

## Material Safety Data Sheet

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Version 1.6

According to 91/155/EEC

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1 - Product and Company Information

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Product Name	ADIPIC ACID EXTRA PURE
Product Number	27635
Company	Sigma-Aldrich Pte Ltd #08-01 Citilink Warehouse Singapore 118529
Technical Phone #	65 271 1089
Fax	65 271 1571

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2 - Composition/Information on Ingredients

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Product Name	CAS #	EC no	Annex I Index Number
ADIPIC ACID	124-04-9	204-673-3	607-144-00-9
Formula	C6H10O4		
Molecular Weight	146.14 AMU		
Synonyms	Acifloctin * Acinetten * Adilactetten * Adipic acid (ACGIH) * Adipinic acid * 1,4-Butanedicarboxylic acid * Hexanedioic acid * 1,6-Hexanedioic acid * Kyselina adipova (Czech) * Molten adipic acid		

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3 - Hazards Identification

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SPECIAL INDICATION OF HAZARDS TO HUMANS AND THE ENVIRONMENT  
Irritating to eyes.

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4 - First Aid Measures

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## AFTER INHALATION

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

## AFTER SKIN CONTACT

In case of contact, immediately wash skin with soap and copious amounts of water.

## AFTER EYE CONTACT

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

## AFTER INGESTION

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

## GENERAL INFORMATION

Contamination of the eyes should be treated by immediate and prolonged irrigation with copious amounts of water.

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## 5 - Fire Fighting Measures

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### EXPLOSION DATA

Dust Potential: This material, like most materials in powder form, is capable of creating a dust explosion.

### EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

### SPECIAL RISKS

Specific Hazard(s): Emits toxic fumes under fire conditions.

### SPECIAL PROTECTIVE EQUIPMENT FOR FIREFIGHTERS

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

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## 6 - Accidental Release Measures

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### PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

### ENVIRONMENTAL PRECAUTION(S)

Avoid contaminating water supply. Avoid contaminating sewers and waterways with this material.

### METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

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## 7 - Handling and Storage

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### HANDLING

Directions for Safe Handling: Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

### STORAGE

Conditions of Storage: Keep tightly closed. Keep away from heat, sparks, and open flame. Store in a cool dry place.

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## 8 - Exposure Controls / Personal Protection

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### ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required. Ventilate area - especially low places where heavy vapors might collect.

### GENERAL HYGIENE MEASURES

Wash thoroughly after handling. Wash contaminated clothing before reuse.

### EXPOSURE LIMITS

Country	Source	Type	Value
Poland		NDS	5 mg/m3
Poland		NDSch	10 mg/m3
Poland		NDSP	

Remarks: {OELS ARE VALID FOR DUSTS} PYLY

### EXPOSURE LIMITS - DENMARK

Source	Type	Value
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## PERSONAL PROTECTIVE EQUIPMENT

Respiratory Protection: Government approved respirator.

Hand Protection: Compatible chemical-resistant gloves.

Eye Protection: Chemical safety goggles.

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9 - Physical and Chemical Properties

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Appearance	Physical State: Solid Color: White Form: Fine crystals	
Property	Value	At Temperature or Pressure
pH	2 - 3	25 °C Concentration: 24.9 g/l
BP/BP Range	265 °C	100 mmHg
MP/MP Range	151 °C	
Flash Point	196 °C	Method: closed cup
Flammability	N/A	
Autoignition Temp	420 °C	
Oxidizing Properties	N/A	
Explosive Properties	N/A	
Explosion Limits	N/A	
Vapor Pressure	1 mmHg	159.5 °C
SG/Density	N/A	
Partition Coefficient	Log Kow: 0.093	25 °C
Viscosity	N/A	
Vapor Density	5 g/l	
Saturated Vapor Conc.	N/A	
Evaporation Rate	N/A	
Bulk Density	N/A	
Decomposition Temp.	N/A	
Solvent Content	N/A	
Water Content	N/A	
Surface Tension	N/A	
Conductivity	N/A	
Miscellaneous Data	N/A	
Solubility	Solvent: 0.1 g/ml MeOH clear, colorless	

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10 - Stability and Reactivity

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## STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents.

## HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Carbon monoxide, Carbon dioxide.

## HAZARDOUS POLYMERIZATION

Hazardous Polymerization: Will not occur

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11 - Toxicological Information

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RTECS NUMBER: AU8400000

## ACUTE TOXICITY

LD50

Oral

Rat

5,050 mg/kg

LD50  
Skin  
Rabbit  
7,940 mg/kg

LD50  
Oral  
Rat  
> 11000 mg/kg

LD50  
Intraperitoneal  
Rat  
275 MG/KG  
Remarks: Behavioral:Somnolence (general depressed activity).  
Gastrointestinal:Other changes. Blood: Hemorrhage.

LD50  
Oral  
Mouse  
1900 mg/kg  
Remarks: Gastrointestinal:Other changes.

LD50  
Intravenous  
Mouse  
680 MG/KG  
Remarks: Behavioral:Convulsions or effect on seizure threshold.  
Blood: Hemorrhage.

LD50  
Oral  
Rabbit  
> 11000 mg/kg

#### IRRITATION DATA

Eyes  
Rabbit  
20 mg  
24H  
Remarks: Moderate irritation effect

#### SIGNS AND SYMPTOMS OF EXPOSURE

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

#### ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.  
Skin Absorption: May be harmful if absorbed through the skin.  
Eye Contact: Causes eye irritation.  
Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.  
Ingestion: May be harmful if swallowed.

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## 12 - Ecological Information

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#### ECOTOXICOLOGICAL EFFECTS

Test Type: LC50 Fish  
Species: Onchorhynchus mykiss (Rainbow trout)  
Time: 48 h

Value: 100 mg/l

Test Type: LC50 Fish

Species: Pimephales promelas (Fathead minnow)

Time: 96 h

Value: 97 mg/l

Test Type: EC50 Daphnia

Species: Daphnia magna

Time: 48 h

Value: 85.7 mg/l

Test Type: EC50 Algae

Species: Scenedesmus subspicatus

Time: 72 h

Value: 31.3 mg/l

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### 13 - Disposal Considerations

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#### SUBSTANCE DISPOSAL

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

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### 14 - Transport Information

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#### RID/ADR

Non-hazardous for road transport.

#### IMDG

Non-hazardous for sea transport.

#### IATA

Non-hazardous for air transport.

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### 15 - Regulatory Information

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#### CLASSIFICATION AND LABELING ACCORDING TO EU DIRECTIVES

ANNEX I INDEX NUMBER: 607-144-00-9

INDICATION OF DANGER: Xi

Irritant.

R-PHRASES: 36

Irritating to eyes.

#### COUNTRY SPECIFIC INFORMATION

##### Germany

WGK: 1

##### SWITZERLAND

SWISS POISON CLASS: 4

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### 16 - Other Information

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#### WARRANTY

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

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