

# Safety Data Sheet

## Adipic Acid, 99%

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Adipic Acid, 99%

**Synonyms/Generic Names:** Hexanedioic acid; 1,4-butanedicarboxylic acid

**Product Number:** 0537

**Product Use:** Industrial, Manufacturing or Laboratory use

**Manufacturer:** Columbus Chemical Industries, Inc.  
N4335 Temkin Rd.  
Columbus, WI. 53925

**For More Information:** 920-623-2140 (Monday-Friday 8:00-4:30)  
[www.columbuschemical.com](http://www.columbuschemical.com)

**In Case of Emergency Call:** CHEMTREC – 800-424-9300 or 703-527-3887 (24 Hours/Day, 7 Days/Week)

### 2. HAZARDS IDENTIFICATION

**Hazards not otherwise classified:** Combustible dust

**Signal Words:** Danger

**Pictograms**



**GHS Classification:**

Skin corrosion	Category 1
Acute aquatic toxicity	Category 3

**GHS Label Elements, including precautionary statements:**

**Hazard Statements:**

H314	Causes severe skin burns and eye damage.
H402	Harmful to aquatic life.

**Precautionary Statements:**

P260	Do not breathe dust of mist.
P264	Wash skin thoroughly after handling.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P330+P331	IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353	IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing, Rinse skin with water/shower.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.
P321	Specific treatment (see supplemental first aid instructions on this label).
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P501	Dispose of contents/containers to an approved waste disposal plant.

### Potential Health Effects

<b>Eyes</b>	May cause moderate eye irritation.
<b>Inhalation</b>	May be harmful if inhaled. Causes respiratory tract irritation.
<b>Skin</b>	May be harmful if absorbed through skin. Occasional contact causes irritation. Prolonged or repeated skin exposure may cause dermatitis.
<b>Ingestion</b>	Known to be slightly toxic if ingested.

### NFPA Ratings

<b>Health</b>	2
<b>Flammability</b>	1
<b>Reactivity</b>	0
<b>Specific hazard</b>	Not Available

### HMIS Ratings

<b>Health</b>	2
<b>Fire</b>	1
<b>Reactivity</b>	0

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Component	Weight %	CAS #	EINECS# / ELINCS#	Formula	Molecular Weight
Adipic Acid	>99	124-04-9	204-673-3	C <sub>6</sub> H <sub>10</sub> O <sub>4</sub>	146.14 g/mol

## 4. FIRST-AID MEASURES

<b>Eyes</b>	Rinse with plenty of water for at least 15 minutes and seek medical attention immediately.
<b>Inhalation</b>	Move casualty to fresh air and keep at rest. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention.
<b>Skin</b>	Flush with plenty of water for at least 15 minutes while removing contaminated clothing and wash using soap. Get medical attention.
<b>Ingestion</b>	<b>Do Not Induce Vomiting!</b> Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

## 5. FIREFIGHTING MEASURES

<b>Suitable (and unsuitable) extinguishing media</b>	Product is flammable. Apply dry chemical, spray water, alcohol foam or expose to carbon dioxide.
<b>Special protective equipment and precautions for firefighters</b>	Wear self-contained, approved breathing apparatus and full protective clothing, including eye protection and boots.
<b>Specific hazards arising from the chemical</b>	Fine dust dispersal in the air near a heat or flame source is a potential dust explosion hazard. Minimum concentration in air as dust is 10-15 mg/L.

## 6. ACCIDENTAL RELEASE MEASURES

<b>Personal precautions, protective equipment and emergency procedures</b>	Evacuate unprotected personnel from area. Eliminate all ignition sources. See section 8 for recommendations on the use of personal protective equipment.
<b>Environmental precautions</b>	Prevent spillage from entering drains. Any release to the environment may be subject to a federal/national or local reporting requirements.
<b>Methods and materials for containment and cleaning up</b>	Cleanup personnel need personal protection from inhalation and skin/eye contact. Sweep up and place in a suitable container for disposal. Clean surfaces thoroughly with water to remove residual contamination. Dispose of all waste or cleanup materials in accordance with local regulations.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

See section 8 for recommendations on the use of personal protective equipment. Use with adequate ventilation. Wash thoroughly after using. Keep container closed when not in use.

### Conditions for safe storage, including any incompatibilities

Store in tightly closed container. Store in a dry, cool and ventilated area. Protect against physical damage. Isolate from incompatible substances.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

**Occupational exposure controls:** Ventilation and appropriate grounding of containers.

Component	Exposure Limits	Basis	Entity
Adipic Acid	5 mg/m <sup>3</sup>	TLV	ACGIH

TWA: Time Weighted Average over 8 hours of work.

TLV: Threshold Limit Value over 8 hours of work.

REL: Recommended Exposure Limit

PEL: Permissible Exposure Limit

STEL: Short Term Exposure Limit during x minutes.

