

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

Printing date 04.12.2023

Version number 4

Revision: 04.12.2023

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

· **1.1 Product identifier**

- **Trade name:** Adenine
- **Synonyma** 6-Aminopurine



- **Article number:** 10739

- **CAS Number:**
73-24-5

- **EC number:**
200-796-1

- **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:** Laboratory chemicals

· **1.3 Details of the supplier of the safety data sheet**

- **Manufacturer/Supplier:**
SERVA Electrophoresis GmbH
Carl-Benz-Str. 7
D-69115 Heidelberg
Tel.: +49 6221 13840-0
FAX: +49 6221 13840-10
msds.info@serva.de

- **Information department:** Product Safety Department Tel.: +49 6221 13840-35

· **1.4 Emergency telephone number:**

- Emergency medical information in case of poisoning
Poison Information Centre Mainz-Tel: +49 (0) 6131 19240
(Counselling in German and English)

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

- **Classification according to Regulation (EC) No 1272/2008:**



GHS06

Acute Tox. 3 H301 Toxic if swallowed.

· **2.2 Label elements**

- **Labelling according to Regulation (EC) No 1272/2008:**

The substance is classified and labelled according to the GB CLP regulation.

- **Hazard pictograms:** GHS06

- **Signal word:** Danger

- **Hazard statements:**

H301 Toxic if swallowed.

- **Precautionary statements**

P264 Wash thoroughly after handling.

P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.

P321 Specific treatment (see on this label).

P330 Rinse mouth.

P405 Store locked up.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**

- **Results of PBT and vPvB assessment:**

- **PBT:** PBT - Assessment not available.

- **vPvB:** vPvB - Assessment not available.

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· **Determination of endocrine-disrupting properties** No further relevant information available.

SECTION 3: Composition/information on ingredients

- **3.1 Substances**
- **CAS No. Description:**
73-24-5 Adenine
- **Identification number(s):**
- **EC number:** 200-796-1
- **Description:**
- **Empirical formula:** $C_5H_5N_5$
- **MW:** 135.1

SECTION 4: First aid measures

- **4.1 Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:** Supply fresh air; consult doctor in case of complaints.
- **After skin contact:**
Wash off immediately with soap and water and rinse thoroughly. In case of complaints, consult a doctor.
- **After eye contact:**
Rinse opened eye for several minutes with running water. Remove contact lenses if possible and continue rinsing. Consult an ophthalmologist immediately.
- **After swallowing:**
Rinse out mouth immediately. Drink plenty of water and provide fresh air. Call a doctor immediately.
- **4.2 Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **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_2 , extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **5.2 Special hazards arising from the substance or mixture:**
Formation of toxic gases is possible during heating or in case of fire.
In case of fire, the following can be formed, but not limited to:
Nitrogen oxides (NOx)
Carbon monoxide and carbon dioxide
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
Ensure adequate ventilation
Avoid formation of dust.
- **6.2 Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up**
Dispose contaminated material as waste according to section 13.
Pick up mechanically.

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- **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.
- Open and handle receptacle with care.
- **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store only in the original receptacle.
- **Information about storage in one common storage facility:**
- Do not store together with strong oxidizing agents.
- **Further information about storage conditions:**
- Store containers tightly closed and dry.
- Store under lock and key and with access restricted to technical experts or their assistants only.
- **7.3 Specific end use(s):** No further relevant information available.

SECTION 8: Exposure controls/personal protection

- **8.1 Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation 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:**
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing
- Store protective clothing separately.
- Avoid contact with the eyes and skin.
- Wash hands before breaks and at the end of work.
- **Breathing equipment:**
- Short term filter device:
- Filter P2.
- **Hand protection:**
- The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
- Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.
- Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
- **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.
- **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.
- **For the permanent contact of a maximum of 15 minutes gloves made of the following materials are suitable:**
- Natural rubber, NR
- Nitrile rubber, NBR

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- **Eye/face protection:** Safety glasses
- **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: | Not determined. |
| · Melting point/freezing point: | approx. 350°C (decomposition) |
| · Boiling point or initial boiling point and boiling range: | not applicable (decomposition) |
| · Flammability: | No information available |
| · Lower and upper explosion limit: | |
| · Lower: | No information available |
| · Upper: | No information available |
| · Flash point: | No information available |
| · Decomposition temperature: | > 350 °C |
| · Viscosity: | |
| · Kinematic viscosity: | No information available |
| · Dynamic viscosity: | No information available |
| · Solubility: | |
| · Water at 20 °C: | 0.5 g/l |
| · Partition coefficient n-octanol/water (log value): | No information available |
| · Vapour pressure: | No information available |
| · Density and/or relative density: | |
| · Density: | No information available |
| · Relative density: | No information available |
| · Particle characteristics | No information available |

