

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

Printing date 10.06.2016

Version number 5

Revision: 10.06.2016

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

· **1.1 Product identifier**

· **Product name:** Alka-M-Photometer

· **Catalog number:** 00513211, 513210BT, 513211BT, 4513210BT, 4513211BT, 5132100BT, 00513219BT

· **1.2 Relevant identified uses of the substance or mixture and uses advised against**

· **Application of the substance / the preparation:** Reagent for water analysis

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

· **Supplier:**

Tintometer GmbH
Schleefstr. 8-12
DE-44287 Dortmund
Made in Germany
www.lovibond.com

phone: +49 (0) 231 945100
E-Mail: sales@tintometer.de

· **Informing department:**

e-mail: produktsicherheit@tintometer.de
Product Safety Department

· **Contact for technical details:**

Technical Department
e-mail: technik@tintometer.de

· **1.4 Emergency telephone number:**

Poison Center Berlin, Germany
phone: 0049-30 30686 790
Languages: English and German

SECTION 2: Hazards identification

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

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

The product is not classified as hazardous according to the CLP regulation.

· **2.2 Label elements**

· **Labelling according to Regulation (EC) No 1272/2008** Void

· **Hazard pictograms** Void

· **Signal word** Void

· **Hazard statements** Void

· **Additional information:**

EUH210 Safety data sheet available on request.

· **2.3 Other hazards** No further relevant information available.

· **Results of PBT and vPvB assessment**

This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

SECTION 3: Composition/information on ingredients

· **3.2 Mixtures**

· **Description:** Preparation contains organic compounds.

· **Dangerous components:**

CAS: 124-04-9 EINECS: 204-673-3 Index No: 607-144-00-9 Reg.nr.: 01-2116457561-38-XXXX	adipic acid	⚠ Eye Irrit. 2, H319	2.5-5%
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- **Additional information** For the wording of the listed hazard phrases refer to section 16.
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SECTION 4: First aid measures

- **4.1 Description of first aid measures**
 - **General information** Instantly remove any clothing soiled by the product.
 - **After inhalation** Supply fresh air.
 - **After skin contact** Instantly wash with water and soap and rinse thoroughly.
 - **After eye contact**
Rinse opened eye for several minutes under running water (at least 15 min). If symptoms persist, consult doctor.
 - **After swallowing**
Rinse out mouth and then drink 1-2 glasses of water.
In case of persistent symptoms consult doctor.
 - **4.2 Most important symptoms and effects, both acute and delayed:**
irritations
after swallowing of large amounts:
thirst
gastric or intestinal trouble
 - **4.3 Indication of any immediate medical attention and special treatment needed:** No further relevant information available.
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SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
 - **Suitable extinguishing agents** Water, Carbon dioxide (CO₂), Foam, Fire-extinguishing powder
 - **5.2 Special hazards arising from the substance or mixture**
combustible
Formation of toxic gases is possible during heating or in case of fire.
nitrous gases
Sulphur oxides (SO_x)
nitrogen oxides (NO_x)
carbon monoxide (CO) and carbon dioxide (CO₂)
 - **5.3 Advice for firefighters**
 - **Protective equipment:**
Wear self-contained breathing apparatus.
Wear full protective suit.
 - **Additional information**
Collect contaminated fire fighting water separately. It must not enter drains.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
Ambient fire may liberate hazardous vapours.
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SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
 - **Advice for non-emergency personnel:** Wear protective equipment. Keep unprotected persons away.
 - **Advice for emergency responders:** Protective equipment: see section 8
 - **6.2 Environmental precautions:** Do not allow product to reach sewage system or water bodies.
 - **6.3 Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Collect mechanically.
Dispose of contaminated material as waste according to item 13.
 - **6.4 Reference to other sections**
See Section 8 for information on personal protection equipment.
See Section 13 for information on disposal.
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SECTION 7: Handling and storage

- **7.1 Precautions for safe handling**
- **Advice on safe handling:** No special precautions necessary if used correctly.
- **Hygiene measures:**
The usual precautionary measures should be adhered to general rules for handling chemicals.

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Wash hands during breaks and at the end of the work.
Do not eat, drink or smoke when using this product.

7.2 Conditions for safe storage, including any incompatibilities
Storage

Requirements to be met by storerooms and containers: Store in cool location.

Information about storage in one common storage facility: Not required.

Storage class 11

Further information about storage conditions:

Protect from heat and direct sunlight.

Protect from the effects of light.

Store under dry conditions.

