

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 06.11.2023

Version number 1

Revision: 06.11.2023

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

- **1.1 Product identifier**
- **Trade name:** Adipic acid
- **Article number:** 1974
- **CAS Number:**  
124-04-9
- **EC number:**  
204-673-3
- **Index number:**  
607-144-00-9
- **Registration number** 01-2119457561-38
- **1.2 Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture**  
For the production of homo- and copolymers.  
Use in formulations, cleaning agents and cleaning products.
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Möller Chemie GmbH & Co. KG  
Bürgerkamp 1  
D-48565 Steinfurt  
Tel.: 02551/9340-0  
Fax: 02551/9340-60
- **Further information obtainable from:** Product safety department
- **1.4 Emergency telephone number:**  
Poison Control Center Mainz - 24 hour emergency service - Tel.: +49 (0) 6131/19240

### SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS05 corrosion

Eye Dam. 1 H318 Causes serious eye damage.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008**  
The substance is classified and labelled according to the CLP regulation.
- **Hazard pictograms**



GHS05

- **Signal word** *Danger*
- **Hazard statements**  
H318 Causes serious eye damage.
- **Precautionary statements**  
P280 *Wear eye protection / face protection.*  
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/doctor.*

- **2.3 Other hazards**

The product does not contain any substance above the legal limits included on the list for endocrine disrupting properties established under Article 59(1) of Regulation (EC) No 1907/2006 or under Commission Delegated Regulation (EU) 2017/2100 or of Commission Regulation (EU) 2018/605 has endocrine disrupting properties.

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- **Results of PBT and vPvB assessment**

- **PBT:**

The product does not contain any substances above legal limits that meet the criteria for PBT (persistent, bioaccumulative and toxic).

- **vPvB:**

The product does not contain any substances above legal limits that meet the criteria for vPvB (very persistent and very bioaccumulative).

### SECTION 3: Composition/information on ingredients

- **3.1 Substances**

- **CAS No. Description**

124-04-9 Adipic acid

- **Identification number(s)**

- **EC number:** 204-673-3

- **Index number:** 607-144-00-9

### SECTION 4: First aid measures

- **4.1 Description of first aid measures**

- **After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

In case of unconsciousness place patient stably in side position for transportation.

- **After skin contact:**

Immediately wash with water and soap and rinse thoroughly.

Move out dirty clothes and shoes.

If skin irritation continues, consult a doctor.

- **After eye contact:**

Remove contact lenses.

Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

- **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting.

If symptoms persist consult doctor.

- **4.2 Most important symptoms and effects, both acute and delayed**

eye irritation

Irritation of the skin

Irritation of the lungs

- **4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

### SECTION 5: Firefighting measures

- **5.1 Extinguishing media**

- **Suitable extinguishing agents:** CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray.

- **For safety reasons unsuitable extinguishing agents:** Water with full jet

- **5.2 Special hazards arising from the substance or mixture**

In case of fire, the following can be released:

Carbon monoxide

carbon dioxide

Danger of dust explosion.

- **5.3 Advice for firefighters**

Do not inhale explosion gases and fumes

Cool containers with water spray.

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- **Protective equipment:** Wear self-contained respiratory protective device.

### SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**  
Ensure adequate ventilation.  
Avoid formation of dust.  
Use personal protective equipment.
- **6.2 Environmental precautions:**  
Do not allow to enter sewers/ surface or ground water.  
Keep contaminated washing water and dispose of appropriately.
- **6.3 Methods and material for containment and cleaning up:** Pick up mechanically.
- **6.4 Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

### SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Do not breathe dust.  
Avoid contact with eyes, skin and cloth.  
Wear protective equipment. Keep unprotected people away.
- **Information about fire - and explosion protection:**  
Avoid dust formation.  
Product is dust explosive.  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:**  
Keep only in the original container.  
Protect from direct sunlight.  
Protect from moisture.  
Keep container tightly closed in a dry, well-ventilated place.
- **Information about storage in one common storage facility:**  
Do not store together with alkalis (caustic solutions).  
Store away from oxidising agents.
- **Further information about storage conditions:** Keep container tightly sealed.
- **Storage class:** 11
- **7.3 Specific end use(s)** No further relevant information available.

### SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:** Not required.
- **DNELs**  
Worker:  
Long-term exposure - systemic effects, inhalation: 74.1 mg/m<sup>3</sup>  
Long-term exposure - systemic effects, dermal: 21 mg/kg  
Consumer:  
Long-term exposure - systemic effects, dermal: 7.5 mg/kg  
Long-term exposure - systemic effects, inhalation: 13 mg/m<sup>3</sup>  
Long-term exposure - systemic effects, oral: 7.5 mg/kg

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- **PNECs**

- Fresh water: 0.126 mg/l

- Sea water: 0.0126 mg/l

- sporadic release: 0.46 mg/l

- Sediment (fresh water): 0.484 mg/kg

- Sediment (sea water): 0.0484 mg/kg

- Soil: 0.0228 mg/kg

- Wastewater treatment plant: 59.1 mg/l

- **Additional information:** The lists valid during the making were used as basis.

- **8.2 Exposure controls**

- **Appropriate engineering controls** No further data; see section 7.

- **Individual protection measures, such as personal protective equipment**

- **General protective and hygienic measures:**

- The usual precautionary measures are to be adhered to when handling chemicals.

- Do not eat, drink, smoke or sniff while working.

- Do not breathe dust. Avoid dust formation.

- **Respiratory protection:** In dust formation respiratory protection required.

- **Hand protection**

- 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

- **Material of gloves**

- IIR: butyl rubber, isobutene-isoprene rubber

- NBR: acrylonitrile butadiene rubber

- CR: chloroprene (chlorobutadiene) rubber

- Nitrile rubber, NBR

- 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.

- **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/face protection**



Tightly sealed goggles

- **Body protection:** Protective work clothing

### SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Physical state**

Solid

- **Colour:**

White

- **Odour:**

Odourless

- **Odour threshold:**

No data availabl

- **Melting point/freezing point:**

150.85 °C

- **Boiling point or initial boiling point and boiling range**

337.5 °C

- **Flammability**

Product is not flammable.

- **Lower and upper explosion limit**

- **Lower:**

not available

- **Upper:**

not available

- **Flash point:**

196 °C

- **Auto-ignition temperature:**

420 °C

- **Decomposition temperature:**

230 °C

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· <i>pH (23 g/l) at 25 °C</i>	2.7
· <i>Viscosity:</i>	
· <i>Kinematic viscosity</i>	No data available.
· <i>Dynamic:</i>	No data available
· <i>Solubility</i>	
· <i>water at 25 °C:</i>	23 g/l
· <i>Partition coefficient n-octanol/water (log value) at 20 °C</i>	0.09 log KOW
· <i>Vapour pressure at 18.5 °C:</i>	0.097 hPa
· <i>Density and/or relative density</i>	
· <i>Density:</i>	Not determined.
· <i>Relative density at 25 °C</i>	1,360 g/cm <sup>3</sup>
· <i>Vapour density</i>	No data available
· <i>Particle characteristics</i>	
See section 3.	

· <b>9.2 Other information</b>	
· <i>Appearance:</i>	
· <i>Form:</i>	Solid
· <i>Important information on protection of health and environment, and on safety.</i>	
· <i>Explosive properties:</i>	Dust explosion hazard
· <i>Change in condition</i>	
· <i>Evaporation rate</i>	No data available.

· <b>Information with regard to physical hazard classes</b>	
· <i>Explosives</i>	Void
· <i>Flammable gases</i>	Void
· <i>Aerosols</i>	Void
· <i>Oxidising gases</i>	Void
· <i>Gases under pressure</i>	Void
· <i>Flammable liquids</i>	Void
· <i>Flammable solids</i>	Void
· <i>Self-reactive substances and mixtures</i>	Void
· <i>Pyrophoric liquids</i>	Void
· <i>Pyrophoric solids</i>	Void
· <i>Self-heating substances and mixtures</i>	Void
· <i>Substances and mixtures, which emit flammable gases in contact with water</i>	Void
· <i>Oxidising liquids</i>	Void
· <i>Oxidising solids</i>	Void
· <i>Organic peroxides</i>	Void
· <i>Corrosive to metals</i>	Void
· <i>Desensitised explosives</i>	Void

