

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 02.12.2011

Version number 1

Revision: 19.03.2010

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

· 1.1. Product identifier

· Trade name: Murashige and Skoog Plant salts

· Article number: 47516

· 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.

(Contd. on page 2)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 02.12.2011

Version number 1

Revision: 19.03.2010

Trade name: **Murashige and Skoog Plant salts**





(Contd. of page 1)

- **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.

(Contd. on page 3)

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

Printing date 02.12.2011

Version number 1

Revision: 19.03.2010

Trade name: Murashige and Skoog Plant salts

(Contd. of page 2)

See Section 13 for disposal information.

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.

GB

(Contd. on page 4)

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

Printing date 02.12.2011

Version number 1

Revision: 19.03.2010

Trade name: *Murashige and Skoog Plant salts*

(Contd. of page 3)

9 Physical and chemical properties

· 9.1. Information on basic physical and chemical properties

· General Information

· Appearance:

· <i>Form:</i>	<i>Powder</i>
· <i>Colour:</i>	<i>Whitish</i>
· <i>Odour:</i>	<i>Characteristic</i>

· *pH-value at 20°C:* 4.0 - 5.0

· 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:

· Primary irritant effect:

· *on the skin:* No irritant effect.

· *on the eye:* No irritating effect.

· *Sensitization:* No sensitizing effects known.

12 Ecological information

· 12.1. Toxicity

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

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

(Contd. on page 5)

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

Printing date 02.12.2011

Version number 1

Revision: 19.03.2010

Trade name: *Murashige and Skoog Plant salts*



(Contd. of page 4)

- **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

- | | |
|--|--|
| <ul style="list-style-type: none"> · 14.1. UN-Number · ADR, IMDG, IATA | 1479 |
| <ul style="list-style-type: none"> · 14.2. UN proper shipping name · ADR · IMDG · IATA | 1479 OXIDIZING SOLID, N.O.S. (POTASSIUM NITRATE, AMMONIUM NITRATE)
OXIDIZING SOLID, N.O.S. (POTASSIUM NITRATE, AMMONIUM NITRATE)
Oxidizing solid, n.o.s. (Potassium nitrate, Ammonium nitrate) |
| <ul style="list-style-type: none"> · 14.3. Transport hazard class(es) · ADR |  |
| <ul style="list-style-type: none"> · Class · Label | 5.1 Oxidising substances.
5.1 |
| <ul style="list-style-type: none"> · IMDG, IATA |  |
| <ul style="list-style-type: none"> · Class · Label | 5.1 Oxidising substances.
5.1 |
| <ul style="list-style-type: none"> · 14.4. Packing group · ADR, IMDG, IATA | III |
| <ul style="list-style-type: none"> · 14.5. Environmental hazards: | Not applicable. |

(Contd. on page 6)

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

Printing date 02.12.2011

Version number 1

Revision: 19.03.2010

Trade name: *Murashige and Skoog Plant salts*

(Contd. of page 5)

· 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

- **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

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