION

DOT	
UN/ID no	UN1312
Hazard Class	4.1
Packing Group	111
Proper shipping name	Borneol
Description	UN1312, Borneol, 4.1, III
Emergency Response Guide Number	133
IMDG	

UN/ID no	UN1312
Hazard Class	4.1
Packing Group	111
Proper shipping name	Borneol
Description	UN1312, Borneol, 4.1, III
EmS-No	F-A, S-I
ΙΑΤΑ	
UN/ID no	UN1312
Hazard Class	4.1
Packing Group	111
Proper shipping name	Borneol
Description	UN1312, Borneol, 4.1, III
ERG Code	3L
	3L

15. REGULATORY INFORMATION

International Inventories All of the components in the product are on the following Inventory lists

Europe (EINECS/ELINCS/NLP) ENCS (Japan):

Chemical name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
(+)-Borneol	-	-	-	Х	-	Х	-	-	-	-

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

US 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 which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute health hazard	No
Chronic Health Hazard	No
Fire hazard	Yes
Sudden release of pressure hazard	No
Reactive hazard	Yes

CWA (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).

US State Regulations

California Proposition 65

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

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

16. OTHER INFORMATION

Revision note

No information available

Disclaimer

The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered 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 materials or in any process, unless specified in the text.

End of Safety Data Sheet