Adipic Acid,

SECTION 1: Identification of the substance/mixture and of the supplier

Product name: **Adipic Acid,**

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: **S25124**

Recommended uses of the product and restrictions on use:

Manufacturer Details:

AquaPhoenix Scientific, Inc
9 Barnhart Drive, Hanover, PA 17331
(717) 632-1291

Supplier Details:

Fisher Science Education
6771 Silver Crest Road, Nazareth, PA 18064
(724)517-1954

Emergency telephone number:

Fisher Science Education
Emergency Telephone No.: 800-535-5053

SECTION 2: Hazards identification

Classification of the substance or mixture:

Corrosive
Serious eye damage, category 1

Eye Damage. 1.
Aquatic AcTox. 3.

Signal word: Danger

Hazard statements:

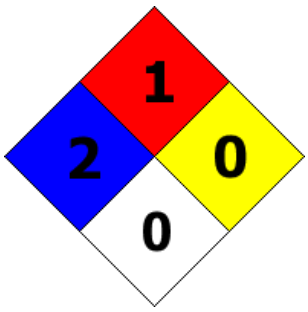
Causes serious eye damage.
Harmful to aquatic life.

Precautionary statements:

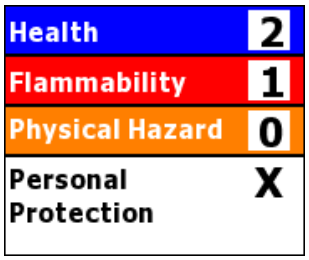
If medical advice is needed, have product container or label at hand.
Keep out of reach of children.
Read label before use.
Avoid release to the environment.
Wear protective gloves/protective clothing/eye protection/face protection.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.
Dispose of contents and container to an approved waste disposal plant.

Other Non-GHS Classification:

WHMIS
None
NFPA/HMIS



NFPA SCALE (0-4)



HMIS RATINGS (0-4)

SECTION 3: Composition/information on ingredients

Ingredients:		
CAS 124-04-9	Adipic Acid	100 %
		Percentages are by weight

SECTION 4: First aid measures

Description of first aid measures

After inhalation:

Loosen clothing as necessary and position individual in a comfortable position. Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Consult a physician.

After skin contact:

Wash hands and exposed skin with soap and plenty of water. Remove contaminated clothing and shoes. Consult a physician.

After eye contact:

Protect unexposed eye. Rinse or flush exposed eye gently using water for 15-20 minutes. Remove contact lenses while rinsing. Consult a physician.

After swallowing:

Rinse mouth thoroughly. Do not induce vomiting. Seek medical attention if irritation, discomfort, or vomiting persists. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed:

Irritation. Headache. Nausea. Shortness of breath.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing agents:

Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

Unsuitable extinguishing agents: None

Special hazards arising from the substance or mixture:

Thermal decomposition can lead to release of irritating gases and vapors.

Advice for firefighters:

Protective equipment:

Wear protective eyeware, gloves, and clothing. Refer to Section 8.

Additional information (precautions):

Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing. Avoid generating dust. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.

SECTION 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure that air-handling systems are operational.

Environmental precautions:

Should not be released into environment. Prevent from reaching drains, sewer, or waterway. Prevent further leakage or spillage if safe to do so.

Methods and material for containment and cleaning up:

Wear protective eyeware, gloves, and clothing. Refer to Section 8. Sweep up and containerize for disposal. Avoid generating dust. Always obey local regulations. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Pick up and arrange disposal without creating dust. Follow proper disposal methods. Refer to Section 13. Keep in suitable closed containers for disposal.

Reference to other sections: None

SECTION 7: Handling and storage

Precautions for safe handling:

Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Refer to Section 13. Wash hands after handling. Avoid contact with skin and eyes. Do not eat, drink, smoke, or use personal products when handling chemical substances. Perform routine housekeeping to prevent dust generation. Containers of this material may be hazardous when empty.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Keep away from food and beverages. Protect from freezing and physical damage. Provide ventilation for containers. Keep container tightly sealed. Store away from incompatible materials.

SECTION 8: Exposure controls/personal protection



Control Parameters:	124-04-9 , Adipic Acid , ACGIH: 5 mg/m3 TWA.
Appropriate Engineering controls:	Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.
Respiratory protection:	Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

Protection of skin: Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.

Eye protection: Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses or goggles are appropriate eye protection.

General hygienic measures: Wash hands before breaks and at the end of work. Avoid contact with skin, eyes, and clothing. Before wearing wash contaminated clothing. Perform routine housekeeping to prevent dust generation. Perform routine housekeeping to prevent dust generation.

