

Creation Date 29-Mar-2010

Revision Date 09-Feb-2012

Revision Number 4

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

Product Identifier

Product Description: Spermidine trihydrochloride
Cat No. 215100000; 215100010; 215100050; 215100250
Synonyms N-(3-Aminopropyl)-1,4-butanediamine trihydrochloride

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

Recommended Use Laboratory chemicals
Uses advised against No Information available

Details of the supplier of the safety data sheet

Company

Acros Organics BVBA
 Janssen Pharmaceuticaaan 3a
 2440 Geel, Belgium

E-mail address begel.sdsdesk@thermofisher.com

Emergency Telephone Number

For information in the US, call: 001-800-ACROS-01
 For information in Europe, call: +32 14 57 52 11

Emergency Number, Europe: +32 14 57 52 99
 Emergency Number, US: 001-201-796-7100

CHEMTREC Phone Number, US: 001-800-424-9300
 CHEMTREC Phone Number, Europe: 001-703-527-3887

SECTION 2. HAZARDS IDENTIFICATION

Classification of the substance or mixture

REGULATION (EC) No 1272/2008

| | |
|---|------------|
| Skin Corrosion/Irritation | Category 2 |
| Serious Eye Damage/Eye Irritation | Category 2 |
| Specific target organ systemic toxicity (single exposure) | Category 3 |

Classification according to EU Directives 67/548/EEC or 1999/45/EC

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

Symbol(s) Xi - Irritant

R-phrases

Risk Combination Phrases R36/37/38 - Irritating to eyes, respiratory system and skin

Spermidine trihydrochloride

Revision Date 09-Feb-2012

SECTION 2. HAZARDS IDENTIFICATION

Label Elements



Signal Word

Warning

Hazard Statements

H319 - Causes serious eye irritation
H335 - May cause respiratory irritation
H315 - Causes skin irritation

Precautionary Statements - EU (§28, 1272/2008)

P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray
P302 + P352 - IF ON SKIN: Wash with plenty of soap and water
P280 - Wear protective gloves/ protective clothing/ eye protection/ face protection
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing

Other Hazards

No information available.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Component | EC-No. | Weight % | CAS-No | 67/548/EEC Classification | CLP Classification - Regulation (EC) No 1272/2008 | REACH No. |
|---|-------------------|----------|----------|---------------------------|---|-----------|
| 1,4-Butanediamine, N-(3-aminopropyl)-, trihydrochloride 334-50-9 | EEC No. 206-379-0 | >95 | 334-50-9 | Xi; R36/37/38 | STOT SE 3 (H335) Skin Irrit. 2 (H315) Eye Irrit. 2 (H319) | - |

For the full text of the R-phrases and H-Statements mentioned in this Section, see Section 16

SECTION 4. FIRST AID MEASURES

Spermidine trihydrochloride

Revision Date 09-Feb-2012

SECTION 4. FIRST AID MEASURES**Description of first aid measures**

| | |
|---------------------------|--|
| Eye Contact | Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Obtain medical attention. |
| Skin Contact | Wash off immediately with plenty of water for at least 15 minutes. Obtain medical attention. |
| Ingestion | Do not induce vomiting. Obtain medical attention. |
| Inhalation | Move to fresh air. If breathing is difficult, give oxygen. Obtain medical attention. |
| Notes to Physician | Treat symptomatically |

SECTION 5. FIRE-FIGHTING MEASURES**Extinguishing media****Suitable Extinguishing Media**

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

Extinguishing media which must not be used for safety reasons

No information available.

Special hazards arising from the substance or mixture

Thermal decomposition can lead to release of irritating gases and vapors.

Advice for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Avoid contact with skin, eyes and clothing.

Environmental precautions

Should not be released into the environment.

Methods and material for containment and cleaning up

Sweep up or vacuum up spillage and collect in suitable container for disposal. Avoid dust formation.

SECTION 7. HANDLING AND STORAGE**Precautions for Safe Handling**



Spermidine trihydrochloride

Revision Date 09-Feb-2012

Wear personal protective equipment. Ensure adequate ventilation. Avoid dust formation. Do not breathe dust. Do not get in eyes, on skin, or on clothing.

Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Store under an inert atmosphere. Keep refrigerated.

Specific End Uses

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Biological limit values This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Derived No Effect Level (DNEL) No information available.

