

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

Printing date 03.05.2018

Version number 3

Revision: 03.05.2018

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

· **1.1 Product identifier**

· **Trade name:** Guanidine-thiocyanate



· **Article number:** 39577

· **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**

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:**

Medical Emergency Information in case of poisoning:

Poison Information Center Mainz - Phone: +49 (0) 6131 19240

(advisory service in German or English language)

SECTION 2: Hazards identification

· **2.1 Classification of the substance or mixture**

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



GHS05

Skin Corr. 1C

H314 Causes severe skin burns and eye damage.



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.

· **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** GHS05, GHS07

· **Signal word** Danger

· **Hazard statements**

H302+H312+H332 Harmful if swallowed, in contact with skin or if inhaled.

H314

Causes severe skin burns and eye damage.

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H412 Harmful to aquatic life with long lasting effects.

· **Precautionary statements**

P260 Do not breathe dusts or mists.

P264 Wash thoroughly after handling.

P273 Avoid release to the environment.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+P312 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

· **Additional information:**

EUH032 Contact with acids liberates very toxic gas.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**

· **PBT:** PBT - assessment not available.

· **vPvB:** vPvB - assessment not available.

SECTION 3: Composition/information on ingredients

· **3.1 Chemical characterisation: 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:** $C_2H_6N_4S$

· **MW:** 118.20

SECTION 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 wash with water and soap and rinse thoroughly.

· **After eye contact**

Rinse opened eye for several minutes under running water. Remove present contact lenses, if easy to do, and continue rinsing. Consult ophthalmologist immediately.

· **After swallowing**

Wash out mouth. Call a doctor immediately.

Do not induce vomiting!

· **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.

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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.
- **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)
Sulphur dioxide (SO₂)
Hydrogen cyanide (HCN)
In certain fire conditions, traces of other toxic gases cannot be excluded.
- **5.3 Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

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.
Inform respective authorities in case of seepage into water course or sewage system.
- **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 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**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.
- **Information about protection against explosions and fires:** Keep ignition sources away - Do not smoke.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:**
Keep away from sources of heat.
store in the dark.
- **Information about storage in one common storage facility:**
Do not store together with acids.
Store away from oxidising agents.
- **Further information about storage conditions:**
Keep receptacle tightly sealed and store in dry conditions.
Store receptacle in a well ventilated area.
- **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

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

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- **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.
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.

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SECTION 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/freezing point: | 115 - 122 °C |
| Initial boiling point and boiling range: | undetermined |
- **Flash point:** Not applicable
- **Flammability (solid, gaseous)** Product is not flammable.
- **Explosive properties:** 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

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- | | |
|---|--|
| · Solubility in / Miscibility with Water at 20 °C: | 710 g/l |
| · Partition coefficient: n-octanol/water: | -1.38 log POW (calculated) |
| · 9.2 Other information | No further relevant information available. |

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 acids releases toxic gases
- **10.4 Conditions to avoid** high temperatures
- **10.5 Incompatible materials:**
Avoid contact with:
Acids
peroxides
Oxidizers
- **10.6 Hazardous decomposition products:**
In case of fire: See Section 5
Hydrogen sulphide
Ammonia

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
 - **Acute toxicity**
Harmful if swallowed, in contact with skin or if inhaled.
- | | | |
|---|------|-----------------|
| · LD/LC50 values that are relevant for classification: | | |
| 593-84-0 guanidinium thiocyanate | | |
| Oral | LD50 | 593 mg/kg (rat) |
- **Primary irritant effect:**
 - **Skin corrosion/irritation**
Causes severe skin burns and eye damage.
 - **Serious eye damage/irritation**
Causes serious eye damage.
Causes severe skin burns and eye damage.
 - **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
 - **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
 - **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.

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.

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- **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.

SECTION 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.

SECTION 14: Transport information

- | | |
|--|--|
| · 14.1 UN-Number · ADR, IMDG, IATA | UN1759 |
| · 14.2 UN proper shipping name · IMDG · IATA | CORROSIVE SOLID, N.O.S. (guanidinium thiocyanate) Corrosive solid, n.o.s. (Guanidinium thiocyanate) |
| · 14.3 Transport hazard class(es) · ADR, IMDG, IATA | <div style="text-align: center;">  </div> |
| · Class · Label | 8 Corrosive substances. 8 |
| · 14.4 Packing group · ADR, IMDG, IATA | III |
| · 14.5 Environmental hazards: | Not applicable. |
| · 14.6 Special precautions for user · Danger code (Kemler): · EMS Number: | Warning: Corrosive substances. 80 F-A,S-B |
| · 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code | Not applicable. |
| · Transport/Additional information: | Not dangerous according to the above specifications. |
| · ADR · Limited quantities (LQ) | 5 kg |

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| | |
|-----------------------------------|--|
| · 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": | Void |

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SECTION 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.

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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.

- **Department issuing SDS:** Product safety department
- **Contact:** +49 6221 13840-35
- **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
 - 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)
 - 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
 - CAS: Chemical Abstracts Service (division of the American Chemical Society)
 - LC50: Lethal concentration, 50 percent
 - LD50: Lethal dose, 50 percent
 - PBT: Persistent, Bioaccumulative and Toxic
 - vPvB: very Persistent and very Bioaccumulative
 - Acute Tox. 4: Acute toxicity – Category 4
 - Skin Corr. 1C: Skin corrosion/irritation – Category 1C
 - Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3
- *** Data compared to the previous version altered.**

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