

MATERIAL SAFETY DATA SHEET

Product Name: SUCCINIC ACID

Revision Date: 11.11.2009

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1. Manufacturer/Supplier Identification

Thirumalai Chemicals Limited,
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2. Composition /Information on ingredients

Chemical Name : Succinic Acid
Chemical Formula : C₄H₆O₄
Molecular Weight : 118.09
CAS No. : 110-15-6
EINECS No. : 203-740-4
Synonyms : Butanedioic Acid , 1,2 Ethanedicarboxilic Acid

3. Hazard Identification

Hazard Symbol : XI - Irritant.
Risk Phrases : R36/37/38
S-phrases : S26 , S37/39
Caution : Causes eye and skin, digestive and respiratory tract irritation.
Potential health effects
Eye : Causes severe eye irritation.
Exposure to solid may cause pain and redness.
Skin : Causes skin irritation
Ingestion : Causes gastrointestinal irritation with nausea, vomiting and diarrhea
Inhalation : Causes respiratory tract irritation.

4. First Aid Measures

General advice : No specific antidote is available.
Treat symptomatically and supportively.
Eye contact : Immediately flush eyes with plenty of water for at least 15 minutes.
Get medical aid.
Skin contact : Remove contaminated clothing. Wash the skin with soap and plenty of
water. Get medical aid if irritation develops or persists.
Ingestion : Clean mouth with water. Drink plenty of water.
Do not induce vomiting. Call a physician immediately.
Inhalation : Move victim to fresh air at once. Consult a physician

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5. Fire Fighting Measures

Special hazards : Combustible material.
Auto-ignition temperature : 630°C (1166°F)
Flash point : 206°C (402.80°F)
Extinguishing agents : Water spray, dry chemical, Carbon dioxide, Foam
Non-suitable
Extinguishing agents : Water Jet, dry Sodium Carbonate
Protective equipment : In case of fire, wear self contained breathing apparatus and chemical protection suit.

6. Accidental Release Measures

Personal precautions : Ensure adequate ventilation. Use personal protective clothing and equipment during cleanup activities.
Environmental precautions : Do not allow material to contaminate ground water system.
Methods for cleaning up : Use mechanical handling equipment and place into a suitable disposal container. Dispose of in compliance with local and national regulations.

7. Handling and Storage

Handling : Avoid breathing dust, vapour, mist or gas.
Avoid contact with skin and eyes.
Storage : Store in cool, dry place. Store in a tightly closed container.

8. Exposure Controls / Personal Protection

National Occupational Exposure Limit : None listed
Engineering Controls : Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.
Personal Protective Equipment
Respiratory : Self contained breathing apparatus
Eye : Closely fitted Safety goggles.
Hand : Impervious Gloves
Skin and body : Approved work boots, protective clothing
Hygiene measures : Wash hands before food and at the end of workday.

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9. Physical and Chemical Properties

Form	: Solid, Crystalline fine granules
Colour	: White
Odour	: Odourless
Melting point	: 185-190 ⁰ C
Boiling point	: 235 ⁰ C @ 760 mm Hg
Flash- point	: 206 ⁰ C
Autoignition temp.	: 630 ⁰ C
Decomposition temp.	: >235 ⁰ C
Vapour pressure	: 0.3 mm Hg @ 47 ⁰ C
Bulk Density	: 1.264 kg/l
Relative Density	: 1.6 (water = 1)
Specific gravity	: 1.552 g/ml
Water Solubility	: 8 g/100ml at 20 ⁰ C
pH - value	: (10% Solution) 2.1

10. Stability and Reactivity

Stability	: Stable under normal temperature and pressure
Materials to avoid	: Incompatible materials
Incompatibles	: Bases, oxidizing agents, reducing agents.
Hazardous decomposition Products	: Carbon monoxide, Carbon dioxide

11. Toxicological Information

Acute toxicity (lethal doses) (Literature value)

LD50/oral/ rat dose	: 2260 mg/kg
LD50/dermal/guinea pig	: 1g/kg

Carcinogenicity, Teratogenicity
, Mutagenicity : Succinic acid does not contain any ingredient designated by ACGIH, ARC, NIOSH, NTP or OSHA as a probable human carcinogen.

Effects of single overdose

Swallowing : Ingestion of large amount may cause nausea, vomiting, cramps and diarrhea and may produce irritation of the mouth and throat.
Moderately toxic by subcutaneous route.

Existing medical conditions
possibly aggravated by exposure: Skin irritation may be aggravated in persons with existing skin lesions. Breathing of vapor, dust or sprays (mists) may aggravate acute or chronic asthma and other chronic pulmonary disease.

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12. Ecological information

Ecotoxicity : Not available

13. Disposal Consideration

Dispose of in a manner consistent with federal, state and local regulation

14. Transport Information

IMO/IATA/RID/ADR : Not regulated as a hazardous material

15. Regulatory Information

OSHA considers none of the chemicals in this product highly hazardous.

Hazard labels : Xi - Irritant

Risk-phrases : R36/37/38 Irritating to eyes, respiratory system and skin

S-phrases : S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S37/39 Wear suitable gloves and eye/face protection

16. Other Information

The information provided in this Safety Data Sheet is given in good faith and is correct to the best of our knowledge and information at the date of publication. It is designed only as guidance for safe handling, storage, transportation, use and disposal. No warranty is expressed or implied.

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