

Safety Data Sheet

acc. to OSHA HCS

Printing date 11/12/2019

Reviewed on 11/12/2019

1 Identification

- **Product identifier**

- **Trade name:** BlueZol

- **Article number:** 39808

- **Application of the substance / the mixture** Laboratory chemicals

- **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

- **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)



2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS06

Acute Tox. 3 H301 Toxic if swallowed.

Acute Tox. 3 H311 Toxic in contact with skin.

Acute Tox. 3 H331 Toxic if inhaled.



GHS08

Muta. 2 H341 Suspected of causing genetic defects.

STOT RE 2 H373 May cause damage to organs through prolonged or repeated exposure.



GHS05

Skin Corr. 1B H314 Causes severe skin burns and eye damage.



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms** GHS05, GHS06, GHS07, GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

phenol

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guanidinium thiocyanate

2-Mercaptoethanol

sodium N-lauroylsarcosinate

- **Hazard statements**

Toxic if swallowed, in contact with skin or if inhaled.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause damage to organs through prolonged or repeated exposure.

- **Precautionary statements**

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

If swallowed: Call a poison center/doctor if you feel unwell.

If on skin: Wash with plenty of soap and water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.

Continue rinsing.

Get medical advice/attention if you feel unwell.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 3

Fire = 0

Reactivity = 0

- **HMIS-ratings (scale 0 - 4)**



Health = *3

Fire = 0

Reactivity = 0

- **Other hazards**

- **Results of PBT and vPvB assessment**

• **PBT:** PBT - assessment not available.• **vPvB:** vPvB - assessment not available.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**

• **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

108-95-2	phenol	30-50%
593-84-0	guanidinium thiocyanate	15-30%
60-24-2	2-Mercaptoethanol	0-10%
137-16-6	sodium N-lauroylsarcosinate	0-10%

• **Additional information:** For the wording of the listed hazard phrases refer to section 16.

4 First-aid measures

- **Description of first aid measures**

- **General information:**

Immediately remove any clothing soiled by the product.

Remove breathing apparatus only after contaminated clothing have been completely removed.

In case of irregular breathing or respiratory arrest provide artificial respiration.

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- **After inhalation:** Supply fresh air or oxygen; call for doctor.
- **After skin contact:**
Immediate wash with copious amounts of water and soap; rinse thoroughly; seek medical advice.
- **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 instantly. Drink copious amounts of water and provide fresh air. Call for doctor immediately.
Do not induce vomiting!
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂ extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**
Formation of toxic gases is possible during heating or in case of fire.
In case of fire, the following can be released:
Carbon monoxide and carbon dioxide
Nitrogen oxides (NO_x)
Ammonia (NH₃)
Sulphur oxides (SO_x)
Hydrogen sulfide
Hydrogen cyanide (HCN)
- **Advice for firefighters**
- **Protective equipment:** Wear self-contained respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective clothing.
Ensure adequate ventilation
Wear respiratory protection.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to item 13.
- **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.
- **Protective Action Criteria for Chemicals**

· PAC-1:

108-95-2	phenol	15 ppm
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· PAC-2:

108-95-2	phenol	23 ppm
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· PAC-3:

108-95-2 phenol

200 ppm

7 Handling and storage

· Handling:

· Precautions for safe handling

Ensure good ventilation/exhaustion at the workplace.

Open and handle receptacle with care.

· Information about protection against explosions and fires: Keep respiratory protective device available.

· Conditions for safe storage, including any incompatibilities

· Storage:

· Requirements to be met by storerooms and receptacles: Store at +2 to +8 °C

· Information about storage in one common storage facility:

Store away from oxidizing agents.

Do not store together with acids.

· Further information about storage conditions: Keep receptacle tightly sealed and store in dry conditions.

· 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.

· Control parameters

· Components with limit values that require monitoring at the workplace:

The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.

At this time, the other constituents have no known exposure limits.

