



The Power to Question

SAFETY DATA SHEET

Santa Cruz Biotechnology, Inc.

Revision date 27-Feb-2015

Version 1

Section 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product Identifier

Product Name	2,3-Dimethyl-2-butanol
Product Code	SC-230842
EC No	209-847-2
CAS No	594-60-5
Pure substance/mixture	Substance

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

For research use only. Not intended for diagnostic or therapeutic use.

1.3. 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

Santa Cruz Biotechnology, Inc.
Bergheimer Str. 89-2
69115 Heidelberg, Germany
+49.6221.4503 0
+1.800.457.3801
europe@scbt.com

1.4. Emergency telephone number

Chemtrec
1.800.424.9300 (Within USA)
+1.703.527.3887 (Outside USA)

Section 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

- (H226)

Classification according to 67/548/EEC

Hazard symbols
R-code(s)

F - Highly flammable
R10

2.2. Label Elements

Signal word
Symbols/Pictograms

Warning



Hazard statements

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

P370 + P378 - In case of fire: Use dry sodium carbonate to extinguish
P210 - Keep away from heat/sparks/open flames/hot surfaces. —
No smoking

2.3. Other Hazards

General Hazards

Not applicable



Section 3: COMPOSITION/INFORMATION ON INGREDIENTS

Molecular Weight 102.17
Formula C₆H₁₄O

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]
2,3-Dimethyl-2-butanol	Present	594-60-5	100	-	Flam. Liq. 3 (H226)

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 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).

Inhalation Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.

Skin Contact Wash off immediately with plenty of water.

Eye contact Wash with plenty of water.

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.

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.

5.3. Advice for firefighters

Special protective equipment for fire-fighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

Section 6: ACCIDENTAL RELEASE MEASURES

6.1. 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.

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. See Section 12 for additional Ecological Information.

6.3. Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.
 Methods for cleaning up Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Pick up and transfer to properly labeled containers.

6.4. Reference to other sections

See Section 12: ECOLOGICAL INFORMATION.

Section 7: HANDLING AND STORAGE

7.1. 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.
 General Hygiene Considerations When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

7.2. Conditions for safe storage, including any incompatibilities

Storage Conditions Keep tightly closed in a dry and cool place. Keep in properly labeled containers.

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 This product, as supplied, does not contain any hazardous materials with occupational 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 Wear safety glasses with side shields (or goggles).
 Skin and Body Protection Antistatic footwear. Wear fire/flame resistant/retardant clothing. Gloves made of plastic or rubber.
 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 liquid
 Appearance No information available
 Odor No information available

Property

pH Values
 No information available



Melting point/freezing point	-14 °C
Boiling point	120 °C
Flash point	29 °C
Density	0.82 g/cm ³
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	No information available
Autoignition temperature	No information available
Decomposition temperature	No information available
Kinematic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available

Section 10: STABILITY AND REACTIVITY

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 Heat, flames and sparks.

10.5. Incompatible materials

Incompatible materials Strong oxidizing agents.

10.6. Hazardous decomposition products

Hazardous Decomposition Products Carbon oxides.

Section 11: TOXICOLOGICAL INFORMATION

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 100% of the mixture consists of ingredient(s) of unknown toxicity.

Section 12: ECOLOGICAL INFORMATION

**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.

Section 14: TRANSPORT INFORMATION

	<u>RID / ADR</u>	<u>IMDG</u>	<u>ICAO (air) / IATA</u>
14.1 UN/ID no	UN1987	UN1987	UN1987
14.2 Proper shipping name	Alcohols, n.o.s.	Alcohols, n.o.s.	Alcohols, n.o.s.
14.3 Hazard Class	3	3	3
Subsidiary hazard class / Labels	-	-	-
14.4 Packing Group	III	III	III
14.5 Environmental Hazard	-	-	-
14.6 Special Provisions	-	223, 274	A3, A180
	Classification code F1	EmS-No F-E, S-D	
	Tunnel restriction code (D/E)		

Section 15: REGULATORY INFORMATION**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**

Canada (DSL/NDSL) Europe (EINECS/ELINCS/NLP) Australia (AICS) South Korea (KECL): ENCS (Japan):

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
2,3-Dimethyl-2-butanol	-	-	X	X	-	X	-	X	-	X

*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

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

Revision note

R10 - Flammable

No information available.

This material safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006**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