

Safety Data Sheet

Preparation Date 03-Mar-2016

Revision Date 03-Mar-2016

Revision Number 2

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

Product Identifier

Product Name **SUCCINIC ACID FCC**

Other means of identification

Product Code C7965
CAS Number 110-15-6
Formula C₄H₆O₄
Synonyms Butanedioic Acid

Recommended use of the chemical and restrictions on use

Recommended Use Flavors and Food Additive
Uses advised against Avoid contact with food. Avoid prolonged contact with eyes, skin, and clothing.

Details of the supplier of the safety data sheet

Supplier Address Lab Alley LLC
22111 Highway 71 West, Suite 601
Spicewood, Texas 78669
Tel.: 512-668-9918

Emergency Telephone Number(s)

InfoTrac: 800-535-5053

2. HAZARDS IDENTIFICATION

Classification

Skin Corrosion/Irritation	Category 2
Serious eye damage/eye irritation	Category 2

Label elements

Emergency Overview

Signal Word

Warning

Hazard statements

Causes skin irritation
Causes serious eye irritation
MAY BE HARMFUL IF SWALLOWED Harmful to aquatic life

**Appearance**

Colorless to White Crystalline Powder

Physical State

Solid

Odor

Odorless

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

Specific treatment (see supplemental first aid instructions on this label)
 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
 IF ON SKIN: Wash with plenty of soap and water
 If skin irritation occurs: Get medical advice/attention
 Take off contaminated clothing and wash before reuse

Hazards not otherwise classified (HNOC)

None known

Other Information

No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms Butanedioic Acid

Formula C₄H₆O₄

Chemical Name	CAS-No	Weight %	North American Hazard Indicator
Butanedioic Acid	110-15-6	100	1

4. FIRST AID MEASURES

First Aid Measures

General Advice Show this safety data sheet to the doctor in attendance.

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult a physician.

Skin Contact Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Remove and wash contaminated clothing before re-use. Consult a physician.

Inhalation Move to fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Consult a physician.

Ingestion	Do not induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Consult a physician.
Protection of First-aiders	Use personal protective equipment. Avoid contact with skin, eyes and clothing.
<u>Most important symptoms and effects, both acute and delayed</u>	
Main Symptoms	No information available.
<u>Indication of any immediate medical attention and special treatment needed</u>	
Notes to Physician	Treat symptomatically.

5. FIRE-FIGHTING MEASURES

<u>Suitable Extinguishing Media</u>	Water spray. Alcohol-resistant foam. Dry chemical. Carbon dioxide (CO ₂).
<u>Unsuitable Extinguishing Media</u>	No information available.
<u>Hazardous Combustion Products</u>	Thermal decomposition or combustion may produce hazardous gases and/or materials.
<u>Explosion Data</u>	Not available
Sensitivity to mechanical impact	Not available.
Sensitivity to static discharge	Not available.

Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition.

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	Evacuate personnel to safe areas. Use personal protective equipment. Avoid contact with skin, eyes and clothing. Ensure adequate ventilation. In case of insufficient ventilation, wear suitable respiratory equipment.
Environmental Precautions	Local authorities should be advised if significant spillages cannot be contained. Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. Should not be released into the environment.

Methods and material for containment and cleaning up

Methods for Cleaning up	Evacuate personnel to safe areas. Sweep up and shovel into suitable containers for disposal. Avoid dust formation. Clean contaminated surface thoroughly.
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7. HANDLING AND STORAGE

Precautions for Safe Handling

Handling	Ensure that eyewash stations and safety showers are close to the workstation location. Use only in an area equipped with a safety shower. Ensure adequate ventilation. Use only in
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well-ventilated areas. Do not breathe vapours/dust. Avoid contact with skin, eyes and clothing. Avoid repeated exposure.

Conditions for safe storage, including any incompatibilities

Storage	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep container tightly closed. Keep in properly labelled containers.
Incompatible Materials	Bases. Cadmium. Reducing agents. Alkalies. Acid anhydrides. Metals. Cyanides. sulfites, nitrites, thiosulfates, dithionites.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Butanedioic Acid 110-15-6	-	-	-

Appropriate engineering controls

Engineering Controls Ensure adequate ventilation, especially in confined areas.

Individual protection measures, such as personal protective equipment

Eye/face Protection	Tightly fitting safety goggles.
Skin and body protection	Impervious gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching the glove's outer surface) to avoid skin contact with this product. The type of protective equipment must be selected according to the concentration and amount of dangerous substance at the specific workplace.
Respiratory Protection	In case of insufficient ventilation, wear suitable respiratory equipment.

