

## SAFETY DATA SHEET

Preparation Date: 6/30/15

Revision Date: 6/30/15

Revision Number: G1

### 1. IDENTIFICATION

#### Product identifier

**Product code:** AD130  
**Product Name:** ADIPIC ACID, FCC

#### Other means of identification

**Synonyms:** 1,4-Butanedicarboxylic acid  
1,6-Hexanedioic acid  
Adipate  
Adipinic acid  
Hexanedioic acid

**CAS #:** 124-04-9  
**RTECS #** AU8400000  
**CI#:** Not available

#### Recommended use of the chemical and restrictions on use

**Recommended use:** No information available.  
**Uses advised against** No information available

**Supplier:** Spectrum Chemical Mfg. Corp  
14422 South San Pedro St.  
Gardena, CA 90248  
(310) 516-8000

**Order Online At:** <https://www.spectrumchemical.com>

**Emergency telephone number** Chemtrec 1-800-424-9300  
**Contact Person:** Martin LaBenz (West Coast)  
**Contact Person:** Ibad Tirmiz (East Coast)

### 2. HAZARDS IDENTIFICATION

#### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Serious eye damage/eye irritation	Category 2A
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#### Label elements

**Warning****Hazard statements**

Causes serious eye irritation

**Hazards not otherwise classified (HNOC)**

Not Applicable

**Other hazards**

Not available

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling

Wear eye/face protection

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.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Components	CAS-No.	Weight %	Trade Secret
Adipic Acid 124-04-9	124-04-9	100	*

**4. FIRST AID MEASURES****First aid measures****General Advice:**

Poison information centers in each State capital city can provide additional assistance for scheduled poisons (13 1126)

**Skin Contact:**

Wash off immediately with soap and plenty of water removing all contaminated clothes and shoes. Get medical attention if irritation develops. Consult a physician if necessary.

**Eye Contact:**

Flush eye with water for 15 minutes. Get medical attention.

**Inhalation:**

Move to fresh air. If not breathing, give artificial respiration. In case of shortness of breath, give oxygen. Get medical attention.

**Ingestion:**

Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Consult a physician if necessary.

**Most important symptoms and effects, both acute and delayed****Symptoms**

Causes serious eye irritation. May cause skin irritation. May cause irritation of respiratory tract.

**Indication of any immediate medical attention and special treatment needed****Notes to Physician:**

Treat symptomatically

### **Protection of first-aiders**

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste

## **5. FIRE-FIGHTING MEASURES**

### **Extinguishing Media**

**Suitable Extinguishing Media:** Carbon dioxide (CO<sub>2</sub>). Dry chemical. Water spray mist or foam.

**Unsuitable Extinguishing Media:** No information available.

### **Specific hazards arising from the chemical**

**Hazardous Combustion Products:** Carbon Monoxide, Carbon Dioxide

**Specific hazards:** May be combustible at high temperatures

### **Special Protective Actions for Firefighters**

**Specific Methods:** No information available.

**Special Protective Equipment 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:** Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Avoid contact with skin, eyes and clothing. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Remove all sources of ignition.

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

### **Methods and material for containment and cleaning up**

**Methods for containment** Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

**Methods for cleaning up** Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

## **7. HANDLING AND STORAGE**

### **Precautions for safe handling**

#### **Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Avoid dust formation. All equipment used when handling the product must be grounded. Keep away from incompatible materials.

#### **Safe Handling Advice**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Avoid dust formation. Do not ingest. Do not breathe vapours/dust. Handle in accordance with good industrial hygiene and safety practice.

### **Conditions for safe storage, including any incompatibilities**

**Technical Measures/Storage Conditions:**

Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

**Incompatible Materials:**

Oxidizing agents.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters****National occupational exposure limits****United States**

Components	OSHA	NIOSH	ACGIH	AIHA WHEEL
Adipic Acid 124-04-9	None	None	= 5 mg/m <sup>3</sup> TWA	None

**Canada**

Components	Alberta	British Columbia	Ontario	Quebec
Adipic Acid 124-04-9	= 5 mg/m <sup>3</sup> TWA	= 5 mg/m <sup>3</sup> TWA	5 mg/m <sup>3</sup> TWA	5 mg/m <sup>3</sup> TWAEV

**Australia and Mexico**

Components	Australia	Mexico
Adipic Acid 124-04-9	None	None

**Appropriate engineering controls****Engineering measures to reduce exposure:**

Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

**Individual protection measures, such as personal protective equipment****Personal Protective Equipment**

- Eye protection:** Goggles or Safety glasses with side-shields
- Skin and body protection:** Long sleeved clothing. Chemical resistant apron. Gloves.
- Respiratory protection:** Effective dust mask. Wear respirator with dust filter.
- Hygiene measures:** Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

