

Material Safety Data Sheet

According to 91/155 EEC(2001/58 EC)

Printing date: 19.12.2006

Reviewed on: 19.12.2006

1 Identification of substance:

Product details:**Trade name:** Adipic Acid**Application of the substance / the preparation**

Adhesives
Dyestuff/Colouring agent
Leather auxiliary
Insecticide
Plasticizer
Food additive

Supplier/Manufacturer:

Penpet Petrochemical Trading GmbH
Merkur-Park
Sieker Landstrasse 126
22143 Hamburg
Germany
Tel: +49 40 675 799 0
Fax: +49 40 675 799 99 / 88

Information department: see above**Emergency information:** National Poisons Information Centre Tel.: +44 (0)870 6006266

2 Composition/Data on components:

Chemical characterization:**CAS No. Description:**

3124-04-9 adipic acid

Identification number(s):**EINECS Number:** 204-673-3**EU Number:** 607-144-00-9

3 Hazards identification

Hazard description:

Xi Irritant

Information pertaining to particular dangers for man and environment:

R 36 Irritating to eyes.

Classification system:

The classification was made according to the latest editions of the EU-lists, and expanded using company data and specialized literature.

4 First aid measures

General information: If symptoms persist or in case of doubt seek medical advice.**After inhalation:** Supply fresh air; consult doctor in case of complaints.**After skin contact:**

Wash with water and soap.

If skin irritation continues, consult a doctor.

After eye contact:

Rinse the eyes with open eyelids for 10 - 15 minutes with water. Then consult a doctor or better an eye specialist.

After swallowing: Seek medical treatment.

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- **Information for doctor:**
- **Treatment:** Symptomatic treatment

5 Fire fighting measures

- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire fighting measures that suit the environment.
- **Special hazards caused by the material, its products of combustion or resulting gases:**
Formation of toxic gases is possible during heating or in case of fire.
Dangerous decomposition product see chapter 10: stability and reactivity
- **Protective equipment:** Wear self-contained respiratory protective device.
- **Additional information:**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

6 Accidental release measures

- **Person-related safety precautions:**
Wear protective clothing.
Ensure adequate ventilation
Avoid formation of dust.
Keep unprotected persons away.
- **Measures for environmental protection:**
Do not allow product to reach sewage system or any water course.
Do not allow to penetrate the ground/soil.
- **Measures for cleaning/collecting:**
Pick up mechanically.
Avoid dust formation absolutely. If necessary pick up with a tested and approved industrial vacuum cleaner.
Send for recovery or disposal in suitable receptacles.
Dispose contaminated material as waste according to item 13.
Clean the affected area carefully; suitable cleaners are:
Warm water and cleansing agent

7 Handling and storage

- **Handling**
- **Information for safe handling:**
Ensure good ventilation/exhaustion at the workplace.
Keep receptacles tightly sealed.
Thorough dedusting.
Any deposit of dust which cannot be avoided must be regularly removed.
Avoid inhalation of dust.
Avoid contact with eyes and skin.
- **Information about protection against explosions and fires:**
Dust can combine with air to form an explosive mixture.



Keep ignition sources away - Do not smoke.

Protect against electrostatic charges

- **Storage**
- **Requirements to be met by storerooms and receptacles:**
Store container tightly sealed at a cool and dry place with sufficient ventilation.
- **Information about storage in one common storage facility:**
Store away from foodstuffs.
Store away from feed.

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Do not store together with alkalis (caustic solutions).

· **Further information about storage conditions:**

Keep receptacle tightly sealed.

Caution when reopening receptacles with broken seal.

· **Storage class** 11 Combustible solids

8 Exposure controls and personal protection

· **Additional information about design of technical systems:**

Install appropriate mechanical ventilation.

Protect against electrostatic charges.

· **Components with limit values that require monitoring at the workplace:** Not required.

· **Additional Occupational Exposure Limit Values for possible hazards during processing:**

Observe general threshold limit for dust.

· **Additional information:** The lists that were valid during the creation were used as basis.

· **Personal protective equipment**

· **General protective and hygienic measures:**

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Vacuum clean contaminated clothing. Do not blow or brush off contamination.

Avoid contact with the eyes.

Provide eye bath.

· **Breathing equipment:**

Not necessary if room is well-ventilated.

At formation of dust:

Short term filter device:

Filter P2.

· **Protection of hands:**

Chemical resistant gloves

To avoid skin problems reduce the wearing of gloves to the required minimum.

Check protective gloves prior to each use for their proper condition.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Preventive skin protection by use of skin-protecting agents is recommended.

After use of gloves apply skin-cleaning agents and skin cosmetics.

· **Material of gloves:**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

For undissolved solid substances following materials may be suitable:

Butyl rubber, BR

Nitrile rubber, NBR

Polychloroprene rubber (CR)

Fluorocarbon rubber (FKM)

Following data refer to aqueous saturated solution of the substance:

Suitable glove material:

Natural rubber - NR (0,5 mm)

Polychloropren rubber - CR (0,5 mm)

Nitrile rubber - NBR (0,35 mm)

Butyl rubber - Butyl (0,5 mm)

Fluorocarbon rubber - FKM (0,4 mm)

· **Penetration time of glove material:**

The exact break-through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** Tightly sealed goggles.

· **Body protection:** Protective work clothing.

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9 Physical and chemical properties:

· General Information

Form: Crystalline
Colour: White
Odour: Weak, characteristic

· Change in condition:

Melting point/Melting range: 150-153°C
Boiling point/Boiling range: 265/133 mbar°C

· **Flash point:** 196°C

· **Flammability (solid, gaseous)** Product is not flammable.

· **Ignition temperature:** 420°C

· **Danger of explosion:** Product is not explosive. However, formation of explosive air/dust mixtures is possible.

· **Vapour pressure at 159°C:** 1.3 hPa

· **Density at 20°C:** 1.360/25°C g/cm³

· **Solubility in / Miscibility with
Water at 20°C:** 24 g/l

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Dangerous reactions:** No dangerous reactions known
- **Dangerous products of decomposition:**
In the case of fire or at high temperatures the formation of the following decomposition products is possible.
Carbon monoxide and carbon dioxide

11 Toxicological information

- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**

124-04-9 adipic acid

Oral LD50 3600 mg/kg (rat)

- **Primary irritant effect:**
- **on the skin:** No irritating effect.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.

12 Ecological information

- **Ecotoxicological effects:**
- **Aquatic toxicity:** Presently there are no ecotoxicological values available.
- **General notes:**
Water hazard class 1 (German Regulation) (Assessment by list): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
Danger to drinking water is possible if large quantities leak into the ground or into water course.

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13 Disposal considerations

- **Product:**
- **Recommendation:**



Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

Must be specially treated adhering to official regulations.

- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **Land transport ADR/RID (cross-border)**
- **ADR/RID class:** No hazardous good according to the regulation.
- **Maritime transport IMDG:**
- **IMDG Class:** No hazardous good according to the regulation.
- **Air transport ICAO-TI and IATA-DGR:**
- **ICAO/IATA Class:** No hazardous good according to the regulation.

15 Regulations

- **Markings according to EC guidelines:**
The product has been classified and marked in accordance with EU Directives / Ordinance on Hazardous Materials
EC-labelling
- **Code letter and hazard designation of product:**



Xi Irritant

- **Risk phrases:**
36 Irritating to eyes.
- **National regulations**
- **Information about limitation of use:** Restrictions on juvenile employment must be observed.
- **Water hazard class:** Water hazard class 1 (Assessment by list): slightly hazardous for water.

16 Other information:

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing MSDS:**
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