Protect from humidity and keep away from water.

Recommended storage temperature: 20 °C +/- 5 °C

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:

The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.

DNELs

Derived No Effect Level (DNEL)

CAS: 124-04-9 adipic acid

Oral	DNEL	19 mg/kg (Consumer / acute / systemic effects) 19 mg/kg (Consumer / long-term / systemic effects)
Dermal	DNEL	38 mg/kg (Worker / acute / systemic effects) 38 mg/kg (Worker / long-term / systemic effects) 19 mg/kg (Consumer / acute / systemic effects) 19 mg/kg (Consumer / long-term / systemic effects)
Inhalative	DNEL	5 mg/m ³ (Worker / acute / local effects) 264 mg/m ³ (Worker / acute / systemic effects) 5 mg/m ³ (Worker / long-term / local effects) 264 mg/m ³ (Worker / long-term / systemic effects) 65 mg/m ³ (Consumer / acute / systemic effects) 65 mg/m ³ (Consumer / long-term / systemic effects)

PNECs

Predicted No Effect Concentration (PNEC)

CAS: 124-04-9 adipic acid

PNEC	59.1 mg/l (Sewage treatment plant) 0.0126 mg/l (Marine water) 0.46 mg/l (Aquatic intermittent release) 0.126 mg/l (Fresh water)
PNEC	0.0228 mg/kg (Soil) 0.0484 mg/kg (Marine sediment) 0.484 mg/kg (Fresh water sediment)

Additional information: The lists that were valid during the compilation were used as basis.

8.2 Exposure controls
Engineering measures:

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.
See item 7.

Personal protective equipment

Breathing equipment: Use breathing protection against the effects of fumes/dust/aerosol.

Recommended filter device for short term use: Filter P1

Protection of hands:

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

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

- **Material of gloves**

- nitrile rubber, NBR

- Recommended thickness of the material: ≥ 0.11 mm

- **Penetration time of glove material**

- Value for the permeation: Level = 1 (< 10 min)

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

- **Eye protection:**

- Safety glasses

- use against the effects of fumes / dust

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

- **Limitation and supervision of exposure into the environment:** Do not allow product to reach sewage system or water bodies.

SECTION 9: Physical and chemical properties

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

- **Appearance:**

- Form / Physical state:** Tablets

- Colour:** Orange

- **Odour:** Odourless

- **Odour threshold:** Not applicable

- **pH-value (8.8 g/l) at 20 °C:** 3.5

- **Melting point/Freezing point:** Not determined

- **Initial boiling point and boiling range:** Not determined

- **Flash point:** Not determined

- **Flammability (solid, gas):** Not determined.

- **Decomposition temperature:** Not applicable

- **Auto-ignition temperature:** Product is not self-igniting.

- **Explosive properties:** Product is not explosive.
The following applies in general to flammable organic substances / preparations: Dust explosion possible if in powder or granular form (fine distribution), mixed with air.

- **Flammability or explosive limits:**

- Lower:** Not determined.

- Upper:** Not determined.

- **Oxidising properties:** none

- **Vapour pressure:** Not applicable.

- **Density:** Not determined

- **Relative density:** Not determined.

- **Vapour density:** Not applicable.

- **Evaporation rate:** Not applicable.

- **Solubility(ies):**

- Water:** Soluble

- **Partition coefficient (n-octanol/water):** Not applicable.

- **Viscosity:** Not applicable.

- **Solvent content:**

- Organic solvents:** 0.0 %

- Solids content:** 100.0 %

- **9.2 Other information** No further relevant information available.

SECTION 10: Stability and reactivity

- **10.1 Reactivity** Dust can combine with air to form an explosive mixture.

- **10.2 Chemical stability** Stable at ambient temperature (room temperature).

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- **10.3 Possibility of hazardous reactions**
Reacts with oxidizing agents
--> forms heat
- **10.4 Conditions to avoid** To avoid thermal decomposition do not overheat.
- **10.5 Incompatible materials:** steel
- **10.6 Hazardous decomposition products:** see section 5

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity** Based on available data, the classification criteria are not met.

LD/LC50 values that are relevant for classification:
CAS: 124-04-9 adipic acid

Oral	LD50	5700 mg/kg (rat) (MERCK)
Dermal	LD50	> 7940 mg/kg (rabbit) (Registrant, ECHA: no deaths occurred)
Inhalative	LC50	> 7.7 mg/l/4h (rat) (dust, aerosol) (Registrant, ECHA: no deaths occurred)

- **Primary irritant effect:**
- **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.