108-95-2 phenol (40-70%)

PEL	Long-term value: 19 mg/m ³ , 5 ppm Skin
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REL	Long-term value: 19 mg/m ³ , 5 ppm Ceiling limit value: 60* mg/m ³ , 15.6* ppm *15-min; Skin
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TLV	Long-term value: 19 mg/m ³ , 5 ppm Skin; BEI
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· Ingredients with biological limit values:

108-95-2 phenol (40-70%)

BEI	250 mg/g creatinine Medium: urine Time: end of shift Parameter: Phenol with hydrolysis (background, nonspecific)
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· Additional information: The lists that were valid during the creation were used as basis.

· Exposure controls

· 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:

Short term filter device:

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Filter P3

- **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.**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:**

Nitrile rubber, NBR

- **Eye protection:** *Tightly sealed goggles*

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

9 Physical and chemical properties

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

- **General Information**

- **Appearance:**

Form:	<i>Liquid</i>
Color:	<i>Light yellow</i>
Odor:	<i>Characteristic</i>
Odor threshold:	<i>Not determined.</i>

- **pH-value:** *no information available*

- **Change in condition**

Melting point/Melting range:	<i>no information available</i>
Boiling point/Boiling range:	<i>no information available</i>

- **Flash point:** *no information available*

- **Flammability (solid, gaseous):** *Not applicable.*

- **Ignition temperature:** *no information available*

- **Decomposition temperature:** *no information available*

- **Auto igniting:** *Product is not selfigniting.*

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

- **Explosion limits:**

Lower:	<i>no information available</i>
Upper:	<i>no information available</i>

- **Vapor pressure:** *no information available*

- **Density:** *no information available*

- **Relative density** *Not determined.*

- **Vapor density** *Not determined.*

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- | | |
|---|--|
| · Evaporation rate | Not determined. |
| · Solubility in / Miscibility with Water: | Fully miscible. |
| · Partition coefficient (n-octanol/water): | no information available |
| · Viscosity: | |
| Dynamic: | no information available |
| Kinematic: | no information available |
| · Solvent content: | |
| VOC content: | 0.00 % |
| · Other information | No further relevant information available. |

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No further relevant informations available.
- **Conditions to avoid**
exposure to the light
Avoid high temperatures, flames, sparks
- **Incompatible materials:** Avoid contact with: acids, strong oxidizers
- **Hazardous decomposition products:** In case of fire: See Section 5

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **LD/LC50 values that are relevant for classification:**

108-95-2 phenol

Oral	LD50	300 mg/kg (Maus) 317 mg/kg (rat)
Dermal	LD50	670 mg/kg (rat)
Inhalative	LC50/4h	316 mg/l (rat)

593-84-0 guanidinium thiocyanate

Oral	LD50	593 mg/kg (rat)
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60-24-2 2-Mercaptoethanol

Oral	LD50	244 mg/kg (rat)
Dermal	LD50	168 mg/kg (rabbit)
Inhalative	LC50/4h	~2 mg/l (rat)
	LC50/96h	37 mg/l (Forelle)

137-16-6 sodium N-lauroylsarcosinate

Oral	LD50	2,900 mg/kg (rat)
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- **Primary irritant effect:**
- **on the skin:** Caustic effect on skin and mucous membranes.
- **on the eye:** Strong caustic effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:

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Toxic

Corrosive

Irritant

Very toxic

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

108-95-2 phenol

3

· **NTP (National Toxicology Program)**

None of the ingredients is listed.

· **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**

60-24-2 2-Mercaptoethanol

EC50/48h 0.4 mg/l (*Daphnia magna*)EC50/72h 18.6 mg/l (*Scenedesmus subspicatus*)

137-16-6 sodium N-lauroylsarcosinate

EC50/48h 29.7 mg/l (*Daphnia magna*)

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

· **Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Additional ecological information:**

· **General notes:**

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

Water hazard class 2 (Self-assessment): hazardous for water

Toxic for aquatic organisms

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

13 Disposal considerations

· **Waste treatment methods**

· **Recommendation:**

Disposal must be made according to official regulations.

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

· **Uncleaned packagings:**

· **Recommendation:**

Disposal of uncleaned packagings must be made according to official regulations in the same manner as the product.

