SAFETY DATA SHEET according to OSHA HazCom Standard 29 CFR 1910.2100(g), Rev. 2012 and GHS Rev 03

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY

1.1 Product identifier
   Trade name  SI⁺ buffer
   Product number  SI010-...
   Product description  Laboratory chemicals

1.2 Relevant identified uses of the substance or mixture and uses advised against
   General use
      For research use only
   Uses advised against
      Not intended for human or animal diagnostic or therapeutic uses

1.3 Details of the supplier of the safety data sheet (Manufacturer/Supplier)
   Company name  Biontex Laboratories GmbH
   Street/POB-No.  Landsberger Str. 234
   Postal Code/City  80687 München, GERMANY
   Dept. responsible for information
   Telefon  01149 89-32479950  Telefax  01149 89-32479952
   E-mail  contact@biontex.com
   WWW  www.biontex.com

1.4 Emergency telephone number
   Centre of detoxification  USA or Canada  +1 800-424-9300

2. HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture
   Classification according to Globally Harmonized System (GHS)
      Not classified as hazardous.
   Skin corrosion/irritation
      Not classified
   Eye damage/irritation
      Not classified

2.2 Label elements
   Classification according to Globally Harmonized System (GHS)
      None

2.2.1 GHS US labeling
   Signal word
      Not applicable
   Pictogram / Hazard symbol
      Not applicable
      Health hazard  not hazardous
      Physical hazard  not hazardous
      Environmental hazards  not hazardous
   Hazard statements
      None
   Hazard-determining components of labeling
      None
Precautionary statements

Chapter 4, 6, 7, 13

Classification system

NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

NFPA/HMIS ratings (scale 0 - 4)

Health: 0
Flammability: 0
Reactivity: 0
Personal Protection: 0

OSHA Hazard Overview (Criteria according to 29CFR1910.1200)
Not applicable

2.3 Other hazards / Hazards not otherwise classified

None

Based on present knowledge and when handled correctly, the product poses no danger for humans and the environment.
The usual minimum standards for protective measures in the chemical industry must be observed.
Results of PBT and vPvB assessment ➔ Chapter 12

3. COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances
This product is a mixture.

3.1.1 Chemical identity and characterisation:

<table>
<thead>
<tr>
<th>Name</th>
<th>CAS-No.</th>
<th>GHS classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>SI⁺-buffer</td>
<td>not applicable</td>
<td>not applicable</td>
</tr>
</tbody>
</table>

3.2 Mixtures

Classification according to Globally Harmonized System (GHS) not hazardous/no dangerous components

Inorganic salts

Chemical identity and characterisation: mixture with harmless/nonhazardous ingredients

Hazardous ingredients: not applicable

UN-No.: not applicable

3.3 Additional information

Ingredients are not hazardous or their concentrations do not exceed the limit specified according to 29 CFR 1910.1200 Hazard Communication Standard (USA) and Regulation 1907/2006/EC and Directive 2001/59/EC (EU).

4. FIRST AID MEASURES

4.1 Description of first aid measures

General information

Remove contaminated clothing immediately. Contaminated clothing should be laundered before reusing. Seek medical attention immediately if symptoms develop.

Inhalation

Remove victim to fresh air, if necessary seek medical advice. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
SAFETY DATA SHEET according to OSHA HazCom Standard 29 CFR 1910.2100(g), Rev. 2012 and GHS Rev 03

Skin contact
Wash skin with plenty of water thoroughly. Remove contaminated clothing. In case of skin reactions, consult a physician.

Eye contact
Remove contact lenses. Immediately flush eyes with plenty of flowing water for at least 20 minutes, also under the eyelids. If necessary seek medical advice.

Swallowing / Ingestion
Never give anything by mouth to an unconscious person. Rinse mouth with water thoroughly. If malaise develops, call a physician. Do not induce vomiting without medical advice.

4.2 Most important symptoms and effects, both acute and delayed
No further relevant informations available.

4.3 Indication of any immediate medical attention and special treatment needed
No information available for special treatment. Treat symptomatically. After first aid, get appropriate in-plant, paramedic, or community medical support if exposure symptoms persist.

4.4 Special precautions/procedures
None

4.5 Notes to physician
Treat symptomatically

5. FIREFIGHTING MEASURES

5.1 Extinguishing media
Suitable
Carbon dioxide (CO₂), dry-chemical or foam fire extinguisher, water spray

Unsuitable
Water jet, otherwise there is a risk of spread of fire

5.2 Special hazards arising from the substance or mixture
Dangerous decomposition is not anticipated, do not breath fumes of fire.

5.3 Advice for firefighters
Wear self-contained breathing apparatus and protective suit.
Use fine water spray to cool endangered containers (from a safe distance).
Suppress gases/vapours/mists with water spray jet.
Pay attention to backdraft.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures
Use personal protective equipment / personal protection measures.
Keep unprotected persons away / evacuate personnel to safe areas.
Ensure adequate ventilation.

