

(Succinic Acid) DATE PREPARED: 7/8/2015

Section 1. Product and Company Identification

Product Name Succinic Acid 110-15-6 **CAS Number**

Parchem - fine & specialty chemicals

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EMERGENCY RESPONSE NUMBER

CHEMTEL

Toll Free US & Canada: 1 (800) 255-3924 All other Origins: 1 (813) 248-0585

Collect Calls Accepted

Section 2. Hazards Identification

Classification of the substance or mixture GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Serious eye damage (Category 1), H318

GHS Label Elements

Pictograms:



Signal word: DANGER!

Hazard and precautionary statements Hazard statement(s)

H318 Causes serious eye damage.

Precautionary statement(s)

P280 Wear eye protection/ face protection.

P305 + P351 + P338 + P310 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.

Hazards not otherwise classified (HNOC) or not covered by GHS: None



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Section 3. Composition / Information on Ingredients

Common Name Succinic Acid **Synonym(s)** Butanedioic acid

Formula $C_4H_6O_4$ **CAS Number** 110-15-6

COMPONENT	CAS NUMBER	CONCENTRATION
Succinic Acid	110-15-6	≤ 100%

Section 4. First Aid Measures

Description of first aid measures

General advice: Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled: If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact: Wash off with soap and plenty of water. Consult a physician.

In case of eye contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed: Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

Most important symptoms and effects, both acute and delayed: The most important known symptoms and effects are described in the labelling and/or in section 11

Indication of any immediate medical attention and special treatment needed: No data available

Section 5. Firefighting Measures

Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special hazards arising from the substance or mixture: Carbon oxides

Advice for firefighters: Wear self-contained breathing apparatus for firefighting if necessary.

Further information: No data available

Section 6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures: Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.



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Environmental precautions: Do not let product enter drains.

Methods and materials for containment and cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Reference to other sections: For disposal see section 13.

Section 7. Handling and Storage

Precautions for safe handling: Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs. Provide appropriate exhaust ventilation at places where dust is formed.

Conditions for safe storage, including any incompatibilities: Keep container tightly closed in a dry and well-ventilated place.

Storage class (TRGS 510): Non Combustible Solids

Section 8. Exposure Controls / Personal Protection

Control parameters

Components with workplace control parameters: Contains no substances with occupational exposure limit values.

Exposure controls

Appropriate engineering controls: Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Eye/face protection: Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Body Protection: Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure: Do not let product enter drains.





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Section 9. Physical and Chemical Properties

Information on basic physical and chemical properties

Form: Crystalline Color: White Odor: Odorless

Melting point/freezing point: Melting point/range: 184 - 186°C (363 - 367°F) - lit. **Initial boiling point and boiling range:** 235°C (455°F) at 1,013 hPa (760 mmHg)

Relative density: 1.564 g/cm3 at 15°C (59°F) **Water solubility:** 83 g/l at 25°C (77°F) - soluble

Section 10. Stability and Reactivity

Reactivity: No data available

Chemical stability: Stable under recommended storage conditions.

Possibility of hazardous reactions: No data available

Conditions to avoid: No data available

Incompatible materials: Bases, Oxidizing agents, Reducing agents

Hazardous decomposition products

Other decomposition products: No data available

In the event of fire: See section 5

Section 11. Toxicological Information

Information on toxicological effects Acute toxicity

LD50 Oral - Rat - 2,260 mg/kg

LC50 Inhalation - Rat - male and female - 4 h - > 1.284 mg/l

(OECD Test Guideline 403)
Dermal: No data available **Skin corrosion/irritation**

Skin - Rabbit

Result: No skin irritation - 4 h (OECD Test Guideline 404)

Serious eye damage/eye irritation

Eyes - Rabbit

Result: Risk of serious damage to eyes. - 24 h

(OECD Test Guideline 405)

Respiratory or skin sensitization

Maximization Test (GPMT) - Guinea pig Result: Does not cause skin sensitization.

(OECD Test Guideline 406)





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Germ cell mutagenicity

Ames test S. typhimurium Result: negative

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: No data available

Specific target organ toxicity - single exposure: No data available Specific target organ toxicity - repeated exposure: No data available

Aspiration hazard: No data available

Additional Information: RTECS: WM4900000

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Section 12. Ecological Information

Toxicity

Toxicity to fish: semi-static test LC50 - Danio rerio (zebra fish) - > 100 mg/l - 96 h (OECD Test Guideline 203)

Toxicity to daphnia and other aquatic invertebrates: Immobilization EC50 - Daphnia magna (Water flea) - > 100 mg/l - 48 h (OECD Test Guideline 202)

Toxicity to algae: Growth inhibition EC50 - Pseudokirchneriella subcapitata (green algae) - > 100

mg/l - 72 h (OECD Test Guideline 201)

Toxicity to bacteria: Respiration inhibition EC50 - Sludge Treatment - > 300 mg/l - 3 h (OECD

Test Guideline 209)

Persistence and degradability Biodegradability

Aerobic - Exposure time 28 d

Result: 96.55 % - Readily biodegradable

Bioaccumulative potential: No data available

Mobility in soil: No data available

Results of PBT and vPvB assessment: PBT/vPvB assessment not available as chemical safety

assessment not required/not conducted

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Other adverse effects: No data available

Section 13. Disposal Considerations

Waste Treatment Methods: Dispose of product and contaminated packaging in accordance with all local, state, and federal environmental control regulations.

Section 14. Transport Information

DOT (US)

Not dangerous goods

IMDG

Not dangerous goods

IATA

Not dangerous goods

Section 15. Regulatory Information

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards

Acute Health Hazard

Massachusetts Right to Know Components

No components are subject to the Massachusetts Right to Know Act.

Pennsylvania Right to Know Components

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New Jersey Right to Know Components

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California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

HMIS Rating Health hazard: 2 Flammability: 0 Physical Hazard: 0



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Section 16. Other Information

Disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product.

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