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

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14 Transport information

· UN-Number	
· DOT, ADR, IMDG, IATA	UN2922
· UN proper shipping name	
· DOT	Corrosive liquids, toxic, n.o.s. (Phenol, Guanidine thiocyanate, N-Lauroylsarcosine sodium, Thioglycol)
· ADR	2922 CORROSIVE LIQUID, TOXIC, N.O.S. (Phenol, Guanidine thiocyanate, N-Lauroylsarcosine sodium, Thioglycol), ENVIRONMENTALLY HAZARDOUS
· IMDG	CORROSIVE LIQUID, TOXIC, N.O.S. (Phenol, Guanidine thiocyanate, N-Lauroylsarcosine sodium, Thioglycol), MARINE POLLUTANT
· IATA	CORROSIVE LIQUID, TOXIC, N.O.S. (Phenol, Guanidine thiocyanate, N-Lauroylsarcosine sodium, Thioglycol)
· Transport hazard class(es)	
· DOT	
· Class	8 Corrosive substances
· Label	8, 6.1
· ADR	
· Class	8 Corrosive substances
· Label	8+6.1
· IMDG	
· Class	8 Corrosive substances
· Label	8/6.1
· IATA	
· Class	8 Corrosive substances
· Label	8 (6.1)
· Packing group	
· DOT, ADR, IMDG, IATA	III
· Environmental hazards:	Product contains environmentally hazardous substances: 2-Mercaptoethanol
· Marine pollutant:	Symbol (fish and tree)
· Special marking (ADR):	Symbol (fish and tree)
· Special precautions for user	Warning: Corrosive substances

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· Danger code (Kemler):	86
· EMS Number:	F-A,S-B
· Stowage Category	B
· Stowage Code	SW2 Clear of living quarters.
· Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable.
· Transport/Additional information:	
· ADR	
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 2922 CORROSIVE LIQUID, TOXIC, N.O.S. (Phenol, Guanidine thiocyanate, N-Lauroylsarcosine sodium, Thioglycol), 8 (6.1), III, ENVIRONMENTALLY HAZARDOUS

15 Regulatory information

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

· **Section 355 (extremely hazardous substances):**

108-95-2 phenol

· **Section 313 (Specific toxic chemical listings):**

108-95-2 phenol

· **TSCA (Toxic Substances Control Act):**

108-95-2 phenol

· **Proposition 65**

None of the ingredients is listed.

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenicity categories**

· **EPA (Environmental Protection Agency)**

108-95-2 phenol

D, I

· **TLV (Threshold Limit Value established by ACGIH)**

108-95-2 phenol

A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

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- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms** GHS05, GHS06, GHS07, GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

phenol

guanidinium thiocyanate

2-Mercaptoethanol

sodium N-lauroylsarcosinate

- **Hazard statements**

Toxic if swallowed, in contact with skin or if inhaled.

Causes severe skin burns and eye damage.

May cause an allergic skin reaction.

Suspected of causing genetic defects.

May cause damage to organs through prolonged or repeated exposure.

- **Precautionary statements**

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

If swallowed: Call a poison center/doctor if you feel unwell.

If on skin: Wash with plenty of soap and water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Get medical advice/attention if you feel unwell.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents/container in accordance with local/regional/national/international regulations.

- **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 SDS:** Product safety department

- **Contact:** +49 6221 13840-35

- **Date of preparation / last revision** 11/12/2019 / 1

- **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

bw: body weight

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

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

NIOSH: National Institute for Occupational Safety

OSHA: Occupational Safety & Health

TLV: Threshold Limit Value

PEL: Permissible Exposure Limit

REL: Recommended Exposure Limit

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*BEI: Biological Exposure Limit**Acute Tox. 3: Acute toxicity – Category 3**Skin Corr. 1B: Skin corrosion/irritation – Category 1B**Skin Sens. 1: Skin sensitisation – Category 1**Muta. 2: Germ cell mutagenicity – Category 2**STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2***. * Data compared to the previous version altered.**

US