· 9.2 Other information

- | | |
|--|---|
| · Appearance: | Further physico-chemical data are not available. |
| · Form: | Powder |
| · Important information on protection of health and environment, and on safety: | |
| · Explosive properties: | The product is not explosive, but the formation of explosive dust/air mixtures is possible. |
| · Molecular weight | 135.1 g/mol |

SECTION 10: Stability and reactivity

- **10.1 Reactivity:** No further relevant information available.
- **10.2 Chemical stability:**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions:**
As the product is supplied it is not capable of dust explosion; however enrichment with fine dust causes risk of dust explosion
- **10.4 Conditions to avoid:** High temperatures
- **10.5 Incompatible materials:**
Avoid contact with:
Strong oxidizers
Strong acids

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· **10.6 Hazardous decomposition products:** In case of fire: see section 5

SECTION 11: Toxicological information

· **11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008:**

· **Acute toxicity:** Toxic if swallowed.

· **LD/LC50 values that are relevant for classification:**

Oral	LD50	783 mg/kg (mouse)
		227 mg/kg (rat)

· **Skin corrosion/irritation:** Based on available data, the classification criteria are not met.

· **Serious eye damage/irritation:** Based on available data, the classification criteria are not met.

· **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:** No relevant information available

SECTION 12: Ecological information

· **12.1 Toxicity:**

· **Aquatic toxicity:** No further relevant information available.

· **12.2 Persistence and degradability:** No further relevant information available.

· **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:** PBT - assessment not available.

· **vPvB:** vPvB - assessment not available.

· **12.6 Endocrine disrupting properties:** For information on endocrine disrupting properties see section 11.

· **12.7 Other adverse effects:**

· **Additional ecological information:**

· **General notes:**

Do not allow product to reach ground water, water course or sewage system.

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.

SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

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

· **Uncleaned packagings:**

· **Recommendation:**

Uncleaned packaging must be disposed of in the same way as the product in accordance with official regulations.

SECTION 14: Transport information

· **14.1 UN number or ID number**

· **ADR, IMDG, IATA**

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<ul style="list-style-type: none"> · 14.2 UN proper shipping name · ADR · IMDG, IATA 	<p>2811 TOXIC SOLID, ORGANIC, N.O.S. (Adenine) TOXIC SOLID, ORGANIC, N.O.S. (Adenine)</p>
<ul style="list-style-type: none"> · 14.3 Transport hazard class(es) · ADR, IMDG, IATA 	<p>6.1 Toxic substances. 6.1</p>
	
<ul style="list-style-type: none"> · Class: · Label: 	<p>6.1 Toxic substances. 6.1</p>
<ul style="list-style-type: none"> · 14.4 Packing group · ADR, IMDG, IATA 	<p>III</p>
<ul style="list-style-type: none"> · 14.5 Environmental hazards · Marine pollutant: 	<p>No</p>
<ul style="list-style-type: none"> · 14.6 Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category 	<p>Warning: Toxic substances. 60 F-A,S-A A</p>
<ul style="list-style-type: none"> · 14.7 Maritime transport in bulk according to IMO instruments 	<p>Not applicable.</p>
<ul style="list-style-type: none"> · Transport/Additional information: 	
<ul style="list-style-type: none"> · ADR · Limited quantities (LQ) · Excepted quantities (EQ) 	<p>5 kg Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g</p>
<ul style="list-style-type: none"> · Transport category · Tunnel restriction code 	<p>2 E</p>
<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	<p>5 kg Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g</p>
<ul style="list-style-type: none"> · UN "Model Regulation": 	<p>UN 2811 TOXIC SOLID, ORGANIC, N.O.S. (ADENINE), 6.1, III</p>

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.
- **Seveso category H2 ACUTE TOXIC**
- **Qualifying quantity (tonnes) for the application of lower-tier requirements** 50 t
- **Qualifying quantity (tonnes) for the application of upper-tier requirements** 200 t
- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**
Substance is not listed.

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- **REGULATION (EU) 2019/1148**
- **Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))**
Substance is not listed.
- **Annex II - REPORTABLE EXPLOSIVES PRECURSORS** Substance is not listed.
- **Regulation (EC) No 273/2004 on drug precursors** Substance is not listed.
- **Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors**
Substance is not listed.
- **National regulations:**
- **Water hazard class:** Water hazard class 1 (Self-assessment): slightly hazardous for water.
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not 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:** +49 6221 13840-35
- **Date of previous version:** 22.03.2018
- **Abbreviations and acronyms:**
 RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 ICAO: International Civil Aviation Organisation
 PBT: persistent, bioaccumulative, toxic substance (UK REACH)
 vPvB: very persistent, very bioaccumulative substance (UK REACH)
 UK REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals
 GB CLP: Regulation on classification, labelling and packaging of substances and mixtures
 bw: body weight
 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)
 LC50: Lethal concentration, 50 percent
 LD50: Lethal dose, 50 percent
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Acute Tox. 3: Acute toxicity – Category 3

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