

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 13.10.2023

Version number 4

Revision: 13.10.2023

SECTION 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
- **UFI:** NJ60-N08S-100E-3UMV
- **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:**



GHS03

Ox. Sol. 3 H272 May intensify fire; oxidiser.

- **2.2 Label elements**
- **Labelling according to Regulation (EC) No 1272/2008:**
The product is classified and labelled according to the GB CLP regulation.
- **Hazard pictograms:** GHS03
- **Signal word:** Warning
- **Hazard statements:**
H272 May intensify fire; oxidiser.
- **Precautionary statements**
 - P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
 - P220 Keep away from clothing and other combustible materials.
 - P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 - P370+P378 In case of fire: Use CO₂, powder or water spray to extinguish.
 - P501 Dispose of contents/container in accordance with local/regional/national/international regulations.
- **Additional information:**
Product contains: Reportable explosives precursors. Making available, introduction, possession and use according to Regulation (EU) 2019/1148, Article 9.
- **Labelling of packages where the contents do not exceed 125 ml**
- **Hazard pictograms** GHS03
- **Signal word** Warning
- **Hazard statements** Void
- **Precautionary statements**
 - P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 P370+P378 In case of fire: Use CO₂, powder or water spray to extinguish.

2.3 Other hazards
Results of PBT and vPvB assessment:

PBT: PBT - Assessment not available.

vPvB: vPvB - Assessment not available.

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

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Description: Mixture of the substances listed below with harmless additions.

Dangerous components:

CAS: 7757-79-1 EINECS: 231-818-8	potassium nitrate Ox. Sol. 3, H272	30-50%
CAS: 6484-52-2 EINECS: 229-347-8	ammonium nitrate Ox. Sol. 3, H272	20-40%
CAS: 10043-52-4 EINECS: 233-140-8	calcium chloride Eye Irrit. 2, H319	5-15%
	zinc sulphate Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Irrit. 2, H315; Eye Irrit. 2, H319	0.1-0.2%
CAS: 10043-35-3 EINECS: 233-139-2 Reg.nr.: 01-2119486683-25	boric acid Repr. 1B, H360FD	0.1-0.2%

SVHC

10043-35-3 boric acid

Additional information

the product contains no further substances which shall be indicated according to UK REACH-Regulation (Regulation (EC) No. 1907/2006).

For the wording of the listed hazard phrases refer to section 16.

SECTION 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:

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. 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:

CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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- **5.2 Special hazards arising from the substance or mixture:**
In case of fire, the following can be formed, but not limited to:
 Nitrogen oxides (NO_x)
 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.
- **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:** *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:**
Storage at +2 to +8 °C
Store only in the original receptacle.
- **Information about storage in one common storage facility:** *Store away from flammable substances.*
- **Further information about storage conditions:** *Protect from heat and direct sunlight.*
- **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.
- **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.
Store protective clothing separately.
Immediately remove all soiled and contaminated clothing
Avoid contact with the eyes and skin.
Wash hands before breaks and at the end of work.
- **Breathing equipment:** *Suitable respiratory protective device recommended.*

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· **Hand protection:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Protective gloves.

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.

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/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:**

off-white to light yellow

· **Odour:**

Characteristic

· **Odour threshold:**

Not determined.

· **Melting point/freezing point:**

No information available

· **Boiling point or initial boiling point and boiling range:**

No information available

· **Flammability:**

Contact with combustible material may cause fire.

· **Lower and upper explosion limit:**

· **Lower:**

No information available

· **Upper:**

No information available

· **Flash point:**

No information available

· **Decomposition temperature:**

No information available

· **pH at 20 °C:**

3.8-4.5

· **Viscosity:**

· **Kinematic viscosity:**

No information available

· **Dynamic viscosity:**

No information available

· **Solubility:**

· **Water:**

Soluble

· **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**

Further physico-chemical data are not available.

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- **Appearance:**
- **Form:** Powder
- **Important information on protection of health and environment, and on safety:**
- **Explosive properties:** Explosive when mixed with combustible material.
- **VOC %:** 0.00 %

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:** Contact with combustible material may cause fire.
- **10.4 Conditions to avoid:** Avoid high temperatures, flames, sparks
- **10.5 Incompatible materials:**
Avoid contact with:
combustible materials.
- **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:** Based on available data, the classification criteria are not met.
- **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.

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SECTION 13: Disposal considerations

· **13.1 Waste treatment methods**

· **Recommendation**

Dispose of in accordance with official regulations.

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.

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

SECTION 14: Transport information

· **14.1 UN number or ID number**

· **ADR, IMDG, IATA**

UN1479

· **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 mixture)

· **14.3 Transport hazard class(es)**

· **ADR, IMDG, IATA**



· **Class:**

5.1 Oxidising substances.

· **Label:**

5.1

· **14.4 Packing group**

· **ADR, IMDG, IATA**

III

· **14.5 Environmental hazards**

· **Marine pollutant:**

No

· **14.6 Special precautions for user**

Warning: Oxidising substances.

· **Hazard identification number (Kemler code):**

50

· **EMS Number:**

F-A,S-Q

· **Segregation groups**

(SGG2) Ammonium compounds

· **Stowage Category**

B

· **Segregation Code**

SG38 Stow "separated from" SGG2-ammonium compounds.

SG49 Stow "separated from" SGG6-cyanides

SG60 Stow "separated from" SGG16-peroxides

SG61 Stow "separated from" SGG15-powdered metals

· **14.7 Maritime transport in bulk according to IMO instruments**

Not applicable.

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· Transport/Additional information:
· ADR
· Limited quantities (LQ)

5 kg

· Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 1000 g

· Transport category

3

· Tunnel restriction code

E

· IMDG
· Limited quantities (LQ)

5 kg

· Excepted quantities (EQ)

Code: E1

Maximum net quantity per inner packaging: 30 g

Maximum net quantity per outer packaging: 1000 g

· UN "Model Regulation":

UN 1479 OXIDIZING SOLID, N.O.S. (POTASSIUM NITRATE, AMMONIUM NITRATE), 5.1, III

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 None of the ingredients is listed.

· Seveso category P8 OXIDISING LIQUIDS AND SOLIDS

· Qualifying quantity (tonnes) for the application of lower-tier requirements 50 t

· Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t

· REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 65

· DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.

· REGULATION (EU) 2019/1148
· Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.

· Annex II - REPORTABLE EXPLOSIVES PRECURSORS

7757-79-1 | potassium nitrate

· Regulation (EC) No 273/2004 on drug precursors

None of the ingredients is listed.

· Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors

None of the ingredients is listed.

· National regulations:
· Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.

· Substances of very high concern (SVHC) according to UK REACH

10043-35-3 | boric acid

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

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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.

· **Relevant phrases**

- H272 May intensify fire; oxidiser.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H360FD May damage fertility. May damage the unborn child.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.

· **Department issuing SDS: Product Safety Department**

· **Contact:** +49 6221 13840-35

· **Date of previous version:** 02.05.2018

· **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
 SVHC: Substance of Very High Concern (UK REACH)
 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
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 Ox. Sol. 3: Oxidizing solids – Category 3
 Skin Irrit. 2: Skin corrosion/irritation – Category 2
 Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
 Repr. 1B: Reproductive toxicity – Category 1B
 Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1
 Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

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