

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 08/28/2017

1 Identification

- **Product identifier**
- **Trade name:** Phosphatase Inhibitor Mix I
- **Article number:** 39050
- **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)

SERVA
■ serving scientists ■

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08

Repr. 1B H360 May damage fertility or the unborn child.



GHS05

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



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

- **Label elements**

- **GHS label elements**

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

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

- **Signal word** Danger

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

imidazole

trisodium tetraoxovanadate

- **Hazard statements**

Harmful if swallowed.

Causes severe skin burns and eye damage.

May damage fertility or the unborn child.

- **Precautionary statements**

Obtain special instructions before use.

Wash thoroughly after handling.

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

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 08/28/2017

Trade name: Phosphatase Inhibitor Mix I

(Contd. of page 1)

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
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.
Store locked up.
Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Classification system:**

· **NFPA ratings (scale 0 - 4)**



Health = 1
 Fire = 0
 Reactivity = 0

· **HMIS-ratings (scale 0 - 4)**



Health = *1
 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

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

· **Dangerous components:**

868-18-8	disodium tartrate	60-80%
13721-39-6	trisodium tetraoxovanadate	15-30%
288-32-4	imidazole	5-15%
7681-49-4	sodium fluoride	2.5-7%

· **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:**
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. Consult doctor if you feel unwell.
- **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 - risk of chemical burns!
- **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.

US

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 08/28/2017

Trade name: Phosphatase Inhibitor Mix I

(Contd. of page 2)

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**
In case of fire, the following can be released:
Hydrogen fluoride (HF)
Nitrogen oxides (NO_x)
Carbon monoxide and carbon dioxide
- **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
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Pick up mechanically.
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.

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of dust.
- **Information about protection against explosions and fires:** No special measures required.
- **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 oxidizing agents.
- **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 constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the remaining constituent has no known exposure limits.
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.

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 08/28/2017

Trade name: Phosphatase Inhibitor Mix I

(Contd. of page 3)

7681-49-4 sodium fluoride (2.5-7%)

PEL ()	2.5 mg/m ³ as F
REL ()	2.5 mg/m ³ as F
TLV ()	2.5 mg/m ³ as F, BEI

- **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.*
 - Immediately remove all soiled and contaminated clothing.*
 - Wash hands before breaks and at the end of work.*
 - Store protective clothing separately.*
 - Avoid contact with the eyes and skin.*
- **Breathing equipment:**
 - Short term filter device:*
 - Filter P2*
 - In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.*
- **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:**
 - Natural rubber, NR*
 - 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:** Powder
 - Color:** White
 - Odor:** Characteristic

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 08/28/2017

Trade name: Phosphatase Inhibitor Mix I

(Contd. of page 4)

- | | |
|--|---|
| · Change in condition | |
| Melting point/Melting range: | Undetermined. |
| Boiling point/Boiling range: | Undetermined. |
| · Flash point: | Not applicable. |
| · Auto igniting: | Product is not selfigniting. |
| · Danger of explosion: | Product does not present an explosion hazard. |
| · Density: | Not determined. |
| · Solubility in / Miscibility with Water: | Soluble. |
| · Solvent content: | |
| Organic solvents: | 0.0 % |
| Solids content: | 100.0 % |
| · 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 dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

288-32-4 imidazole

Oral	LD50	220 mg/kg (rat)
------	------	-----------------

- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:** No sensitizing effects known.
- **Additional toxicological information:**
The product shows the following dangers according to internally approved calculation methods for preparations:
Harmful
Irritant

- **Carcinogenic categories**

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

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 08/28/2017

Trade name: Phosphatase Inhibitor Mix I

(Contd. of page 5)

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

None of the ingredients is listed.

12 Ecological information

· **Toxicity**

· **Aquatic toxicity:**

288-32-4 imidazole

EC50/48h 341.5 mg/l (*Daphnia magna*)

EC50/72h 130 mg/l (*Scenedesmus subspicatus*)

· **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:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

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

· **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:**

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

Disposal must be made according to official regulations.

· **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.

14 Transport information

· **UN-Number**

· **DOT, ADR, IMDG, IATA**

UN1759

· **UN proper shipping name**

· **IMDG**

CORROSIVE SOLID, N.O.S. (IMIDAZOLE MIXTURE)

· **IATA**

Corrosive solid, n.o.s. (Imidazole mixture)

· **Transport hazard class(es)**

· **DOT**



· **Class**

8 Corrosive substances

(Contd. on page 7)

Safety Data Sheet



acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 08/28/2017

Trade name: *Phosphatase Inhibitor Mix I*

(Contd. of page 6)

· Label	8
· ADR, IATA	
	
· Class	8 Corrosive substances
· Label	8
· IMDG	
	
· Class	8 Corrosive substances
· Packing group	
· DOT, ADR, IATA	III
· IMDG	Void
· Environmental hazards:	
· Marine pollutant:	No
· Special precautions for user	Warning: Corrosive substances
· Danger code (Kemler):	80
· EMS Number:	F-A,S-B
· Stowage Category	A
· 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.
· ADR	
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
· 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

15 Regulatory information

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

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

None of the ingredients is listed.

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

None of the ingredients is listed.

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

All ingredients are listed.

(Contd. on page 8)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 08/28/2017

Trade name: Phosphatase Inhibitor Mix I

(Contd. of page 7)

· **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)**

None of the ingredients is listed.

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

7681-49-4 sodium fluoride

A4

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

None of the ingredients is listed.

· **GHS label elements**

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

· **Hazard pictograms** GHS05, GHS07, GHS08

· **Signal word** Danger

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

imidazole

trisodium tetraoxovanadate

· **Hazard statements**

Harmful if swallowed.

Causes severe skin burns and eye damage.

May damage fertility or the unborn child.

· **Precautionary statements**

Obtain special instructions before use.

Wash thoroughly after handling.

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

If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

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.

Store locked up.

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

· **National regulations:**

· **Information about limitation of use:**

Employment restrictions concerning pregnant and lactating women must be observed.

· **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** 05/03/2018 / 1

(Contd. on page 9)

Safety Data Sheet

acc. to OSHA HCS

Printing date 05/03/2018

Reviewed on 08/28/2017

Trade name: Phosphatase Inhibitor Mix I

(Contd. of page 8)

· **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

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)

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

Acute Tox. 4: Acute toxicity – Category 4

Skin Corr. 1C: Skin corrosion/irritation – Category 1C

Repr. 1B: Reproductive toxicity – Category 1B

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