6.2 Environmental precautions
Prevent further leakage or spillage if safe to do so.
Prevent product from entering drains/surface water/groundwater.
Additional special actions to limit damages are not necessary.
SAFETY DATA SHEET according to OSHA HazCom Standard 29 CFR 1910.2100(g), Rev. 2012 and GHS Rev 03

6.3 Methods and material for containment and cleaning up
Dilute spilled liquids with plenty of water and adsorb. Sweep or vacuum (if powder) or soak up with inert absorbent material (if liquid), then replace into a suitable clean, dry, closed container and label for disposal. Never return spills in original containers for reuse.

6.4 Reference to other sections
Information on safe handling ➔ Chapter 7
Information on personal protection equipment ➔ Chapter 8
Information for disposal ➔ Chapter 13

7. HANDLING AND STORAGE

7.1 Precautions for safe handling
Handling according to Guidelines for Laboratories.

Advises on safe handling
Usual precautions when handling chemicals ➔ Chapter 8.
Handle with care and avoid unnecessary, prolonged or repeated exposure. Avoid inhalation.
Avoid contact with eyes, skin and clothing. Use protective equipment to minimize exposure.

Precautions against fire and explosion
Autoignition does not occur. no special precautions are necessary

Measures to prevent aerosol and dust generation
No special precautions are necessary.

Measures to protect the environment
No special precautions are necessary.

General Hygiene measures
No special precautions are necessary.

7.2 Conditions for safe storage, including any incompatibilities
Storage conditions
This item is supplied uncooled and should be stored at 35,6°F and 46,4°F (2°C - 8°C) immediately after receipt. Do not freeze. Keep container tightly closed. Use original vessel.

Requirements for storerooms and containers/hints on joint storage
There is no restriction and/or requirements for storage with other materials.

Storage class/storage in one common storage facility
10-13 Other liquids and solids

7.3 Specific end uses(s)
Refer to the instruction booklet for proper and intended use. Otherwise, contact supplier for specific application.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameter
None

8.1.1 Occupational exposure limit / biological limit
The product does not contain any relevant quantities of materials with critical value that have to be monitored.
SAFETY DATA SHEET according to
OSHA HazCom Standard 29 CFR 1910.2100(g), Rev. 2012 and GHS Rev 03

8.1.2 Control Banding (e.g. ILO, OSHA)
None

8.2 Exposure controls
Exposure limitation and controlling are workplace related and must be regulated by the user.

8.2.1 Appropriate technical safety devices
Technical measures and appropriate working operations are just as important as the use of personal protective equipment. Provide good ventilation and/or an exhaust system in the work area. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits.

8.2.2 Personal protective equipment
Personal protective equipment should be selected specifically for the workplace.

Eye / Face protection
Tightly sealed goggles. Ensure that an eyewash station is proximal to the workstation.

Skin / Body protection
Wear protective clothes. Ensure that safety showers are proximal to the workstation.

Hand protection
Protective gloves - the material has to be impermeable and resistant to the product. Break through time, permeation and degradation has to be found out by the manufacturer of the protective gloves and has to be observed.

Breathing protection
Not required

General protection and hygiene measures
The usual precautionary measures are to be adhered to when handling chemicals. Remove contaminated clothing immediately and wash it before re-use. After contact clean skin with soap and water or use appropriate detergent. Wash hands before breaks and after work. Keep out of reach of children. Keep away from food, drink and animal feed. Do not eat, drink or smoke during work/in work areas.

8.2.3 Environmental exposure controls
Information on environmental exposure ➔ Chapter 6, 7 und 12

8.3 Engineering measures
Always provide fresh air.
Ensure that eyewash stations and safety showers are close to the workstation location.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties
Appearance/physical state liquid
Colour/Odour colorless/mild characteristic odour
pH value no data available
Evaporation rate no data available
Melting point/range no data available
Boiling point/range at ~ 212°F (100°C)
Flash point no data available
Flammability (solid, gaseous) no data available
Ignition temperature (solid/gaseous) no data available
Autoignition temperature no data available
Oxidising properties no data available
9.2 Other information
   No further relevant information available.

10. STABILITY AND REACTIVITY

10.1 Reactivity
   No data available

10.2 Chemical stability
   Product is stable under normal storage conditions and if it used according to specifications.

10.3 Possibility of hazardous reactions
   No dangerous reactions known under conditions of normal use, handling and storage.

10.4 Conditions to avoid
   No dangerous reactions known under conditions of normal use, handling and storage.

10.5 Incompatible materials
   Unknown

10.6 Thermal decomposition products
   No decomposition known if used according to specifications.

10.7 Hazardous decomposition products
   No dangerous decomposition products known.

10.8 Polymerisation
   Hazardous polymerisation does not occur.

10.9 Incompatible materials
   No further relevant information available.
11. TOXICOLOGICAL INFORMATION

11.1 Information to toxicological effects

Acute toxicity (LD_{50}/LC_{50}) unknown
Eye irritation may cause irritation/allergic sensitization
Skin irritation may cause irritation/allergic sensitization
Aspiration may cause irritation/allergic sensitization
Ingestion may cause irritation/allergic sensitization
Germ cell mutagenicity unknown
Mutagenic effects/Reproductive toxicity unknown
Carcinogenicity unknown
EPA none of the ingredients are listed
TLV (established by ACGIH) none of the ingredients are listed
NIOSH none of the ingredients are listed
NTP none of the ingredients are listed
OSHA none of the ingredients are listed
IARC not classified
Sensitisation unknown
Target organ effects (single or repeated exposure) no known effects under normal use conditions
Chronic effects from short/long-term exposure no information available
Numerical measures of toxicity no information available
Assessment of other acute effects no information available