SECTION 9: Physical and chemical properties

Appearance (physical state, color):	White solid	**Explosion limit lower**: **Explosion limit upper**:	Non Explosive Non Explosive
Odor:	Odorless	**Vapor pressure at 20°C**:	1 hPa (1 mmHg) at 159.5 °C; 0.097 hPa (0.073 mmHg) at 18.5 °C
Odor threshold:	Not Determined	**Vapor density**:	5.04 (air=1)
pH-value:	3.2 (0.1% solution)	**Relative density**:	Not Determined
Melting/Freezing point:	151 - 154 °C	**Solubilities**:	Methanol - soluble. Ethanol - soluble. Acetone - soluble. Benzene - slightly soluble. Soluble in water : 2.0 g/100g @ 25°C.
Boiling point/Boiling range:	337.5 C @ 760mmHg	**Partition coefficient (n-octanol/water)**:	log Pow: 0.093 at 25 °C
Flash point (closed cup):	196 °C	**Auto/Self-ignition temperature**:	> 400 °C
Evaporation rate:	Not Determined	**Decomposition temperature**:	Not Determined
Flammability (solid, gaseous):	May form combustible dust concentrations in air.	**Viscosity**:	a. Kinematic: Not Determined b. Dynamic: Not Determined
Density at 20°C:	Not Determined		

SECTION 10: Stability and reactivity

Reactivity:

Nonreactive under normal conditions.

Chemical stability:

Stable under normal conditions.

Possible hazardous reactions:

None under normal processing.

Conditions to avoid:

Incompatible materials. Dust generation.

Incompatible materials:

Strong oxidizing agents. Strong reducing agents. Strong bases.

Hazardous decomposition products:

Carbon monoxide. Carbon dioxide.

SECTION 11: Toxicological information

Acute Toxicity:

Oral:

124-04-9 LD50 Oral - Rat - male and female - 5,560 mg/kg

Dermal:

124-04-9 LD0 Dermal - Rabbit - male and female - 7,940 mg/kg

Inhalation:

124-04-9 LC0 Inhalation - Rat - male and female - 4 h - > 7.7 mg/l

Chronic Toxicity: No additional information.
Corrosion Irritation:

Dermal:

124-04-9 Skin - Rabbit Result: Mild skin irritation - 24 h

Ocular:

124-04-9 Eyes - Rabbit Result: Risk of serious damage to eyes. - 24 h

Sensitization: No additional information.
Numerical Measures: No additional information.
Carcinogenicity: No additional information.
Mutagenicity: No additional information.
Reproductive Toxicity: No additional information.

SECTION 12: Ecological information

Ecotoxicity:

Toxicity to fish static test LC0 - Brachydanio rerio (zebrafish) - >= 1,000 mg/l - 96 h: 124-04-9

Toxicity to daphnia and other aquatic invertebrates Immobilization LC50 - Daphnia magna (Water flea) - 46 mg/l - 48 h: 124-04-9

Toxicity to algae static test EC50 - Pseudokirchneriella subcapitata (aglae) - 59 mg/l - 72 h: 124-04-9

Toxicity to bacteria Respiration inhibition EC50 - Sludge Treatment - 7,910 mg/l - 3 h: 124-04-9

Fish: Bluegill/Sunfish: LC50 = 97-330 mg/L; 24-96 Hr: 124-04-9

Persistence and degradability:

124-04-9: Biodegradability aerobic - Exposure time 30 d Result: 83 % - Readily biodegradable.

Bioaccumulative potential: No additional information.
Mobility in soil: No additional information.
Other adverse effects: No additional information.

SECTION 13: Disposal considerations

Waste disposal recommendations:

Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as unused product. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine

whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification. Dilute with water and flush to sewer.

SECTION 14: Transport information

US DOT

UN Number:
ADR, ADN, DOT, IMDG, IATA 3077

Limited Quantity Exception: None

Bulk:
RQ (if applicable): None
Proper shipping Name: Environmentally hazardous substance, solid, n.o.s. (Adipic acid).
Hazard Class: 9
Packing Group: III.
Marine Pollutant (if applicable): No additional information.
Comments: None

Non Bulk:
RQ (if applicable): None
Proper shipping Name: Environmentally hazardous substance, solid, n.o.s. (Adipic acid).
Hazard Class: 9
Packing Group: III.
Marine Pollutant (if applicable): No additional information.
Comments: None

SECTION 15: Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

Acute

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

RCRA (hazardous waste code):

None of the ingredients are listed.

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

124-04-9 Adipic Acid 5000 lbs.

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 1%):

124-04-9 Adipic Acid.

SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

GHS Full Text Phrases: None

Abbreviations and Acronyms:

IMDG International Maritime Code for Dangerous Goods.
PNEC Predicted No-Effect Concentration (REACH).
CFR Code of Federal Regulations (USA).
SARA Superfund Amendments and Reauthorization Act (USA).
RCRA Resource Conservation and Recovery Act (USA).
TSCA Toxic Substances Control Act (USA).
NPRI National Pollutant Release Inventory (Canada).
DOT US Department of Transportation.
IATA International Air Transport Association.
GHS Globally Harmonized System of Classification and Labelling of Chemicals.
ACGIH American Conference of Governmental Industrial Hygienists.
CAS Chemical Abstracts Service (division of the American Chemical Society).
NFPA National Fire Protection Association (USA).
HMIS Hazardous Materials Identification System (USA).
WHMIS Workplace Hazardous Materials Information System (Canada).
DNEL Derived No-Effect Level (REACH).

Effective date: 01.20.2015
Last updated: 06.17.2015