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

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Colorless to White Crystalline Powder
Physical State	Solid
Odor	Odorless
Odor Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	2.7	
Melting/freezing point	185 - 190 °C	Literary Reference
Boiling Point/Range	235 °C	
Flash Point	206°C No data available	No information available
Evaporation Rate		
Flammability (solid, gas)		
Flammability Limits in Air		
upper flammability limit	14.4%	
lower flammability limit	2.6%	
Vapor Pressure	0.017 mmHg @ 20°C	
Vapor Density	Not available	
Specific Gravity	1.56 g/cm ³	
Water Solubility	80 g/L @ 20°C	
Solubility in other solvents	No information available	

Partition coefficient: n-octanol/water	Not available	
Autoignition temp (°C)	630 °C	Estimated
Decomposition temperature	No data available	
Viscosity, kinematic	No information available	
Viscosity, dynamic	Not available	
Explosive Properties	No information available	
Oxidizing Properties	No information available	

Other Information

Softening Point	No information available
Molecular Weight	118.09
VOC Content	No information available
Density	No information available
Bulk Density	No information available

10. STABILITY AND REACTIVITY

Reactivity	Not applicable.
Chemical Stability	Stable under recommended storage conditions
Conditions to Avoid	Heat, flames and sparks.
Incompatible Materials	Bases. Cadmium. Reducing agents. Alkalies. Acid anhydrides. Metals. Cyanides. sulfites, nitrites, thiosulfates, dithionites.
Hazardous Decomposition Products	Carbon monoxide. Carbon dioxide (CO ₂).
Possibility of Hazardous Reactions	None under normal processing

11. TOXICOLOGICAL INFORMATION

Product Information

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 2210 mg/kg

Information on likely routes of exposure

Eyes	Severe eye irritation. Risk of serious damage to eyes. May cause chemical conjunctivitis. Redness. Itching. Avoid contact with eyes.
Skin	May be harmful by skin contact. Irritating to skin. Itching. Redness. Avoid contact with skin.
Inhalation	May be harmful by inhalation. Irritating to mucous membranes. Irritating to respiratory system. Can produce delayed pulmonary edema. Coughing. Shortness of breath. Avoid breathing dust.
Ingestion	May be harmful if swallowed. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Do not ingest.

Information on toxicological effects

Symptoms No information available.

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

Irritation Eye,rabbit: 700 ug SEV

Eye damage/irritation	No information available.
Skin Corrosion/Irritation	No information available.
Sensitization	No information available.
Reproductive Effects	No information available.
Mutagenic Effects	Possible mutagen.
Developmental Effects	No information available.
STOT - single exposure	No information available.
STOT - Repeated Exposure	No information available.
Chronic Toxicity	Avoid repeated exposure. Possible mutagen.
Target Organ Effects	Eyes, Skin, Respiratory system.
Aspiration Hazard	No information available.

Numerical measures of toxicity - Product Information

12. ECOLOGICAL INFORMATION

Ecotoxicity

Harmful to aquatic life. Avoid release to the environment.

Chemical Name	Freshwater Algae Data	Freshwater Fish Species Data	Microtox Data	Water Flea Data
Butanedioic Acid 110-15-6	= 35 mg/L EC50 = 66 mg/L EC50 35: 96 h <i>Desmodesmus subspicatus</i> mg/L EC50 66: 72 h <i>Desmodesmus subspicatus</i> mg/L EC50			= 88.4 mg/L EC50 88.4: 48 h <i>Daphnia magna</i> mg/L EC50

Persistence / Degradability Not readily biodegradable.

Bioaccumulation / Accumulation No information available.

Mobility in Soil No information available.

Chemical Name	log Pow =
Butanedioic Acid 110-15-6	-0.575 - 0.081

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste Disposal Method Contact waste disposal services. Dispose of in accordance with local regulations.

Contaminated Packaging Dispose of in accordance with local regulations. Empty containers should be taken for local recycling, recovery or waste disposal.

14. TRANSPORT INFORMATION

<u>DOT</u>	Not regulated
<u>TDG</u>	Not regulated
<u>MEX</u>	Not regulated
<u>ICAO</u>	Not regulated
<u>IATA</u>	Not regulated
<u>IMDG/IMO</u>	Not regulated
<u>RID</u>	Not regulated
<u>ADR</u>	Not regulated
<u>ADN</u>	Not regulated

15. REGULATORY INFORMATION

International Inventories

U.S.A. (TSCA)	Complies
Canada (DSL)	Complies
EU (EINECS)	Complies
EU (ELINCS)	Does not Comply
Japan (ENCS)	Complies
China	Complies
Korea (KECL)	Complies
Philippines (PICCS)	Complies
Australia (AICS)	Complies

Chemical Name	U.S.A. (TSCA)	Canada (DSL)	EU (EINECS)	EU (ELINCS)	
Butanedioic Acid	Present	Present	Present	-	
Component	Japan (ENCS)	China	Korea (KECL)	Philippines (PICCS)	Australia (AICS)
Butanedioic Acid 110-15-6 (100)	Present (2)-846	Present	Present	Present	Present
Chemical Name	Mexico INV		Taiwan INV		
Butanedioic Acid 110-15-6	Present		-		

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 Hazardous Categorization

Acute Health Hazard

Yes

Chronic Health Hazard	Yes
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	No

Chemical Name	CAS-No	VOCs
Butanedioic Acid	110-15-6	Present

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)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

*State Regulations***California Proposition 65**

This product does not contain any Proposition 65 chemicals.

State Right-to-Know

This product does not contain any State Right-to-Know chemicals.

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable

*Canada***WHMIS Statement**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all the information required by the CPR.

NFPA

Health 2

Flammability 0

Instability 0

Physical Hazard *



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Revision Summary

Not available

Disclaimer

The information provided on this SDS 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.

End of SDS