



The Power to Question

SAFETY DATA SHEET

Santa Cruz Biotechnology, Inc.

Revision date 13-Dec-2019

Version 1.2

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

Product identifier

Product Name Adipic acid
Product Code SC-239201

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

Serious eye damage/eye irritation Category 2

Label elements

Signal word Warning
Hazard statements May be harmful if inhaled
Causes serious eye irritation
Symbols/Pictograms



Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

IF exposed or concerned: Get medical advice/attention
IF IN EYES: Rinse cautiously with water for several minutes.
Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention

Hazards not otherwise classified (HNOC)

Hazards not otherwise classified (HNOC) Not applicable

Other Information

Other hazards Harmful to aquatic life with long lasting effects. Harmful to aquatic life.



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

3. COMPOSITION/INFORMATION ON INGREDIENTS

CAS No 124-04-9
Molecular Weight 146.14
Formula C₆H₁₀O₄

Chemical name	CAS No.	Weight-%	Oral LD50	Dermal LD50	Inhalation LC50
Adipic acid	124-04-9	>98	> 11000 mg/kg (Rat)	> 7940 mg/kg (Rabbit)	> 7700 mg/m ³ (Rat) 4 h

4. FIRST AID MEASURES

First Aid Measures

General advice	If symptoms persist, call a physician.
Eye contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician. Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician. Immediate medical attention is not required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes.
Inhalation	Remove to fresh air. If symptoms persist, call a physician. Immediate medical attention is not required. Move to fresh air in case of accidental inhalation of vapors.
Ingestion	Immediate medical attention is not required. Rinse mouth. Drink plenty of water. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.
Self-protection of the first aider	Use personal protective equipment as required.

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 No information available.

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 Use personal protective equipment as required. Avoid contact with eyes and skin. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

Environmental precautions

Environmental precautions Prevent entry into waterways, sewers, basements or confined areas. Do not flush into surface water or sanitary sewer system. 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 Use personal protective equipment as required. Take up mechanically, placing in appropriate containers for disposal. Clean contaminated surface thoroughly. Cover powder spill with plastic sheet or tarp to minimize spreading and keep powder dry. Avoid creating dust. Soak up with inert absorbent material. Dam up. Pick up and transfer to properly labeled containers. Sweep up and shovel into suitable containers for disposal. After cleaning, flush away traces with water. Take precautionary measures against static discharges.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Use with local exhaust ventilation. Do not breathe dust/fume/gas/mist/vapors/spray.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep container tightly closed. Keep out of the reach of children. Keep containers tightly closed in a cool, well-ventilated 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 .

Chemical name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Adipic acid 124-04-9	TWA: 5 mg/m ³	-	-

Appropriate engineering controls

Engineering Controls Showers
 Eyewash stations
 Ventilation systems

**Individual protection measures, such as personal protective equipment**

Eye/face protection	Tight sealing safety goggles. Face protection shield.
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. Wash contaminated clothing before reuse. Regular cleaning of equipment, work area and clothing is recommended.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Solid
Appearance	No information available
Odor	Odorless

<u>Property</u>	<u>Values</u>
pH	No information available
Melting point/freezing point	151 °C
Boiling point	265 °C
Flash point	196 °C CC (closed cup)
Liquid Density	1.36 g/cm ³
Evaporation rate	No information available
Upper flammability limits	No information available
Lower flammability limit	No information available
Vapor pressure	0.097 mmHg
Vapor density	5.04
Specific gravity	No information available
Water solubility	No information available
Solubility in other solvents	No information available
Partition coefficient	0.081
Autoignition temperature	420 °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	Extremes of temperature and direct sunlight.
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 Avoid repeated exposure.

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)	11011 mg/kg
ATEmix (dermal)	7948 mg/kg
ATEmix (inhalation-dust/mist)	6.2 mg/l
ATEmix (inhalation-vapor)	7700 mg/l

12. ECOLOGICAL INFORMATION

Ecotoxicity Harmful to aquatic life with long lasting effects

Chemical name	Algae/aquatic plants	Fish	Toxicity to Microorganisms	Crustacea
Adipic acid 124-04-9	31.3: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50 26.6: 96 h <i>Desmodesmus subspicatus</i> mg/L EC50	97: 96 h <i>Pimephales promelas</i> mg/L LC50 static 230: 96 h <i>Leuciscus idus</i> mg/L LC50 static	-	85.7: 48 h <i>Daphnia magna</i> mg/L EC50

0% of the mixture consists of component(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
Adipic acid 124-04-9	0.081

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.

Other Information Waste codes should be assigned by the user based on the application for which the product was used.

14. TRANSPORT INFORMATION**DOT**

UN/ID no	UN3077
Hazard Class	9
Packing Group	III
Proper shipping name	Environmentally hazardous substance, solid, n.o.s.
Reportable Quantity (RQ)	(Adipic acid: RQ (kg)= 2270.00)



Description UN3077, Environmentally hazardous substance, solid, n.o.s., 9, III, Marine pollutant
 Emergency Response Guide Number 171

IMDG

UN/ID no UN3077
 Hazard Class 9
 Packing Group III
 Proper shipping name Environmentally hazardous substance, solid, n.o.s.
 Description UN3077, Environmentally hazardous substance, solid, n.o.s., 9, III, Marine Pollutant
 Environmentally hazardous substance, solid, n.o.s. UN3077, Environmentally hazardous substance, solid, n.o.s., 9, III, Marine Pollutant 2
 Special Provisions 274, 335, 966, 967, 969
 EmS-No F-A, S-F

IATA

UN/ID no UN3077
 Hazard Class 9
 Packing Group III
 Proper shipping name Environmentally hazardous substance, solid, n.o.s.
 Description UN3077, Environmentally hazardous substance, solid, n.o.s., 9, III
 ERG Code 9L

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
Adipic acid	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 Yes
 Chronic Health Hazard No
 Fire hazard No
 Sudden release of pressure hazard No
 Reactive hazard No

CWA (Clean Water Act)

This product contains the following substances which are regulated pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Chemical name	CWA - Reportable Quantities	CWA - Toxic Pollutants	CWA - Priority Pollutants	CWA - Hazardous Substances
Adipic acid	5000 lb			X



124-04-9				
----------	--	--	--	--

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
Adipic acid 124-04-9	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