## SECTION 10: Stability and reactivity

- **10.1 Reactivity** Reacts violently with strong oxidizing agents and bases.
- **10.2 Chemical stability** Stable under specified storage conditions.
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions**  
Potential risk of dust explosion due to release of suspended particles.  
Development of heat on contact with alkaline substances.
- **10.4 Conditions to avoid**  
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Do not smoke.  
Protect from moisture  
Hygroscopic solid.  
Avoid dust formation.

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- **10.5 Incompatible materials:**  
oxidizing materials  
bases
- **10.6 Hazardous decomposition products:** Heating until decomposition releases pungent fumes.

### SECTION 11: Toxicological information

- **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**
- **Acute toxicity** Based on available data, the classification criteria are not met.
- **LD/LC50 values relevant for classification:**  
LD50/oral/rat: 5560 mg/kg  
LD50/dermal/rat > 7940 mg/kg  
LC50/4 h/inhalation/rat > 7.7 mg/l
- **Skin corrosion/irritation** Based on available data, the classification criteria are not met.
- **Serious eye damage/irritation**  
Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity** Based on available data, the classification criteria are not met.
- **STOT-single exposure** Based on available data, the classification criteria are not met.
- **STOT-repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.
- **11.2 Information on other hazards**
- **Endocrine disrupting properties** Substance is not listed.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:**  
LC0/96 h > 1000 mg/l (Danio rerio)  
LC50/48 h: 46 mg/l (Daphnia magna)  
EC50/72 h: 64,5 mg/l (Pseudokirchnella subcapitata)
- **12.2 Persistence and degradability** Easily biodegradable
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** This substance is not considered to be persistent, bioaccumulating nor toxic (PBT).
- **vPvB:** This substance is not considered to be very persistent nor very bioaccumulative (vPvB).
- **12.6 Endocrine disrupting properties** For information on endocrine disrupting properties see section 11.
- **12.7 Other adverse effects**
- **Additional ecological information:**
- **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.

### SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation** Disposal according to local regulations.

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

### SECTION 14: Transport information

- |   |                 |
|---|-----------------|
| · <b>14.1 UN number or ID number</b><br>· <b>ADR, ADN, IMDG, IATA</b>                       | Void            |
| · <b>14.2 UN proper shipping name</b><br>· <b>ADR, ADN, IMDG, IATA</b>                      | Void            |
| · <b>14.3 Transport hazard class(es)</b><br>· <b>ADR, ADN, IMDG, IATA</b><br>· <b>Class</b> | Void            |
| · <b>14.4 Packing group</b><br>· <b>ADR, IMDG, IATA</b>                                     | Void            |
| · <b>14.5 Environmental hazards:</b>  | Not applicable. |
| · <b>14.6 Special precautions for user</b>  | Not applicable. |
| · <b>14.7 Maritime transport in bulk according to IMO instruments</b>                       | Not applicable. |
| · <b>UN "Model Regulation":</b>   | Void            |

### SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** Substance is not listed.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 75
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has been carried out.

### SECTION 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 SDS:** Product safety department
- **Contact:** Mrs. Steyer

- **Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)  
 IMDG: International Maritime Code for Dangerous Goods  
 IATA: International Air Transport Association  
 GHS: Globally Harmonised System of Classification and Labelling of Chemicals  
 EINECS: European Inventory of Existing Commercial Chemical Substances  
 CAS: Chemical Abstracts Service (division of the American Chemical Society)  
 DNEL: Derived No-Effect Level (REACH)  
 PNEC: Predicted No-Effect Concentration (REACH)  
 LC50: Lethal concentration, 50 percent  
 LD50: Lethal dose, 50 percent  
 PBT: Persistent, Bioaccumulative and Toxic  
 vPvB: very Persistent and very Bioaccumulative  
 Eye Dam. 1: Serious eye damage/eye irritation – Category 1