



The Power to Question

# SAFETY DATA SHEET

Santa Cruz Biotechnology, Inc.

Revision date 19-Jun-2019

Version 1

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

### 1.1. Product Identifier

Product Name	2,2,3,3-Tetramethylbutane
Product Code	SC-230735
EC No	209-855-6
CAS No	594-82-1
Synonyms	Hexamethylethane
Pure substance/mixture	Substance
Contains 2,2,3,3-Tetramethylbutane	

### 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

Aspiration toxicity	Category 1 - (H304)
Skin corrosion/irritation	Category 2 - (H315)
Specific target organ toxicity (single exposure)	Category 3 - (H336)
Acute aquatic toxicity	Category 1 - (H400)
Chronic aquatic toxicity	Category 1 - (H410)
Flammable solids	Category 1 - (H228)

### 2.2. Label Elements

Contains 2,2,3,3-Tetramethylbutane

Signal word Danger

Symbols/Pictograms



Hazard statements

H304 - May be fatal if swallowed and enters airways  
 H315 - Causes skin irritation  
 H336 - May cause drowsiness or dizziness  
 H410 - Very toxic to aquatic life with long lasting effects  
 H228 - Flammable solid



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

P264 - Wash face, hands and any exposed skin thoroughly after handling  
 P280 - Wear protective gloves  
 P302 + P352 - IF ON SKIN: Wash with plenty of soap and water  
 P321 - Specific treatment (see Emergency Phone Number on this label)  
 P332 + P313 - If skin irritation occurs: Get medical advice/attention  
 P362 - Take off contaminated clothing and wash before reuse  
 P261 - Avoid breathing dust/fume/gas/mist/vapors/spray  
 P271 - Use only outdoors or in a well-ventilated area  
 P304 + P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing  
 P312 - Call a POISON CENTER or doctor if you feel unwell  
 P403 + P233 - Store in a well-ventilated place. Keep container tightly closed  
 P405 - Store locked up  
 P501 - Dispose of contents/ container to an approved waste disposal plant  
 P273 - Avoid release to the environment  
 P391 - Collect spillage  
 P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
 P331 - Do NOT induce vomiting  
 P280 - Wear protective gloves/protective clothing/eye protection/face protection  
 P210 - Keep away from heat/sparks/open flames/hot surfaces. — No smoking  
 P240 - Ground/bond container and receiving equipment  
 P241 - Use explosion-proof electrical/ ventilating/ lighting/ equipment

**2.3. Other Hazards**

General Hazards

Not applicable

**Section 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Molecular Weight 114.23  
 Formula C<sub>8</sub>H<sub>18</sub>

**3.1 Substances**

Chemical name	EC No	CAS No.	Weight-%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
2,2,3,3-Tetramethylbutane	Present	594-82-1	100	Flam. Sol. 1 (H228) Skin Irrit. 2 (H315) STOT SE 3 (H336) Aquatic Chronic 1 (H410)

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

**Section 4: FIRST AID MEASURES****4.1. Description of first aid measures**

General advice Consult a physician if necessary.  
 Inhalation Remove to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.  
 Skin Contact Wash skin with soap and water.  
 Eye contact Wash with plenty of water.  
 Ingestion Never give anything by mouth to an unconscious person. Clean mouth with water.

**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 Ensure adequate ventilation, especially in confined areas.

For emergency responders Use personal protection recommended in Section 8.

**6.2. Environmental precautions**

Environmental precautions 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 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.

**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 Handle in accordance with good industrial hygiene and safety practice.

General Hygiene Considerations Handle in accordance with good industrial hygiene and safety practice.

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

Storage Conditions Keep container tightly closed in a dry and well-ventilated place.

**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.

Chemical name	European Union	United Kingdom	France	Spain	Germany
2,2,3,3-Tetramethylbutane 594-82-1			TWA: 1000 mg/m <sup>3</sup> STEL: 1500 mg/m <sup>3</sup>	TWA: 300 ppm TWA: 1420 mg/m <sup>3</sup>	
Component	Italy	Portugal	Netherlands	Finland	Denmark
2,2,3,3-Tetramethylbutane 594-82-1 ( 100 )		TWA: 300 ppm		TWA: 300 ppm TWA: 1400 mg/m <sup>3</sup> STEL: 380 ppm STEL: 1800 mg/m <sup>3</sup>	
Chemical name	Austria	Switzerland	Poland	Norway	Ireland
2,2,3,3-Tetramethylbutane 594-82-1	STEL 1200 ppm STEL 5600 mg/m <sup>3</sup> TWA: 300 ppm TWA: 1400 mg/m <sup>3</sup>	STEL: 600 ppm STEL: 2800 mg/m <sup>3</sup> TWA: 300 ppm TWA: 1400 mg/m <sup>3</sup>		TWA: 40 ppm TWA: 275 mg/m <sup>3</sup> STEL: 60 ppm STEL: 343.75 mg/m <sup>3</sup>	

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 Wear protective gloves and protective clothing.  
 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

<u>Property</u>	<u>Values</u>
pH	No information available
Melting point/freezing point	94 °C
Boiling point	106 °C
Flash point	4 °C CC (closed cup)
Liquid Density	No information available
Evaporation rate	No information available
Upper flammability limits	No information available
Lower flammability limit	1%
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
<b>10.2. Chemical stability</b>	
Stability	Stable under recommended storage conditions.
Sensitivity to Mechanical Impact	No information available.
Sensitivity to Static Discharge	No information available.
<b>10.3. Possibility of hazardous reactions</b>	
Hazardous polymerization	No information available.
Possibility of Hazardous Reactions	None under normal processing.
<b>10.4. Conditions to avoid</b>	
Conditions to avoid	Extremes of temperature and direct sunlight.
<b>10.5. Incompatible materials</b>	
Incompatible materials	Strong oxidizing agents.
<b>10.6. Hazardous decomposition products</b>	
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	0% 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	0% 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.
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### 12.3. Bioaccumulative potential

Bioaccumulation	No information available.
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### 12.4. Mobility in soil

Mobility	No information available.
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### 12.5. Results of PBT and vPvB assessment

PBT and vPvB assessment	No information available.
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### 12.6. Other adverse effects

Other adverse effects	No information available
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## 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>
<b>14.1 UN/ID no</b>	UN1325	UN1325	UN1325
<b>14.2 Proper shipping name</b>	Flammable solid, organic, n.o.s.	Flammable solid, organic, n.o.s.	Flammable solid, organic, n.o.s.
<b>14.3 Hazard Class</b>	4.1	4.1	4.1
<b>Subsidiary hazard class / Labels</b>	-	-	-
<b>14.4 Packing Group</b>	II	II	II
<b>14.5 14.5 Environmental Hazard</b>	Yes	This product contains a chemical which is listed as a marine pollutant according to IMDG/IMO	Yes
<b>14.6 14.6 Special Provisions</b>	274 Classification code F1 Tunnel restriction code (E)	274 EmS-No F-A, S-G	A3, A803 ERG Code 3L

## 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) South Korea (KECL): ENCS (Japan):

Chemical name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
2,2,3,3-Tetramethylbutane	-	-	-	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 H-Statements referred to under sections 2 and 3

H228 - Flammable solid  
H315 - Causes skin irritation  
H336 - May cause drowsiness or dizziness



Revision note

H410 - Very toxic to aquatic life with long lasting effects  
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**