

**SAFETY DATA SHEET**

Create Date: 2020-10-15

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**SECTION 1: COMPANY AND PRODUCT INFORMATION**

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**1.1 Product identifiers**

Product name : Spermidine trihydrochloride

Cat. Number : ZXB-01-129

CAS number : 334-50-9

Synonyms : N-(3-Aminopropyl)-1,4-diamino-butane trihydrochloride

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified uses : Laboratory chemicals, manufacture of substances. It is for research purposes only.

**1.3 Details of the supplier of the safety data sheet**

Address : Hinter den Gärten  
5689173 Lonsee  
Deutschland

Email : info@zellx.de

Phone : +49(0)731 55211521

Fax : +49(0)731 55211719

**1.4 Emergency telephone number**

Emergency phone : +49(0)731 55211521

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**SECTION 2: HAZARDS IDENTIFICATION**

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**2.1 GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

Skin Irritation (Category 2), H315  
Eye Irritation (Category 2A), H319

**2.2 Label elements and precautionary statements**

Pictogram : 

Signal word : Warning

Hazard statement(s) : H315 Causes skin irritation.  
H319 Causes serious eye irritation.

: P264 Wash skin thoroughly after handling.

Precautionary statement(s)

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do – continue rinsing  
P332+313 If skin irritation occurs: Get medical advice/attention P337+313: If eye irritation persists get medical advice/attention  
P337+313 If eye irritation persists get medical advice/attention  
P362: Take off contaminated clothing and wash before reuse.

### 2.3 NFPA Rating

Health hazard : 2  
Fire hazard : 0  
Reactivity hazard : 0

### 2.4 HMIS Rating

Health hazard : 2  
Chronic health hazard : -  
Flammability : 0  
Physical hazard : 0

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## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

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### 3.1 Substances

Substance	CAS#	EC#	Concentration
Proteinase K M.F: C <sub>7</sub> H <sub>19</sub> N <sub>3</sub> · 3 HCl M.W: 254.63 g/mol	334-50-9	-	-

### 3.2 Hazardous components & classification

Skin Irritation 2, H315

Eye Irritation 2A, H319

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## SECTION 4: FIRST AID MEASURES

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### 4.1 Description of first aid measures

#### In case of inhalation

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

#### In case of skin contact

Wash off with soap and plenty of water. Take victim immediately to hospital. Consult a physician.

#### In case of eye contact

Immediately rinse out with water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Consult a physician.

#### In case of ingestion

Never give anything by mouth to an unconscious person. Rinse mouth with water and drink plenty of water. Consult a physician.

### 4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labeling (see section2). And /or in section 11.

#### 4.3 Indication of any immediate medical attention and special treatment needed

Not available

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### SECTION 5: FIRE FIGHTING MEASURES

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#### 5.1 Conditions of flammability:

Not flammable or combustible

#### 5.2 Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

#### 5.3 Special hazards arising from the substance

During a fire, highly toxic gases may be generated by thermal decomposition or combustion

– Carbon Oxides, Nitrogen Oxides (NO<sub>x</sub>), Hydrogen Chloride gas

#### 5.4 Advice for firefighters

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

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### SECTION 6: ACCIDENTAL RELEASE MEASURES

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#### 6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation.

**For personal protection see section 8**

#### 6.2 Environmental precautions

Do not let product enter drains.

#### 6.3 Methods and material for containment and cleaning up

Soak up with absorbent material, discard.

**For proper disposal see section 13**

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### SECTION 7: HANDLING AND STORAGE

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#### 7.1 Precautions for safe handling

Always wear personal protective equipment (PPE)

**For precautions see section 8**

#### 7.2 Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container tightly closed.

Store desiccated at 4°C. Protect from air.

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### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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#### 8.1 Control parameters

Contains no substances with occupational exposure limit values.

#### 8.2 Engineering controls

Contains no substances with occupational exposure limit values.