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<b>Physical state:</b> Solid.	<b>Appearance:</b> Crystalline powder.	<b>Color:</b> White.
<b>Odor:</b> Odorless.	<b>Taste</b> Tart.	<b>Molecular/Formula weight:</b> 146.14 g/mole
<b>Formula:</b> C6H10O4	<b>Flammability:</b> No information available	<b>Flash point (°C):</b> 196°C
<b>Flashpoint (°C/°F):</b> 196°C (384.8°F)	<b>Flash Point Tested according to:</b> Closed cup	<b>Autoignition Temperature (°C/°F):</b> 402°C (788°F)
<b>Lower Explosion Limit (%):</b> No information available	<b>Upper Explosion Limit (%):</b> No information available	<b>pH:</b> 2.7 at 25°C
<b>Melting point/range(°C/°F):</b> 151.5-154°C (304.7-309.2°F)	<b>Boiling point/range(°C/°F):</b> 337.5°C (639.5°F)	<b>Bulk density:</b> No information available
<b>Decomposition temperature(°C/°F):</b> No information available	<b>Density (g/cm3):</b> No information available	<b>Specific gravity:</b> 1.36
<b>Vapor pressure @ 20°C (kPa):</b> No information available	<b>Evaporation rate:</b> No information available	<b>Vapor density:</b> 5.04
<b>VOC content (g/L):</b> No information available	<b>Odor threshold (ppm):</b> No information available	<b>Partition coefficient (n-octanol/water):</b> No information available
<b>Viscosity:</b> No information available	<b>Miscibility:</b> No information available	<b>Solubility:</b> Easily soluble in methanol Soluble in hot water Soluble in Acetone Partially soluble in cold water Insoluble in Acetic acid Insoluble in Petroleum Benzin Insoluble in Petroleum ether Insoluble in Benzene Slightly soluble in Cyclohexane Freely soluble in Ethanol

## 10. STABILITY AND REACTIVITY

### Reactivity

Reactive with oxidizing agents

### Chemical stability

#### **Stability:**

Stable under recommended storage conditions

#### **Possibility of Hazardous Reactions:**

Hazardous polymerization does not occur

#### **Conditions to avoid:**

Heat. Ignition sources. Incompatible materials. Avoid dust formation. Dust may form explosive mixture in air. Fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard.

#### **Incompatible Materials:**

Oxidizing agents.

#### **Hazardous decomposition products:**

Carbon monoxide. Carbon dioxide.

### Other Information

#### **Corrosivity:**

Aqueous solutions of Adipic Acid are corrosive.

**Special Remarks on Corrosivity:** No information available

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

**Principal Routes of Exposure:**

Ingestion. Inhalation.

### Acute Toxicity

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

ATEmix (inhalation-dust/mist) 7.7mg/l

### **Component Information**

*Adipic Acid - 124-04-9*

**LD50/oral/rat** = > 11000 mg/kg Oral LD50 Rat, 5050 mg/kg Oral LD50 Rat (RTECS)

**LD50/oral/mouse** = 1900 mg/kg Oral LD50 mouse

**LD50/dermal/rat** = No information available

**LD50/dermal/rabbit** = No information available

**LC50/inhalation/rat** = >7.7 mg/L Inhalation LC50 Rat 4 h

31 mg/L Inhalation LC50 Rat 1 h

**LC50/inhalation/mouse** = No information available

**Other LD50 or LC50 information** = >11000 mg/kg Oral LD50 Rabbit

### **Product Information**

**LD50/oral/rat** =

**VALUE- Acute Tox Oral** = >11000mg/kg

**LD50/oral/mouse** =

**Value - Acute Tox Oral** = 1900mg/kg

**LD50/dermal/rabbit**

**VALUE-Acute Tox Dermal** = No information available

**LD50/dermal/rat**

**VALUE -Acute Tox Dermal** = No information available

**LC50/inhalation/rat**

**VALUE-Vapor** = No information available

**VALUE-Gas** = No information available

**VALUE-Dust/Mist** = >7.7mg/l

**LC50/Inhalation/mouse**

**VALUE-Vapor** = No information available

**VALUE - Gas** = No information available

**VALUE - Dust/Mist** = No information available

### Symptoms

**Skin Contact:** May cause skin irritation.

**Eye Contact:** Causes serious eye irritation.

**Inhalation** May cause respiratory tract irritation. Symptoms may include coughing, sneezing and blood-tinged mucous.

**Ingestion** May cause digestive (gastrointestinal) tract irritation. Can cause hypermotility, diarrhea. It may affect behavior/central nervous system/nervous system (somnolence, convulsions). May affect metabolism..

**Aspiration hazard** No information available

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

**Chronic Toxicity** Prolonged or repeated ingestion may affect the liver, and kidneys. Prolonged or repeated inhalation may affect the kidneys. Prolonged or repeated inhalation may affect the liver. Chronic exposure may cause central nervous system effects.

