

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

Printing date 16.01.2012

Version number 1

Revision: 16.01.2012

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

1.1. Product identifier

· Trade name: Methylnadic anhydride

· Article number: 29452

· CAS Number:

25134-21-8

· EC number:

246-644-8

· Index number:

607-106-00-1

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

· Application of the substance / the preparation 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: +49 6131 19240 (university hospital Mainz)

SERVA
Electrophoresis

2 Hazards identification

· 2.1. Classification of the substance or mixture

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



GHS08

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H335 May cause respiratory irritation.

· Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Xn; Harmful

R22: Harmful if swallowed.



Xi; Irritant

R36/37/38: Irritating to eyes, respiratory system and skin.



Xn; Sensitising

R42: May cause sensitisation by inhalation.

· Information concerning particular hazards for human and environment: not applicable

· Classification system:

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

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· 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** GHS07, GHS08**· Signal word** Danger**· Hazard statements***H302 Harmful if swallowed.**H315 Causes skin irritation.**H319 Causes serious eye irritation.**H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.**H335 May cause respiratory irritation.***· Precautionary statements***P280 Wear protective gloves/protective clothing/eye protection/face protection.**P285 In case of inadequate ventilation wear respiratory protection.**P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.**P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.**P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.**P302+P352 IF ON SKIN: Wash with plenty of soap and water.***· 2.3. Other hazards****· Results of PBT and vPvB assessment****· PBT:** PBT - assessment not available.**· vPvB:** vPvB - assessment not available.**3 Composition/information on ingredients****· 3.1. Chemical characterization: Substances****· CAS No. Description:***25134-21-8 1,2,3,6-tetrahydromethyl-3,6-methanophthalicanhydride***· Identification number(s):****· EC number:** 246-644-8**· Index number:** 607-106-00-1**· Description:****· Empirical formula:** $C_{10}H_{10}O_3$ **· MW:** 178,19**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***Immediately wash with water and soap and rinse thoroughly.**Consult doctor In case of complaints.***· After eye contact***Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.***· After swallowing** Call for doctor immediately.**· Information for doctor****· 4.2. Most important symptoms and effects, both acute and delayed***No further relevant information available.*

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- **4.3. Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Firefighting measures

- **5.1. Extinguishing media**
- **Suitable extinguishing agents**
CO₂, 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**
In case of fire, the following can be released:
Carbon monoxide and carbon dioxide
- **5.3. Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures

- **6.1. Personal precautions, protective equipment and emergency procedures** Wear protective clothing.
- **6.2. Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **6.3. Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **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.

7 Handling and storage

- **Handling**
- **7.1. Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **7.2. Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** Store only in unopened original receptacles.
- **Information about storage in one common storage facility:** Store away from oxidizing agents.
- **Further information about storage conditions:**
Protect from humidity and water.
Keep receptacle tightly sealed.
- **7.3. Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **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**
- **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.

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Avoid contact with the eyes and skin.

· **Breathing equipment:**

Short term filter device:

Filter P2.

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**

Neoprene gloves

Protective gloves.

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

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

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

9 Physical and chemical properties

· **9.1. Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

Form: Viscous

Colour: Yellowish

· **Odour:** Pungent

· **Odour threshold:** Not determined.

· **pH-value:** Acidic

· **Change in condition**

Melting point/Melting range: undetermined

Boiling point/Boiling range: 295°C

· **Flash point:** 150°C

· **Ignition temperature:** 450°C

· **Decomposition temperature:** Not determined.

· **Self igniting:** Not determined.

· **Danger of explosion:** Product does not present an explosion hazard.

· **Explosion limits:**

Lower: Not determined.

Upper: Not determined.

· **Vapour pressure:** Not determined.

· **Density at 20°C:** 1.24 g/cm³

· **Relative density** Not determined.

· **Vapour density** Not determined.

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- | | |
|---|-----------------------------------|
| · Evaporation rate | Not determined. |
| · Solubility in / Miscibility with Water: | Hydrolized |
| · Segregation coefficient (n-octanol/water): | Not determined. |
| · Viscosity: | |
| dynamic at 25°C: | 170 - 280 mPas |
| kinematic: | Not determined. |
| · 9.2. Other information | There are no more data available. |

10 Stability and reactivity

- **10.1. Reactivity** No further relevant informations available
- **10.2. Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **10.3. Possibility of hazardous reactions** No further relevant informations available.
- **10.4. Conditions to avoid moisture**
- **10.5. Incompatible materials:**
Avoid contact with: strong bases
Avoid contact with strong oxidizers and reducing agents.
Avoid contact with: Amines
- **10.6. Hazardous decomposition products:** Carbon monoxide and carbon dioxide

11 Toxicological information

- **11.1. Information on toxicological effects**
- **Acute toxicity:**

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

25134-21-8 1,2,3,6-tetrahydromethyl-3,6-methanophthalicanhydride

Oral	LD50	> 918 mg/kg (rat)
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- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through inhalation.
- **Acute effects (acute toxicity, irritation and corrosivity)** Respiratory irritation is possible.

12 Ecological information

- **12.1. Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **12.2. Persistence and degradability** No further relevant information available.
- **Other information:** The product is difficultly biodegradable.
- **Behaviour in environmental systems:**
- **12.3. Bioaccumulative potential** No further relevant information available.
- **12.4. Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **General notes:**
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water.
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.
- **12.5. Results of PBT and vPvB assessment**
- **PBT:** PBT - assessment not available.
- **vPvB:** vPvB - assessment not available.

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· 12.6. **Other adverse effects** No further relevant information available.

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

14 Transport information

· 14.1. **UN-Number**· **ADR, IMDG, IATA**

UN1760

· 14.2. **UN proper shipping name**· **ADR**

1760 CORROSIVE LIQUID, N.O.S. (8,9-dinorborn-5-ene-2,3-dicarboxylic anhydride)

· **IMDG, IATA**

Corrosive liquid, n.o.s. (1,2,3,6-tetrahydromethyl-3,6-methanophthalicanhydride)

· 14.3. **Transport hazard class(es)**· **ADR**· **Class**

8 Corrosive substances.

· **Label**

8

· **IMDG, IATA**· **Class**

8 Corrosive substances.

· **Label**

8

· 14.4. **Packing group**· **ADR, IMDG, IATA**

III

· 14.5. **Environmental hazards:**· **Marine pollutant:**

No

· 14.6. **Special precautions for user**

Warning: Corrosive substances.

· **Danger code (Kemler):**

80

· 14.7. **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

· **Transport/Additional information:**· **ADR**· **Tunnel restriction code**

E

· **UN "Model Regulation":**

UN1760, CORROSIVE LIQUID, N.O.S., 8, III

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15 Regulatory information

· **15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **National regulations**

· **Technical instructions (air):**

Class	Share in %
I	80-100

· **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.

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:** Product safety department

· **Contact:** +49 6221 13840-35

· **Abbreviations and acronyms:**

PBT: persistent, bioaccumulative, toxic substance (REACH)

vPvB: very persistent, very bioaccumulative substance (REACH)

REACH: Regulation concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals

CLP: Regulation on classification, labelling and packaging of substances and mixtures

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

ICAO: International Civil Aviation Organization

GHS: Globally Harmonized 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

· *** Data compared to the previous version altered.**

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