IDLH: Immediately Dangerous to Life or Health

WEEL: Workplace Environmental Exposure Levels

CEIL: Ceiling

### Personal Protection

<b>Eyes</b>	Wear chemical safety glasses and/or full face shield where dust formation is possible.
<b>Inhalation</b>	Provide local exhaust, preferably mechanical. If exposure levels are excessive, use an approved respirator.
<b>Skin</b>	Wear rubber gloves, protective clothing with lab coat or coveralls/apron.
<b>Other</b>	Not Available

### Other Recommendations

Provide eyewash stations, quick-drench showers and washing facilities accessible to areas of use and handling. Have supplies and equipment for neutralization and running water available.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance (physical state, color, etc.)	White solid.
Odor	No odor.
Odor threshold	Not Available
pH	3.2 (0.1% aq soln.) @25°C
Melting point/freezing point	152°C (306°F)
Initial boiling point and boiling range	337°C (639°F) @ 760 mmHg (Decomposes)
Flash point	196°C (385°F)
Evaporation rate	Not Available
Flammability (solid, gas)	Slight flammability when exposed to heat or flame. Fine dusts may become potential Fine dust dispersal in the air near a heat or flame source is a potential dust explosion hazard
Upper/lower flammability or explosive limit	Not Available
Vapor pressure (mmHg)	1 @ 159.5°C (320°F)
Vapor density	(air=1) 5.04
Relative density	Not Available
Solubility (ies)	Soluble
Partition coefficient: n-octanol/water	Not Available
Auto-ignition temperature	420°C (788°F)
Decomposition temperature	Not Available

## 10. STABILITY AND REACTIVITY

<b>Chemical Stability</b>	Stable
<b>Possibility of Hazardous Reactions</b>	Will not occur.
<b>Conditions to Avoid</b>	Heat, Air and Dusting conditions.
<b>Incompatible Materials</b>	Can react with oxidizing materials.
<b>Hazardous Decomposition Products</b>	Carbon oxides

## 11. TOXICOLOGICAL INFORMATION

### Acute Toxicity

#### Adipic Acid

<b>Skin</b>	Skin- rabbit- 20 mg/24H moderate LD50 Dermal- rabbit- 7,940 mmHg
<b>Eyes</b>	Eyes-rabbit- Moderate eye irritation- 24 h
<b>Respiratory</b>	Not Available
<b>Ingestion</b>	LD50 Oral- rat- 5,050 mg/kg LD50 Oral- rat > 11 g/kg

### Carcinogenicity

<b>IARC</b>	No components of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
<b>ACGIH</b>	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.
<b>NTP</b>	No components of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

<b>OSHA</b>	No components of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
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### Signs & Symptoms of Exposure

<b>Skin</b>	Irritation.
<b>Eyes</b>	Redness, pain, watering eyes.
<b>Respiratory</b>	Sneezing and coughing.
<b>Ingestion</b>	Known to be slightly toxic if ingested. Irritation.

<b>Chronic Toxicity</b>	Not Available
<b>Teratogenicity</b>	Not Available
<b>Mutagenicity</b>	Not Available
<b>Embryotoxicity</b>	Not Available
<b>Specific Target Organ Toxicity</b>	Not Available

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Adipic Acid

<b>Aquatic Vertebrate</b>	LC50- Pimephales promelas (fathead minnow)- 97 mg/l – 96 h
<b>Aquatic Invertebrate</b>	EC50- Daphnia magna (water flea)= 85.7 mg/l- 48 h
<b>Terrestrial</b>	EC50- Desmodesmus subspicatus (green algae)- 31.3 mg/l- 72 h

<b>Persistence and Degradability</b>	Easily biodegrades.
<b>Bioaccumulative Potential</b>	Not Available
<b>Mobility in Soil</b>	Not Available
<b>PBT and vPvB Assessment</b>	Not Available
<b>Other Adverse Effects</b>	When released into the air, moderate biodegradation occurs by reaction with photochemically produced hydroxyl radicals.

## 13. DISPOSAL CONSIDERATIONS

<b>Waste Product or Residues</b>	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product or residue.
<b>Product Containers</b>	Users should review their operations in terms of the applicable federal/national or local regulations and consult with appropriate regulatory agencies if necessary before disposing of waste product container.

The information offered in section 13 is for the product as shipped. Use and/or alterations to the product may significantly change the characteristics of the material and alter the waste classification and proper disposal methods.

## 14. TRANSPORTATION INFORMATION

US DOT	Not Dangerous Goods
TDG	Not Dangerous Goods
IMDG	Not Dangerous Goods
Marine Pollutant	No
IATA/ICAO	Not Dangerous Goods

## 15. REGULATORY INFORMATION

TSCA Inventory Status	All ingredients are listed on the TSCA Active inventory.
DSL / NDSL	All ingredients are listed on the DSL inventory.
California Proposition 65	Not Listed
Rhode Island: Hazardous Substance List	Listed: Adipic Acid
Massachusetts: Toxic or Hazardous Substance List, Right to Know	Listed: Adipic Acid
Pennsylvania: Hazardous Substance List	Listed: Adipic Acid
New Jersey: Right to Know Hazardous Substance List	Listed: Adipic Acid
SARA 302	Not Listed
SARA 304	Not Listed
SARA 311	Sudden Release of Pressure Hazard, Acute Health Hazard.
SARA 312	Sudden Release of Pressure Hazard, Acute Health Hazard.
SARA 313	Not Listed
WHMIS Canada	Class D2B: Poisonous and infectious material – Other effects – Toxic.

## 16. OTHER INFORMATION

Revision	Date
Original	08/05/2011
Revision 1	07/06/2012
Revision 2	06/05/2015
Revision 3	10/04/2021

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