Information on components:
CAS: 124-04-9 adipic acid

Irritation of skin	OECD 404	(rabbit: no irritation)
Irritation of eyes	OECD 405	(rabbit: severe irritations)

- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.

Information on components:
CAS: 124-04-9 adipic acid

Sensitisation	OECD 406	(guinea pig: negative) (IUCLID)
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- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)** The following statements refer to the mixture:
- **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 (specific target organ toxicity) -single exposure** Based on available data, the classification criteria are not met.
- **STOT (specific target organ toxicity) -repeated exposure** Based on available data, the classification criteria are not met.
- **Aspiration hazard** Based on available data, the classification criteria are not met.

Information on components:
CAS: 124-04-9 adipic acid

OECD 471	(negative) (Bacterial Reverse Mutation Test - Ames test) (IUCLID)
OECD 474	(negative) (Mammalian Erythrocyte Micronucleus Test)

Additional toxicological information:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

SECTION 12: Ecological information

12.1 Toxicity
Aquatic toxicity:
CAS: 124-04-9 adipic acid

LC50	511 mg/l/48h (gold orfe)
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EC50	86 mg/l/48h (Daphnia magna) (OECD 202)
IC50	31 mg/l/72h (Desmodesmus subspicatus) (IUCLID)
LC50	97 mg/l/96h (fathhead minnow) (ECOTOX)

· **Bacterial toxicity:**

CAS: 124-04-9 adipic acid

EC50	92 mg/l (Pseudomonas putida) (DIN 38412) (IUCLID)
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· **12.2 Persistence and degradability**

CAS: 124-04-9 adipic acid

OECD 301 B	100% / 28d (.) (CO2 Evolution Test)
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· **12.3 Bioaccumulative potential**

CAS: 124-04-9 adipic acid

log Pow	0.081 (.) (25 °C, OECD 107)
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· **12.4 Mobility in soil** No further relevant information available.

· **12.5 Results of PBT and vPvB assessment**

This mixture does not contain any substances that are assessed to be persistent, bioaccumulative and toxic (PBT) or very persistent and very bioaccumulative (vPvB), according to the criteria given in Annex XIII of Regulation (EC) No. 1907/2006.

· **12.6 Other adverse effects** Avoid transfer into the environment.

· **Water hazard:**

Mixture (Self-assessment acc. VwVwS Annex 4, German regulation):

Water hazard class 2: hazardous for water.

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

Danger to drinking water if even small quantities leak into soil.

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.

Disposal must be made according to official regulations.

· **European waste catalogue**

16 05 09	discarded chemicals other than those mentioned in 16 05 06, 16 05 07 or 16 05 08
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· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to official regulations.

· **Recommended cleaning agent:** Water, if necessary with cleaning agent.

SECTION 14: Transport information

· **14.1 UN-Number**

· **ADR,RID, ADN, IMDG, IATA**

Void

· **14.2 UN proper shipping name**

· **ADR,RID, ADN, IMDG, IATA**

Void

· **14.3 Transport hazard class(es)**

· **ADR,RID, ADN, IMDG, IATA**

· **Class**

Void

· **14.4 Packing group**

· **ADR,RID, IMDG, IATA**

Void

· **14.5 Environmental hazards:**

Not applicable.

· **14.6 Special precautions for user**

Not applicable.

· **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not applicable.

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· Transport/Additional information:	Not dangerous according to the above specifications.
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SECTION 15: Regulatory information

· 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
· Regulation (EC) No 689/2008 concerning the export and import of dangerous chemicals:

None of the ingredients is listed.

· Regulation (EC) No 1005/2009 on substances that deplete the ozone layer:

None of the ingredients is listed.

· Directive 2012/18/EU (SEVESO III):
· Named dangerous substances - ANNEX I None of the ingredients is listed.

· Information about limitation of use: Not required.

· 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· Relevant phrases

H319 Causes serious eye irritation.

· Training hints Provide adequate information, instruction and training for operators.

· Abbreviations and acronyms:

OECD: Organisation for Economic Co-operation and Development

STOT: specific target organ toxicity

SE: single exposure

RE: repeated exposure

EC50: half maximal effective concentration

IC50: half maximal inhibitory concentration

NOEL or NOEC: No Observed Effect Level or Concentration

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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

ELINCS: European List of Notified 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

SVHC: Substances of Very High Concern

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

· Sources Data arise from safety data sheets, reference works and literature.