#### 8.3 Personal protective equipment

Eye/face protection : Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection	: Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Body protection	: Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
Respiratory protection	: Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

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## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

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### 9.1 Information on basic physical and chemical properties

a) Appearance	: White
b) Physical states	: Powder
c) Odor	: Not available
d) Odor threshold	: Not available
e) Melting point	: 257-259 °C
f) Boiling point range	: Not available
g) pH	: 3.0-6.0 at 254.6 g/l at 25°C
h) Density	: Not available
i) Flash point	: Not available
j) Evaporation rate	: Not available
k) Flammability	: Not available
l) Upper/lower flammability or explosive limits:	: Not available
m) Vapor pressure	: Not available
n) Vapor density	: Not available
o) Relative density	: Not available
p) Water solubility	: 254.6 g/l at 20°C
q) Partition coefficient:n-octanol/water	: Not available
r) Auto-ignition temperature	: Not available
s) Decomposition temperature	: Not available
t) Viscosity	: Not available

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## SECTION 10: STABILITY AND REACTIVITY

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### 10.1 Reactivity

Not available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

Not available

### 10.4 Conditions to avoid

Incompatible materials, acids.

### 10.5 Incompatible materials

Strong oxidizing agents, Strong bases and must be avoided.

### 10.6 Hazardous decomposition products

Hazardous decomposition products formed under fire conditions. - Carbon Oxides, Nitrogen Oxides (NOx), Hydrogen Chloride gas

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## SECTION 11: TOXICOLOGICAL INFORMATION

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### 11.1 Acute toxicity

Intraperitoneal : LD<sub>50</sub>(Mouse)-870 mg/kg -Remarks: Behavioral: Convulsions or effect on seizure threshold. Behavioral: Change in motor activity (specific assay). Lungs, Thorax, or Respiration: Other changes.

### 11.2 Skin corrosion/irritation

Not available

### 11.3 Respiratory or skin sensitization

Not available

### 11.4 Germ cell mutagenicity

Not available

### 11.5 Carcinogenicity

IARC : No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH : No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP : No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA : No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

### 11.6 Reproductive toxicity

Not available

### 11.7 Specific target organ toxicity – single exposure

Not available

### 11.8 Specific target organ toxicity – repeated exposure

Not available

#### **11.9 Aspiration hazard**

Not available

#### **11.10 Likely routes of exposure**

Respiratory organs, mouth, skin, and eyes.

#### **11.11 Symptoms of exposure**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

#### **11.12 Additional information**

RTECS: EJ7023000

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### **SECTION 12: ECOLOGICAL INFORMATION**

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#### **12.1 Toxicity**

No toxicity data available

#### **12.2 Persistence and degradability**

Inherent biodegradability

#### **12.3 Bioaccumulative potential**

Does not bioaccumulate.

#### **12.4 Mobility in soil**

No nobility in soil data available

#### **12.5 Other adverse effect**

No other adverse effect data available

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### **SECTION 13: DISPOSAL CONSIDERATIONS**

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Dispose of product in accordance with local rules and regulations

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### **SECTION 14: TRANSPORTATION INFORMATION**

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#### **14.1 DOT (US)**

This material is considered to be non-hazardous for transport.

#### **14.2 IMDG**

This material is considered to be non-hazardous for transport.

#### **14.3 IATA**

This material is considered to be non-hazardous for transport.

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### **SECTION 15: REGULATORY INFORMATION**

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#### **15.1 SARA**

SARA 302 Components

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302

SARA 313 Components

This material does not contain any chemical components with known CAS numbers that exceed the threshold (DeMinimis) reporting levels established by SARA Title III, Section 313

SARA 311/312 Hazards

Acute Health Hazard, Acute Health Hazard

## 15.2 Right to know components

Massachusetts : Spermidine trihydrochloride CAS-No. 334-50-9.

Pennsylvania : Spermidine trihydrochloride CAS-No. 334-50-9.

New Jersey : Spermidine trihydrochloride CAS-No. 334-50-9.

California proposition 65 components : This product does not contain any chemical known to the State of California to cause cancer, birth, or any other reproductive defects.

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## SECTION 16: OTHER INFORMATION

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### 16.1 Disclaimer

This product is offered by zellx-biochem.com for research, laboratory or further manufacturing use. Not for human use or consumption. The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchant-ability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall zellx-biochem.com be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if zellx-biochem.com has been advised of the possibility of such damages.

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### 16.2 Preparation Information

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