

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

Printing date 02.12.2011

Version number 1

Revision: 16.03.2011

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

- **1.1. Product identifier**
- **Trade name:** Murashige and Skoog
minimal organic powder medium
- **Article number:** 47515
- **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**



GHS03

Ox. Sol. 1 H271 May cause fire or explosion; strong oxidiser.

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



O; Oxidising

R8-9: Contact with combustible material may cause fire. Explosive when mixed with combustible material.

- **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

- **Classification system:**

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

- **2.2. Label elements**

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

The product is classified and labelled according to the CLP regulation.

- **Hazard pictograms** GHS03

- **Signal word** Danger

- **Hazard statements**

H271 May cause fire or explosion; strong oxidiser.

- **Precautionary statements**

P210 Keep away from heat/sparks/open flames/hot surfaces. - No smoking.

P220 Keep/Store away from clothing/combustible materials.

P283 Wear fire/flame resistant/retardant clothing.

P221 Take any precaution to avoid mixing with combustibles.

P371+P380+P375 In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

P306+P360 **IF ON CLOTHING:** rinse immediately contaminated clothing and skin with plenty of water before removing clothes.

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- **2.3. Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **3.2. Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with harmless additions.

· **Dangerous components:**

CAS: 7757-79-1 EINECS: 231-818-8	potassium nitrate	 O R8  Ox. Sol. 3, H272	40-70%
CAS: 6484-52-2 EINECS: 229-347-8	ammonium nitrate	 O R8-9  Ox. Sol. 1, H271	30-50%

- **Additional information** For the wording of the listed risk phrases refer to section 16.

4 First aid measures

- **4.1. Description of first aid measures**
- **After inhalation** Supply fresh air; consult doctor in case of complaints.
- **After skin contact** Immediately rinse with water.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing**
Rinse out mouth and then drink plenty of water.
If symptoms persist consult doctor.
- **Information for doctor**
- **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.

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:
Nitrogen oxides (NO_x)
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:**
Pick up mechanically.
Dispose contaminated material as waste according to item 13.
- **6.4. Reference to other sections**
See Section 8 for information on personal protection equipment.

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See Section 13 for disposal information.

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7 Handling and storage

- **Handling**
- **7.1. Precautions for safe handling** Prevent formation of dust.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect from heat.
- **7.2. Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Store away from flammable substances.
- **Further information about storage conditions:**
Protect from heat and direct sunlight.
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:**
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **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** Wash hands before breaks and at the end of work.
- **Breathing equipment:** Suitable respiratory protective device recommended.
- **Protection of hands:**
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. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
- **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:** Safety glasses
- **Body protection:** Protective work clothing.

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9 Physical and chemical properties

· 9.1. Information on basic physical and chemical properties

· General Information

· Appearance:

Form: Powder
Colour: Whitish
Odour: Characteristic

· **pH-value at 20°C:** 3.8 - 4.5

· Change in condition

Melting point/Melting range: undetermined
Boiling point/Boiling range: undetermined

· **Flash point:** Not applicable

· **Flammability (solid, gaseous)** Contact with combustible material may cause fire.

· **Self igniting:** Product is not selfigniting.

· **Danger of explosion:** Explosive when mixed with combustible material.

· **Density:** Not determined

· Solubility in / Miscibility with

Water at 20°C: 4.5 g/l

· Solvent content:

Organic solvents: 0.0 %

· **VOC %:** 0.00 %

· **Solids content:** 100.0 %

· **9.2. Other information** There are no more data available.

10 Stability and reactivity

· 10.1. Reactivity

· 10.2. Chemical stability

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

· **10.3. Possibility of hazardous reactions** No dangerous reactions known

· **10.4. Conditions to avoid** No further relevant information available.

· **10.5. Incompatible materials:** No further relevant information available.

· **10.6. Hazardous decomposition products:** No dangerous decomposition products known

11 Toxicological information

· 11.1. Information on toxicological effects

· Acute toxicity:

· LD/LC50 values that are relevant for classification:

6484-52-2 ammonium nitrate

Oral	LD50	2217 mg/kg (rat)
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Inhalative	LC50/4h	> 88.8 mg/l (rat)
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7757-79-1 potassium nitrate

Oral	LD50	3540 mg/kg (rat)
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	LC50/96h	1378 mg/l (Fish)
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· Primary irritant effect:

· **on the skin:** No irritant effect.

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- **on the eye:** No irritating effect.
- **Sensitization:** No sensitizing effects known.

12 Ecological information

· 12.1. Toxicity

· Aquatic toxicity:

6484-52-2 ammonium nitrate

EC50/48h	> 111 mg/l (Daphnia magna)
EC50/72h	> 22 mg/l (Scenedesmus subspicatus)

· 12.2. Persistence and degradability

 No further relevant information available.

· 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.

· 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.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

14 Transport information

· 14.1. UN-Number

· **ADR, IMDG, IATA** 1479

· 14.2. UN proper shipping name

· **ADR** 1479 OXIDIZING SOLID, N.O.S. (POTASSIUM NITRATE, AMMONIUM NITRATE)

· **IMDG** OXIDIZING SOLID, N.O.S. (POTASSIUM NITRATE, AMMONIUM NITRATE)

· **IATA** Oxidizing solid, n.o.s. (Potassium nitrate, Ammonium nitrate)

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

· ADR



· Class

5.1 Oxidising substances.

· Label

5.1

· IMDG, IATA



· Class

5.1 Oxidising substances.

· Label

5.1

· **14.4. Packing group**

· ADR, IMDG, IATA

III

· **14.5. Environmental hazards:**

Not applicable.

· **Marine pollutant:**

No

· **14.6. Special precautions for user**

Warning: Oxidising substances.

· **Danger code (Kemler):**

50

· **EMS Number:**

F-A,S-Q

· **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":**

UN1479, OXIDIZING SOLID, N.O.S., 5.1, III

15 Regulatory information

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

· **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.

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.

· **Relevant phrases**

H271 May cause fire or explosion; strong oxidiser.

H272 May intensify fire; oxidiser.

R8 Contact with combustible material may cause fire.

R9 Explosive when mixed with combustible material.

· **Department issuing MSDS:** Product safety department

· **Contact:** +49 6221 13840-35

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· **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

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

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

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