Predicted No Effect Concentration (PNEC) No information available.

Exposure controls

Engineering Measures Ensure adequate ventilation, especially in confined areas Ensure that eyewash stations and safety showers are close to the workstation location

Personal protective equipment

Eye Protection Goggles

Hand Protection Protective gloves

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure

Respiratory Protection Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice

Environmental exposure controls No information available.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---------------------------------|-------------------------------|
| Physical State | Solid |
| Appearance | White |
| odor | strong |
| pH | 3 - 6 |
| Boiling Point/Range | No information available. |
| Melting Point/Range | 248 - 252°C / 478.4 - 485.6°F |
| Flash Point | No information available. |
| Autoignition Temperature | No information available. |
| Water Solubility | soluble |
| Molecular Formula | C7 H19 N3 . 3 H Cl |
| Molecular Weight | 254.63 |

Spermidine trihydrochloride

Revision Date 09-Feb-2012

SECTION 10. STABILITY AND REACTIVITY**Reactivity****Chemical Stability**

Hygroscopic. Air sensitive.

Possibility of Hazardous Reactions

Hazardous Polymerization No information available
Hazardous Reactions . No information available.

Conditions to Avoid

Incompatible products, Exposure to moist air or water.

Incompatible Materials

Strong oxidizing agents.

Hazardous Decomposition ProductsNitrogen oxides (NOx). Carbon monoxide (CO). Carbon dioxide (CO₂).**SECTION 11. TOXICOLOGICAL INFORMATION****Information on Toxicological Effects****Acute Toxicity**

Product Information No acute toxicity information is available for this product

Component Information**Chronic Toxicity**

Carcinogenicity There are no known carcinogenic chemicals in this product

Sensitization No information available.
Mutagenic Effects No information available
Reproductive Effects No information available.
Developmental Effects No information available.
Target Organs Respiratory system Eyes Skin

Spermidine trihydrochloride**Revision Date 09-Feb-2012**

Other Adverse Effects The toxicological properties have not been fully investigated. See actual entry in RTECS for complete information

Endocrine Disruptor Information None known

SECTION 12. ECOLOGICAL INFORMATION**Toxicity**

Ecotoxicity effects Contains no substances known to be hazardous to the environment or that are not degradable in waste water treatment plants

Persistence and degradability

No information available

Bioaccumulative potential

No information available.

Mobility in soil

No information available.

Results of PBT and vPvB assessment**Other adverse effects**

No information available

SECTION 13. DISPOSAL CONSIDERATIONS**Waste treatment methods**

Waste from Residues / Unused Products Dispose of in accordance with local regulations

Contaminated Packaging Empty containers should be taken to local recyclers for disposal

SECTION 14. TRANSPORT INFORMATION

IMDG/IMO Not regulated

ADR Not regulated

IATA Not regulated

Spermidine trihydrochloride

Revision Date 09-Feb-2012

SECTION 14. TRANSPORT INFORMATION

SECTION 15. REGULATORY INFORMATION

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

International Inventories

| Component | EINECS | ELINCS | NLP | TSCA | DSL | NDSL | PICCS | ENCS | CHINA | AICS | KECL |
|---|-----------|--------|-----|------|-----|------|-------|------|-------|------|------|
| 1,4-Butanediamine, N-(3-aminopropyl)-, trihydrochloride | 206-379-0 | - | | X | - | X | - | - | X | - | - |

Legend

- TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- EINECS/ELINCS** - European Inventory of Existing Commercial Chemical Substances/EU List of Notified Chemical Substances
- DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List
- PICCS** - Philippines Inventory of Chemicals and Chemical Substances
- ENCS** - Japan Existing and New Chemical Substances
- CHINA** - China Inventory of Existing Chemical Substances
- AICS** - Inventory of Chemical Substances
- KECL** - Existing and Evaluated Chemical Substances

Chemical Safety Assessment

SECTION 16. OTHER INFORMATION

Full text of R-phrases referred to under sections 2 and 3

R36/37/38 - Irritating to eyes, respiratory system and skin

Revision Date 09-Feb-2012
 Revision Summary (M)SDS sections updated, 7.
 This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006
 Disclaimer

The information provided on this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other material or in any process, unless specified in the text.



SAFETY DATA SHEET

Spermidine trihydrochloride

Revision Date 09-Feb-2012

End of Safety Data Sheet