MATERIAL SAFETY DATA SHEET

Email: sales@clearsynth.com , info@clearsynth.com

SECTION-1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name : Tiotropium Bromide Monohydrate

Catalogue Number : CS-O-08304

Company Identification : Clearsynth Labs Ltd.
17, Lotus Business Park,
New Link Road, Andheri (W),
Mumbai-400053, INDIA

For Emergency Call : +91-22-245045900

Recommended Use : Laboratory Chemicals and Manufacture of substances

SECTION-2: HAZARDS IDENTIFICATION

GHS Hazards Classification

Not a hazardous substance by GHS.

GHS Label Elements And Hazards Statements

None

Hazard Statement(s)

Not a hazardous substance by GHS.

GHS Precautionary Statements

No data available.

Hazards Not Otherwise Classified (HNOC) or Not Covered by GHS

No data available.

SECTION-3: COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms : Not available

CAS Number : 139404-48-1

Molecular Formula : $C_{19}H_{22}BrNO_4S_2.H_2O$

Molecular weight : 490.43 (g / mol)

SECTION-4: FIRST AID MEASURES

Description of First Aid Measures

General Advice: Consult a physician. Show this safety data sheet to the doctor in attendance.
If Inhaled: 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. Consult a physician.
In Case of Eye Contact: Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If Swallowed: Never give anything by mouth to an unconscious person.Rinse mouth with water.Consult a physician.

SECTION-5: FIRE FIGHTING MEASURES

Chemical Hazards From Arising From Substance Fire

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

Suitable Extinguishing Media

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

Advice For Firefighters

Wear self-contained breathing appratus & full protective gear to prevent contact with skin & eyes.

SECTION-6: ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment And Emergency Procedures

Use personal protective equipment as indicated in Section 8. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental Precautions

Do not let product enter drains or water sources.

Cleaning up of Spills/Leaks

Vacuum or sweep up material and place into suitable disposal container without creating dust.

SECTION-7: HANDLING AND STORAGE

Precautions For Safe Handling

Avoid contact with eyes, skin and clothing.

Avoid ingestion and inhalation.

Keep away from sources of ignition.

Storage

Keep container tightly closed.

Store at refrigerator (2-8°C) for long term storage

SECTION-8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Appropriate Engineering Controls

Follow safe industrial engineering/laboratory practices when handling any chemical.

Personal Protective Equipment

Eyes: Wear safety glasses and chemical goggles if splashing is possible.

Skin: Wear appropriate protective gloves and clothing to prevent skin exposure.

Clothing: Wear appropriate protective clothing to minimize contact with skin.

Respirators: Wear a NIOSH/MSHA or European Standard EN 149 approved full-face piece airline respirator in the positive pressure mode with emergency escape provisions.

SECTION-9: PHYSICAL AND CHEMICAL PROPERTIES

Physical State	:	Powder
Color	:	White
Odor	:	No data available.
pH	:	No data available.
Vapour Pressure	:	No data available.
Viscosity	:	No data available.
Boiling Point	:	No data available.
Melting Point	:	No data available.
Auto Ignition Temperature	:	No data available.
Flash Point	:	No data available.
Explosion Limit, Lower	:	No data available.
Explosion Limit, Upper	:	No data available.
Decomposition Temperature	:	No data available.
Loss on Drying	:	No data available.
Specific Gravity / Density	:	No data available.
Solubility	:	In DMSO

SECTION-10: STABILITY AND REACTIVITY

Chemical Stability : Stable under recommended storage conditions.

Condition to Avoid : No data available.

Incompatibilities with Other Materials : Strong oxidizing agents, strong bases.

Hazardas Decomposition Products : No data available.

Hazardas Polymerization : No data available.

SECTION-11: TOXICOLOGICAL INFORMATION

Information on Toxicological Effects

Acute Toxicity	:	No data available.
Skin Irritation/Corrosion	:	No data available.
Eye Damage/Irritation	:	No data available.
Respiratory or Skin Sensitization	:	No data available.
Germ Cell Mutagenicity	:	No data available.
Carcinogenicity	:	No data available.
Reproductive Toxicity	:	No data available.
Special Remark on Other	:	No data available.
Toxic Effects on Humans	:	No data available.
Routes of Exposure	:	Inhalation,Ingestion,Skin,Eyes

SECTION-12: ECOLOGICAL INFORMATION

No data available.

SECTION-13: DISPOSAL CONSIDERATION

Dispose in a manner consitent with country, state and local regulations. product is not to be disposed of in sanitary sewers,storm sewers or landfills.Contact a licensed professional waste disposal service to dispose of this

SECTION-14: TRANSPORT INFORMATION

UN Number :

DOT (US)	:	No data available.
IATA	:	No data available.
IMDG	:	No data available.
ADR/RID	:	No data available.

UN Proper Shipping Name :

DOT (US) / IATA	:	Not dangerous goods.
IMDG / ADR / RID	:	Not dangerous goods.

Transport Hazard Class (es) :

DOT (US)	:	No data available.
IATA	:	No data available.
IMDG	:	No data available.
ADR/RID	:	No data available.

Packing Group :

DOT (US)	:	No data available.
IATA	:	No data available.
IMDG	:	No data available.
ADR/RID	:	No data available.

Environmental Hazards :

DOT (US)	:	No data available.
IATA	:	No data available.
IMDG	:	No data available.
ADR/RID	:	No data available.

SECTION-15: REGULATORY INFORMATION

This safety data sheet complies with the requirements OHSAS 18001:2007

SECTION-16: ADDITIONAL INFORMATION

The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. However, we make no warranty of merchantability 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 way shall the company 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 the company has been advised of the possibility of such damages.