



The Power to Question

SAFETY DATA SHEET

Santa Cruz Biotechnology, Inc.

Revision date 10-Aug-2016

Version 1.2

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

Product identifier

Product Name 3-Methyl-2-butanone
Product Code SC-238586

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

Specific target organ toxicity (single exposure)
Flammable liquids

Category 3
Category 2

Label elements

Signal word
Hazard statements

Danger
May cause drowsiness or dizziness
Highly flammable liquid and vapor

Symbols/Pictograms



Precautionary Statements - Prevention

Avoid breathing dust/fume/gas/mist/vapors/spray
Use only outdoors or in a well-ventilated area
Keep away from heat/sparks/open flames/hot surfaces. — No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Wear protective gloves/protective clothing/eye protection/face protection
Keep cool

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing
Call a POISON CENTER or doctor/physician if you feel unwell
In case of fire: Use CO₂, dry chemical, or foam for extinction
Store in a well-ventilated place. Keep container tightly closed
Store locked up

Precautionary Statements - Storage



Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Hazards not otherwise classified (HNOC)

Hazards not otherwise classified (HNOC)

Not applicable

Other Information

NFPA	Health hazards	0		HMIS	Health hazards	1
	Flammability	3			Flammability	3
	Stability	0			Physical hazards	0
	Physical and chemical properties	-			Personal protection	-

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS No 563-80-4
 Molecular Weight 86.13
 Formula C₅H₁₀O

Chemical Name	CAS No	Weight %	Oral LD50	Dermal LD50	Inhalation LC50
3-Methyl-2-butanone	563-80-4	>98	= 3000 mg/kg (Rat) = 2572 mg/kg (Rat)	= 6350 mg/kg (Rabbit) = 6.35 mL/kg (Rabbit)	= 6377 ppm (Rat) 6 h

4. FIRST AID MEASURES

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.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

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

Unsuitable Extinguishing Media None.

Specific hazards arising from the chemical

Specific hazards arising from the chemical No information available.

Hazardous combustion products Carbon oxides.



Explosion data

Sensitivity to Mechanical Impact No information available.
 Sensitivity to Static Discharge No information available.

Protective equipment and precautions for firefighters

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

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.

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.

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.

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. Store at room temperature.
 Incompatible materials None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines .
 Other Information Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
3-Methyl-2-butanone 563-80-4	TWA: 20 ppm	(vacated) TWA: 200 ppm (vacated) TWA: 705 mg/m ³	TWA: 200 ppm TWA: 705 mg/m ³

NIOSH IDLH Immediately Dangerous to Life or Health

Appropriate engineering controls

Engineering Controls Showers
 Eyewash stations
 Ventilation systems



Individual protection measures, such as personal protective equipment

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.
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	liquid
Appearance	No information available
Odor	No information available

<u>Property</u>	<u>Values</u>
pH	No information available
Melting point/freezing point	-92 °C
Boiling point	94 °C
Flash point	-3 °C CC (closed cup)
Density	0.81 g/mL
Evaporation rate	4
Upper flammability limits	8.2%
Lower flammability limit	1.2%
Vapor pressure	53 mmHg
Vapor density	No information available
Specific gravity	No information available
Water solubility	No information available
Solubility in other solvents	No information available
Partition coefficient	2.29
Autoignition temperature	448 °C
Decomposition temperature	No information available
Kinematic viscosity	No information available
Explosive properties	No information available
Oxidizing properties	No information available

10. STABILITY AND REACTIVITY

Reactivity	Not applicable
Chemical stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing.
Hazardous polymerization	No information available.
Conditions to avoid	Heat, flames and sparks.
Incompatible materials	Strong oxidizing agents.
Hazardous Decomposition Products	Carbon oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Inhalation	No data available.
Eye contact	No data available.
Skin Contact	No data available.
Ingestion	No data available.



Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Chronic Toxicity No information available.
 Target Organ Effects Eyes, Respiratory system, Skin.

Numerical measures of toxicity - Product Information

Unknown acute toxicity No information available
 The following values are calculated based on chapter 3.1 of the GHS document
 ATEmix (oral) 2500 mg/kg
 ATEmix (dermal) 6331 mg/kg
 ATEmix (inhalation-dust/mist) 6.2 mg/l
 ATEmix (inhalation-vapor) 6377 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity May cause long lasting harmful effects to aquatic life

Chemical Name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
3-Methyl-2-butanone 563-80-4	-	813 - 918: 96 h Pimephales promelas mg/L LC50 flow-through	-	-

0% of the mixture consists of components(s) of unknown hazards to the aquatic environment.

Persistence and degradability No information available.
 Bioaccumulation No information available.
 Mobility No information available.

Chemical Name	Partition coefficient
3-Methyl-2-butanone 563-80-4	0.56

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.
 California Hazardous Waste Status This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
3-Methyl-2-butanone 563-80-4	Toxic Ignitable

14. TRANSPORT INFORMATION

DOT
 UN/ID no UN2397
 Hazard Class 3
 Packing Group II



Proper shipping name 3-Methylbutan-2-one
 Description UN2397, 3-Methylbutan-2-one, 3, II
 Emergency Response Guide Number 127

IMDG

UN/ID no UN2397
 Hazard Class 3
 Packing Group II
 Proper shipping name 3-Methylbutan-2-one
 Description UN2397, 3-Methylbutan-2-one, 3, II, (-3°C c.c.)
 EmS-No F-E, S-D

IATA

UN/ID no UN2397
 Hazard Class 3
 Packing Group II
 Proper shipping name 3-Methylbutan-2-one
 Description UN2397, 3-Methylbutan-2-one, 3, II

15. REGULATORY INFORMATION**International Inventories**

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

TSCA (United States): Canada (DSL/NDSL) Europe (EINECS/ELINCS/NLP) Australia (AICS) South Korea (KECL): China (IECSC)
 ENCS (Japan): Philippines (PICCS)

Chemical Name	TSCA	DSL	NDSL	EINECS	ELINCS	ENCS	IECSC	KECL	PICCS	AICS
3-Methyl-2-butanone	X	X	-	X	-	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

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 No

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



Chemical Name	New Jersey	Massachusetts	Pennsylvania
3-Methyl-2-butanone 563-80-4	X	X	X

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