

# MATERIAL SAFETY DATA SHEET


## Adipic acid

### Section 1 - Chemical Product and Company Identification

<b>MSDS Name:</b>	<b>Adipic Acid</b>
<b>Synonyms:</b>	Hexanedioic acid
Company Identification: (INDIA)	Veritas House, 70 Mint Road, Fort, Mumbai - 400 001. INDIA
For information in the INDIA, call:	Tel: +91 - 22 - 2275 5555 / 6184 0000, Fax: +91 - 22 - 2275 5556 / 6184 0001

### Section 2 - Composition, Information on Ingredients

CAS#	Chemical Name:	%	EINECS#
124-04-9	Adipic acid	99%	204-673-3

<b>Hazard Symbols:</b>	XI
	
<b>Risk Phrases:</b>	36

### Section 3 - Hazards Identification

#### EMERGENCY OVERVIEW

*Irritating to eyes.*

#### Potential Health Effects

<b>Eye:</b>	Causes eye irritation. Causes redness and pain.
<b>Skin:</b>	May cause skin irritation.
<b>Ingestion:</b>	Ingestion of large amounts may cause gastrointestinal irritation. Expected to be a low ingestion hazard.
<b>Inhalation:</b>	May cause respiratory tract irritation. Low hazard for usual industrial handling.
<b>Chronic:</b>	No information found.

### Section 4 - First Aid Measures

<b>Eyes:</b>	Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
<b>Skin:</b>	Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.
<b>Ingestion:</b>	If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.
<b>Inhalation:</b>	Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid if cough or other symptoms appear.
<b>Notes to Physician:</b>	

### Section 5 - Fire Fighting Measures

<b>General Information:</b>	As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. This material in sufficient quantity and reduced particle size is capable of creating a dust explosion.
<b>Extinguishing Media:</b>	Use water spray, dry chemical, carbon dioxide, or chemical foam.

### Section 6 - Accidental Release Measures

<b>General Information:</b>	Use proper personal protective equipment as indicated in Section 8.
<b>Spills/Leaks:</b>	Vacuum or sweep up material and place into a suitable disposal container. Avoid generating dusty conditions.

### Section 7 - Handling and Storage

<b>Handling:</b>	Avoid breathing dust, vapor, mist, or gas. Avoid contact with skin and eyes. Avoid mechanical shock and friction.
<b>Storage:</b>	Store in a cool, dry place. Store in a tightly closed container.

### Section 8 - Exposure Controls, Personal Protection

<b>Engineering Controls:</b>	Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.
<b>Exposure Limits</b>	CAS# 124-04-9: Belgium - TWA: 5 mg/m <sup>3</sup> VLE Malaysia: 5 mg/m <sup>3</sup> TWA Netherlands: 5 mg/m <sup>3</sup> MAC. Spain: 5 mg/m <sup>3</sup> VLA-ED
<b>Personal Protective Equipment</b>	
<b>Eyes:</b>	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.
<b>Skin:</b>	Wear appropriate gloves to prevent skin exposure.
<b>Clothing:</b>	Wear appropriate protective clothing to minimize contact with skin.
<b>Respirators:</b>	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.

### Section 9 - Physical and Chemical Properties

<b>Physical State:</b>	Crystalline powder
<b>Color:</b>	white
<b>Odor:</b>	odorless
<b>pH:</b>	Not available
<b>Vapor Pressure:</b>	<1mbar @20 deg C
<b>Viscosity:</b>	Not available
<b>Boiling Point:</b>	265 deg C @100mmHg ( 509.00°F)
<b>Freezing/Melting Point:</b>	151 - 153 deg C
<b>Autoignition Temperature:</b>	420 deg C ( 788.00 deg F)
<b>Flash Point:</b>	196 deg C ( 384.80 deg F)

<b>Explosion Limits: Lower:</b>	Not available
<b>Explosion Limits: Upper:</b>	Not available
<b>Decomposition Temperature:</b>	
<b>Solubility in water:</b>	1.44 g/100 ml water (15°C)
<b>Specific Gravity/Density:</b>	
<b>Molecular Formula:</b>	C6H10O4
<b>Molecular Weight:</b>	146.14

## Section 10 - Stability and Reactivity

<b>Chemical Stability:</b>	Stable under normal temperatures and pressures.
<b>Conditions to Avoid:</b>	Incompatible materials, dust generation, heating to decomposition.
<b>Incompatibilities with Other Materials</b>	Strong oxidizing agents, reducing agents, bases, steel.
<b>Hazardous Decomposition Products</b>	Carbon monoxide, carbon dioxide.
<b>Hazardous Polymerization</b>	Will not occur.

## Section 11 - Toxicological Information

<b>RTECS#:</b>	CAS# 124-04-9: AU8400000
<b>LD50/LC50:</b>	RTECS: <b>CAS# 124-04-9:</b> Draize test, rabbit, eye: 20 mg/24H Moderate; Oral, mouse: LD50 = 1900 mg/kg; Oral, rabbit: LD50 = >11 gm/kg; Oral, rat: LD50 = >11 gm/kg; Other: Inhalation, rat: LC50 = >7.7 mg/l/4H
<b>Carcinogenicity:</b>	Adipic acid - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
<b>Other:</b>	Mutagenicity: Ames-test: negative. See actual entry in RTECS for complete information.

## Section 12 - Ecological Information

<b>Ecotoxicity:</b>	Daphnia: EC/LC50: 86 mg/l; 48H; Bacteria: EC/LC0: 10000 mg/l; 16H;
<b>Other:</b>	Biodegradable. Fish toxicity: LC50 (24-96 hr) bluegill sunfish, fathead minnow 330-97 mg/l static bioassay at 18-22°C Bioaccumulation: The low partition coefficient indicates that bioconcentration in fish will be negligible.

## Section 13 - Disposal Considerations

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

## Section 14 - Transport Information

	IATA	IMO	RID/ADR
<b>Shipping Name:</b>	Not regulated.	Not regulated.	Not regulated.
<b>Hazard Class:</b>			
<b>UN Number:</b>			
<b>Packing Group:</b>			

USA RQ: CAS# 124-04-9: 5000 lb final RQ; 2270 kg final RQ

## Section 15 - Regulatory Information

**European/International Regulations**

European Labeling in Accordance with EC Directives	
Hazard Symbols: XI	
<b>Risk Phrases:</b>	➤ R 36 Irritating to eyes.
<b>Safety Phrases:</b>	➤ WGK (Water Danger/Protection)
	➤ CAS# 124-04-9: 0
<b>Canada</b>	➤ CAS# 124-04-9 is listed on Canada's DSL List
<b>US Federal</b>	➤ TSCA
	○ CAS# 124-04-9 is listed on the TSCA Inventory.

**Section 16 - Other Information**

<b>MSDS Creation Date:</b>	July 25, 2015
<b>Revision #0 Date</b>	

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