

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

Printing date 24.11.2011

Version number 1

Revision: 18.06.2009

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

1.1. Product identifier

· Trade name: Guanidine-thiocyanate

· Article number: 24220

· CAS Number:

593-84-0

· EC number:

209-812-1

· Index number:

615-004-00-3

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



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H312 Harmful in contact with skin.

Acute Tox. 4 H332 Harmful if inhaled.

Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

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



Xn; Harmful

R20/21/22: Harmful by inhalation, in contact with skin and if swallowed.

R32-52/53: Contact with acids liberates very toxic gas. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

· 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 substance is classified and labelled according to the CLP regulation.

· Hazard pictograms GHS07

· Signal word Warning

· Hazard statements

H302+EUH032 Harmful if swallowed. Contact with acids liberates very toxic gas.

H312 Harmful in contact with skin.

H332 Harmful if inhaled.

H412 Harmful to aquatic life with long lasting effects.

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· Precautionary statements

- P273 Avoid release to the environment.
- P280 Wear protective gloves/protective clothing/eye protection/face protection.
- P264 Wash thoroughly after handling.
- P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P301+P312 IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
- P302+P352 IF ON SKIN: Wash with plenty of soap and water.

· 2.3. Other hazards**· Results of PBT and vPvB assessment**

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients**· 3.1. Chemical characterization: Substances**

- **CAS No. Description:**
593-84-0 guanidinium thiocyanate
- **Identification number(s):**
- **EC number:** 209-812-1
- **Index number:** 615-004-00-3
- **Description:**
- **Empirical formula:** C₂H₆N₄S
- **MW:** 118,20

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 and to be sure call for a doctor.
- **After skin contact** Immediately rinse with water.
- **After eye contact** Rinse opened eye for several minutes under running water.
- **After swallowing** Drink copious amounts of water and provide fresh air. Call for doctor immediately.

· Information for doctor**· 4.2. Most important symptoms and effects, both acute and delayed**

- Nausea
- Amyosthenia
- Dysfunction of the nervous system (e.g. hallucination, coma)

· 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)
- Sulphur dioxide (SO₂)
- Hydrogen cyanide (HCN)

In certain fire conditions, traces of other toxic gases cannot be excluded.

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- **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.
Inform respective authorities in case of seepage into water course or sewage system.
- **6.3. Methods and material for containment and cleaning up:**
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **6.4. Reference to other sections**
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**
Prevent formation of dust.
Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **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:** Do not store together with acids.
- **Further information about storage conditions:**
Keep receptacle tightly sealed.
Store in dry conditions.
Store receptacle in a well ventilated area.
- **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.
Wash hands before breaks and at the end of work.
Avoid contact with the eyes and skin.
- **Breathing equipment:**
Short term filter device:
Filter P2.
- **Protection of hands:**
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.

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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:** Safety glasses

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

9 Physical and chemical properties

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

- **General Information**

- **Appearance:**

Form: Crystalline

Colour: White

- **Odour:** Characteristic

- **pH-value (500 g/l) at 25°C:** 5.5 - 6.0

- **Change in condition**

Melting point/Melting range: 115 - 122°C

Boiling point/Boiling range: undetermined

- **Flash point:** Not applicable

- **Flammability (solid, gaseous)** Product is not flammable.

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

- **Density at 20°C:** 1.29 g/cm³

- **Bulk density at 20°C:** 0.5 - 0.7 kg/m³

- **Solubility in / Miscibility with**

Water at 20°C: 710 g/l

- **9.2. Other information** No further relevant information 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** Contact with acids releases toxic gases

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

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

- **10.6. Hazardous decomposition products:**

Hydrogen sulphide

Nitrogen oxides

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11 Toxicological information· **11.1. Information on toxicological effects**· **Acute toxicity:**· **LD/LC50 values that are relevant for classification:**

| | | |
|------|------|-----------------|
| Oral | LD50 | 593 mg/kg (rat) |
|------|------|-----------------|

· **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.· **Behaviour in environmental systems:**· **12.3. Bioaccumulative potential** No further relevant information available.· **12.4. Mobility in soil** No further relevant information available.· **Ecotoxicological effects:**· **Remark:** Harmful to fish· **Additional ecological information:**· **General notes:**

Harmful to aquatic organisms

Water hazard class 2 (German Regulation) (Assessment by list): hazardous for water.

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

Danger to drinking water if even small quantities leak into the ground.

· **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, ADN, IMDG, IATA** Void· **14.2. UN proper shipping name**· **ADR, ADN, IMDG, IATA** Void· **14.3. Transport hazard class(es)**· **ADR, ADN, IMDG, IATA**· **Class** Void

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| | |
|--|--|
| · 14.4. Packing group · ADR, IMDG, IATA | Void |
| · 14.6. Special precautions for user | Not applicable. |
| · 14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · Transport/Additional information: | Not dangerous according to the above specifications. |
| · UN "Model Regulation": | - |

* **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 2 (Assessment by list): 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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