SAFETY DATA SHEET

PUTRESCINE, Dihydrochloride

SECTION 1: CHEMICAL AND COMPANY IDENTIFICATION

BioShop Canada Inc. 5480 Mainway Burlington, Ontario L7L 6A4 1-800-234-1179

Emergency Telephone No.: 1-905-466-3832 Chemical Name: Putrescine dihydrochloride

Catalog Number: PUT001

Recommended use: for research purposes only

SECTION 2 HAZARDS IDENTIFICATION

Emergency overview:

GHS Classification:

Skin corrosion/irritation: (category 2) Eye irritation: (category 2A)

Pictogram



Signal word: Warning

Hazard statements:

H315 causes skin irritation.H319 causes serious eye irritation

Precautionary statement:

P261 Avoid breathing dust/fume/gas/mist/vapours/spray P303+P361+P331- IF ON SKIN: take off immediately all contaminated clothing. Rinse skin with water.

P305+P351+P338 IF IN EYES: rinse cautiously with water for sevearl minutes. remove contact lenses, if present and easy to do. Continue rining...

Potential health effects:

Inhalation: May be harmful if inhaled

Skin: May be harmful if absorbed through skin. causes skin irritation

Eyes: Causes eye irritation Ingestion: May be harmful if swallowed

SECTION 3 COMPOSITION/ INGREDIENTS

CAS#

%

Putrescine dihydrochloride

333-93-7

100%

Molecular Formula: C4H12N2.2HCl **Molecular Weight:** 161.07 g/mol

SECTION 4 FIRST AID MEASURES

Eyes: Flush eyes with plenty of water for at least 15 minutes. If irritation

persists get medical attention.

Skin: Flush area immediately with plenty of soap and water. **Inhalation**: Remove victim to fresh air. If not breathing give artificial respiration .Get medical attention if symptoms persist.

Ingestion: Wash mouth with water.

SECTION 5 FIRE FIGHTING MEASURES

General Information: Always wear full protective gear in the event of a fire. Toxic gases and vapors may be generated by decomposition or combustion. Excessive dust in combination with air can create an explosive mixture.

Flammable: No Flash Point: N/A

Autoignition Temperature: N/A

Extinguishing Media: Use water spray, foam, dry chemical or carbon

dioxide.

Explosion Data: Not available

SECTION 6 ACCIDENTAL RELEASE MEASURES

Ventilate the area. Wear appropriate protective equipment. Sweep and place in a closed container. In the event of a fire always wear self-contained breathing apparatus, NIOSH/MSHA approved or equivalent.

Leak and Spill Procedures: Ventilate the area. Wear appropriate protective equipment. Cover with dry lime or soda. Sweep and place in a closed container. Avoid generating dust.

SECTION 7 HANDLING AND STORAGE

Handling: Avoid contact. Do not get in eyes, on skin, or clothing. Wash thoroughly after handling. Wash contaminated clothing before reuse. Minimize dust generation.

Storage Conditions: 4C.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure limits: none listed

Use adequate ventilation. Avoid dust generation..

Wear appropriate protective equipment to prevent eye and skin exposure.

Wear appropriate respirator to prevent lung irritation.

Personal Protection: Lab coat, safety goggles, rubber gloves.

Ventilation: Use appropriate exhaust ventilation .

 $\textbf{Respiratory protection:} \ use \ OSHA/MSHA \ approved \ \ dust \ masks.$

.

SAFETY DATA SHEET

PUTRESCINE, Dihydrochloride

Canada: WHMIS: D2B

SECTION 9

PHYSICAL AND CHEMICAL PROPERTIES

Physical State: solid Appearance and Odor N/A Freezing/Melting Point: N/A Boiling Point: N/A Specific Gravity: N/A Vapor Density: N/A Solubility: N/A pH: N/A

SECTION 10

STABILITY AND REACTIVITY:

Stability: Stable under normal temperatures and pressure

Conditions to avoid: dust generation. **Incompatibility**: Strong oxidizing agents

Hazardous Decomposition Products: Nitrogen oxides, carbon monoxide,

carbon dioxide,

Hazardous Polymerization: Will not occur

SECTION 11

TOXICOLOGICAL PROPERTIES

Exposure Limits:

LD50 / LC50: LD50 : not available

Epidemiology: No data available Teratogenicity; No data available Reproductive Effects: No data available Neurotoxicity: No data available Mutagenicity: No data available

Carcinogenicity: Not listed by ACGIH, IARC, NTP, or OSHA

SECTION 12

ECOLOGICAL INFORMATION

Toxicity:

No information found.

SECTION 13

DISPOSAL CONSIDERATION

Waste Disposal: Burn in chemical incinerator. Observe all Federal, provincial and local regulations.

SECTION 14

TRANSPORT INFORMATION

Shipping Information:

DOT (US): not dangerous IMDG: not dangerous IATA: not dangerous

SECTION 15

REGULATORY INFORMATION

US: TSCA: listed

SECTION 16 ADDITIONAL INFORMATION

Prepared By: M.Kierdelewicz (President)

Date Prepared: Dec 29/2021 Phone: (800) 234-1179

The information provided on this Material Safety Data Sheet is furnished in good faith and without warranty of any kind. The above information is believed to be correct and should be used only as a guide. BioShop Canada Inc. shall not be held liable for any damage resulting from the handling or from the contact with the above product.

Observe all federal, provincial and state laws concerning health, safety and pollution.