12. ECOLOGICAL INFORMATION

12.1 Toxicity / Ecotoxicity
No effects or hazards known.

12.2 Aquatic toxicity
No further relevant information available.

12.3 Persistence and degradability
No effects or hazards known.

12.4 Bioaccumulative potential
No effects or hazards known.

12.5 Mobility in soil
No effects or hazards known.

12.6 Results of PBT and vPvB assessment
The substance does not meet the criteria for a classification.
PBT not applicable
vPvB not applicable

12.7 Other adverse effects
No data available.
13. **DISPOSAL CONSIDERATIONS**

13.1 **Waste treatment methods**
Dispense of in accordance with local regulations and national laws and provisions.

13.2 **Contaminated/appropriate packaging**
Dispose of empty packs via local recycling or waste disposal routes, if necessary, clean them beforehand.

13.3 **Additional information**
Prevent discharge of the liquid into the sewage system, cesspit and cellars.
Vapours can form potentially explosive atmosphere.
Waste disposal must be in accordance with appropriate Federal, State and local regulations.
This product, if unaltered by use, may be disposed of by treatment at a permitted facility or as advised by your local hazardous waste regulatory authority. Residue from fires extinguished with this material may be hazardous.

14. **TRANSPORT INFORMATION**

14.1 **UN number**
None

14.2 **UN proper shipping name**
None

14.3 **Transport hazard class(es)**
None
Is not subject to current regulations for transportation of dangerous goods
(ADR/RID, IMO, ADN, IMDG/EmS, IATA/ICAO, DOT, MERCOSUR).
The product is not hazardous to ship.

14.4 **Packing group**
None

14.5 **Environmental hazards**
None

14.6 **Special precautions for user**
Not applicable ➔ Chapter 6 - 8

14.7 **Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code**
Not applicable

15. **REGULATORY INFORMATION**

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

**U.S. Federal Regulations**
Respectively in the latest version incl. all amendments, additions and corrections.
SARA/CERCLA not listed
TSCA not listed
Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) not contains HAPs
SAFETY DATA SHEET according to
OSHA HazCom Standard 29 CFR 1910.2100(g), Rev. 2012 and GHS Rev 03

U.S. State Regulations
Compliance with applicable agreements, regulations and laws of the respective country.
California Propostion 65 does not contain chemicals listed under Proposition 65

Other relevant regulations, restrictions and prohibition regulations
None

Inventory status
WHMIS hazard class (Canada) not listed
NDSL/DSL (Canada) not listed
AICS (Australia) not listed
ENCS/PACS (Japan) not listed
IECSC (China) not listed
KECI (Korea) not listed
NECI/TCSCA (Taiwan) not listed
NZIoC (New Zealand) not listed
PICCS (Phillippines) not listed

15.2 Chemical safety assessment
Not been carried out.

16. OTHER INFORMATION

16.1 Issuing institution
Department issuing SDS
Department of Health, Safety and Environmental Protection
Contact
Dr. Roland Klösel

16.2 Abbreviations and acronyms
AICS Australian Inventory of Chemical Substances
ADR Accord européen sur le transport des marchandises dangereuses par Route
(English Agreement concerning the International Carriage of Dangerous Goods by Road)
ADN Accord européen relatif au transport international des marchandises dangereuses
par voies de navigation intérieures (European Agreement concerning the
International Carriage of Dangerous Goods by Inland Waterways)
ACGIH American Conference of Governmental Industrial Hygienists
CAS Chemical Abstracts Service (Division of the American Chemical Society)
CERCLA Comprehensive Environmental Response, Compensation, and Liability Act
DOT Department of Transportation
(N)DSL Canadian (Non-)Domestic Substance List
EmS Emergency Schedule
EPA Environmental Protection Agency
ENCS Japanese Existing and New Chemical Substances
GHS Globally Harmonized System of Classification and Labelling of Chemicals
HMIS Hazardous Materials Identification System
IARC International Agency for Research on Cancer
IATA International Air Transport Association
IBC Intermediate Bulk Container
ICAO International Civil Aviation Organization
IECSC Existing Chemical Substances Produced or Imported in China
ILO International Labour Organization
IMDG International Maritime Code for Dangerous Goods
IMO International Maritime Organization
KECI Korean Existing Chemicals Inventory
16.3 Further information

The above information was acquired by diligent search and/or investigation and the recommendations are based on prudent application of professional judgment. The information shall not be taken as being all inclusive and is to be used only as a guide. However, Biontex does not warrant the accuracy of this information.

All materials and mixtures may present unknown hazards and should be used with caution. When necessary or appropriate, independent opinions regarding the risk of handling or exposure should be obtained from trained professionals.

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