**Sensitization:** No information available

**Mutagenic Effects:** No information available

**Carcinogenic effects:** Not considered carcinogenic

Components	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Prohibited Carcinogenic Substances	Australia - Notifiable Carcinogenic Substances
Adipic Acid	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

**Reproductive toxicity** No data is available

**Reproductive Effects:** No information available  
**Developmental Effects:** No information available  
**Teratogenic Effects:** No information available

**Specific Target Organ Toxicity**

**STOT - single exposure** No information available  
**STOT - repeated exposure** No information available  
**Target Organs:** No information available

**12. ECOLOGICAL INFORMATION**

**Ecotoxicity**

**Ecotoxicity effects:** Aquatic environment.

*Adipic Acid - 124-04-9*

**Freshwater Algae Data:** 26.6 mg/L EC50 *Desmodesmus subspicatus* 96 h  
 31.3 mg/L EC50 *Desmodesmus subspicatus* 72 h

**Freshwater Fish Species Data:** 97 mg/L LC50 *Pimephales promelas* 96 h static 1  
 230 mg/L LC50 *Leuciscus idus* 96 h static 1

**Water Flea Data:** 85.7 mg/L EC50 *Daphnia magna* 48 h

**Persistence and degradability:** No information available

**Bioaccumulative potential:** No information available

**Mobility:** No information available

### 13. DISPOSAL CONSIDERATIONS

#### Disposal Methods

**Waste from residues / unused products:**

Waste must be disposed of in accordance with Federal, State and Local regulation.

**Contaminated packaging:**

Empty containers should be taken for local recycling, recovery or waste disposal

Components	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Adipic Acid	None	None	None	None

### 14. TRANSPORT INFORMATION

**DOT**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** None  
**ERG No:** No information available  
**Marine Pollutant:** No data available  
**DOT RQ (lbs):** No information available

**TDG (Canada)**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Description:** No information available

**ADR**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Packing Group:** No information available  
**Subsidiary Risk:** No information available  
**Classification Code:** No information available  
**Description:** No information available  
**CEFIC Tremcard No:** No information available

**IMO / IMDG**

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Description:** No information available  
**IMDG Page:** No information available  
**Marine Pollutant:** No information available



## 14. TRANSPORT INFORMATION

**MFAG:** No information available  
**Maximum Quantity:** No information available

### RID

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Classification Code:** No information available  
**Description:** No information available

### ICAO

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Description:** No information available

### IATA

**UN-No:** Not Regulated  
**Proper Shipping Name:** No information available  
**Hazard Class:** No information available  
**Subsidiary Risk:** No information available  
**Packing Group:** No information available  
**Description:** No information available

## 15. REGULATORY INFORMATION

### International Inventories

Components	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	CHINA	Australia (AICS)	EINECS-No.
<i>Adipic Acid</i>	Present	Present KE-03754	Present	Present (2)-858	Present	Present	Present 204-673-3

### U.S. Regulations

#### *Adipic Acid*

**Massachusetts RTK:** Present  
**New Jersey RTK Hazardous Substance List:** 0026  
**New Jersey - Discharge Prevention - List of Hazardous Substances:** Present  
**Pennsylvania RTK:** Environmental hazard  
**Pennsylvania RTK - Environmental Hazard List:** Present  
**Pennsylvania RTK - Special Hazardous Substances:** Present  
**Minnesota - Hazardous Substance List:** Present  
**New York Release Reporting - List of Hazardous Substances:**  
 = 5000 lb RQ  
**Louisiana Reportable Quantity List for Pollutants:** Listed  
**California Directors List of Hazardous Substances:** Present  
**FDA - Food Additives Generally Recognized as Safe (GRAS):** 21 CFR 184.1009

**FDA - 21 CFR - Total Food Additives** 175.300 175.320 176.170 176.180 177.1200 177.1390 177.1500 177.1630 177.1680 177.2420 177.2600 184.1009

### California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.

#### Chemicals Known to the State of California to Cause Cancer:

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

**Chemicals Known to the State of California to Cause Reproductive Toxicity:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Components	Carcinogen	Developmental Toxicity	Male Reproductive Toxicity	Female Reproductive Toxicity:
Adipic Acid	Not Listed	Not Listed	Not Listed	Not Listed

**CERCLA/SARA**

Components	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting <i>de minimis</i>
Adipic Acid	= 2270 kg final RQ	None	None	None	None

**U.S. TSCA**

Components	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Adipic Acid	Not Applicable	Not Applicable

**Canada****WHMIS hazard class:**

D2B Toxic materials

**Canada Controlled Products Regulation:**

This product has been classified according to the hazard criteria of the CPR (Controlled Products Regulation) and the MSDS contains all of the information required by the CPR.

Components	WHMIS Ingredient Disclosure List -
Adipic Acid	1 %

**Inventory**

Components	Canada (DSL)	Canada (NDSL)
Adipic Acid	Present	Not Listed

Components	CEPA Schedule I - Toxic Substances	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Adipic Acid	Not listed	Not listed

**EU Classification****R-phrase(s)**

R36 - Irritating to eyes.

**S -phrase(s)**

S 2 - Keep out of the reach of children.

Components	Classification	Concentration Limits:	Safety Phrases
Adipic Acid	Xi; R36	No information	S2

The product is classified in accordance with Annex VI to Directive 67/548/EEC

**Indication of danger:**

Xi - Irritant.



## 16. OTHER INFORMATION

**Preparation Date:** 6/30/15  
**Revision Date:** 6/30/15  
**Prepared by:** Sonia Owen

**Disclaimer:**

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

**End of Safety Data Sheet**