MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

MSDS Name: tiotropium bromide hydrate
Catalog Numbers: C600002936
For R D use only.: 魏氏化学

Company Identification:
ShanghaiKuanerSoft co ltd
Yanjinag Road 525 ,jin ling gu
Minhang District, Shanghai 200433, China
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2. COMPOSITION, INFORMATION ON INGREDIENTS

Molecular Formula: C19H24BrNO5S2
Molecular Weight: 490.43g/mol

Component:		Concentration
tiotropium bromide hydrate		
CAS Number:	411207-31-3	-

3. HAZARDS IDENTIFICATION EMERGENCY OVERVIEW

3.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)
Acute toxicity, oral(Category 4)
Skin corrosion/irritation(Category 2)
Serious eye damage/eye irritation(Category 2A)
STOT- single exposure(Category 3)
No Resource File

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

Pictogram	☒
Signal word	Warning
Hazard statement(s)	
H315	Harmful if swallowed。
H319	Causes skin irritation。
H335	Causes serious eye irritation。
Precautionary statement(s)	
P216	Avoid breathing dust.
P264	Wear protective gloves/protective clothing/eye protection/face protection.。
P271	It can only be used outdoors or in places with good ventilation.。
P280	Wear protective gloves/eye protectors/face protectors.
Measures	
P302 + P352	If on the skin: wash with a lot of soap and water.
P304 + P340	If inhaled: move the patient to fresh air to rest and maintain a breathing position.
P305 + P351 + P338	If you enter your eyes, wash them carefully with water for a few minutes. If you wear contact lenses and can easily take out, take out contact lenses. Continue to rinse.
P312	Feeling unwell, call a detoxification center or doctor.
P321	Specific treatment (see first aid guidance provided on this label).
P332 + P313	If you still feel eye irritation: Seek a doctor/see a doctor.
P337 + P313	If you still feel eye irritation: Seek a doctor/see a doctor.
P362	Remove contaminated clothes and reuse them after cleaning.
Storage	
P403 + P233	Store in a well-ventilated place. Keep the container airtight.
P405	Storage must be locked。
Handle	
P501	Processing content/containers to approved waste treatment plants。

3.3 Other hazards-No

4. FIRST AID MEASURES

4.1 Eyes

Flush eyes with plenty of water occasionally lifting the upper and lower lids.

Get medical aid.

Skin

Get medical aid. Flush skin with plenty of water while removing contaminated clothing and shoes.

Ingestion

Get medical aid. Wash mouth out with water.

Inhalation

Remove from exposure and move to fresh air immediately. If not breathing,give artificial respiration. If breathing is difficult, give

oxygen.

5. FIRE FIGHTING MEASURES

5.1 General Information

As in any fire, wear a self-contained breathing apparatus and full protective gear.

5.2 Extinguishing Media

Use water spray, dry chemical, carbon dioxide or chemical foam.

6. ACCIDENTAL RELEASE MEASURES

6.1 General Information

Use proper personal protective equipment.

6.2 Spills/Leaks

Vacuum or sweep up material and place into suitable disposal container. Avoid generating dusty conditions.

7. HANDLING AND STORAGE

7.1 Handling

Avoid breathing dust, vapor, mist or gas. Avoid contact with eyes, skin.

7.2 Storage

Store in a dry place. Store in a tightly closed container.

8. EXPOSURE CONTROLS, PERSONAL PROTECTION

8.1 Control parameters

Maximum permissible concentration

There is no known national exposure limit. ◦

8.2 Exposure control

Appropriate technical control

Operate in accordance with good industrial and safety specifications. Wash your hands before and after work ◦

Personal protective equipment

Eye/face protection

Wearing gloves and taking gloves must be checked before using them. ◦

Remove gloves (do not touch the outside surface of gloves) in an appropriate way to avoid any skin contact with this product.

After use, please handle the contaminated gloves carefully according to relevant laws and regulations and effective laboratory rules and procedures. Clean and blow dry your hands.

The protective gloves selected must meet the requirements of 89/686/EEC of the EU and the EN 376 standard derived from it.

Physical protection

Human protection measures are selected according to the type, concentration and quantity of hazardous substances and specific workplace.

The type of protective equipment must be selected according to the concentration and content of dangerous substances in a particular workplace.

Respiratory system protection

No need to protect breathing. To protect against dust damage, use N95 (US) or P1 (EN 143) dust mask.

Respirators use breathers and parts that have been tested and passed government standards such as NIOSH (US) or CEN (EU).

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance	白色之类白色粉末
Boiling Point	No data available.
Melting Point	No data available.
Flash point	No data available.
Water solubility	No data available.
Ignition temperature	No data available.
Lower explosion limit	No data available.
Upper explosion limit	No data available.

10. STABILITY AND REACTIVITY

10.1 Chemical Stability:

No data available.

10.2 Chemical Reactivity:

No data available.

10.3 Possibility of dangerous reactions

No data available.

10.4 Avoidable Conditions

No data available.

10.5 Incompatible materials

No data available.

10.6 Dangerous decomposition products

Other decomposition products - No data available.

11. TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Acute toxicity

No data available.

Skin corrosion/irritation

No data available.

Serious eye damage/eye irritation

No data available.

Respiratory or skin sensitization

No data available.

Germ cell mutagenicity

No data available.

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.

Reproductive toxicity

No data available.

Specific target organ toxicity - single exposure

No data available.

Specific target organ toxicity - repeated exposure

No data available.

Aspiration hazard

No data available.

Additional Information

No data available.

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

12. ECOLOGICAL INFORMATION

12.1 Toxicity

No data available.

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

No data available.

12.6 Other adverse effects

No data available.

13. DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging

Dispose of as unused product ◦

14. TRANSPORT INFORMATION

14.1 DOT (US)

Not dangerous goods: _

14.2 UN number

ADR/RID: _	IMDG: _	

14.3 UN proper shipping name

ADR/RID:	Not dangerous goods
IMDG:	Not dangerous goods
IATA:	Not dangerous goods

14.4 Transport hazard class(es)

ADR/RID: _	IMDG: _	IATA: _

14.5 Packaging group

ADR/RID: _	IMDG: _	IATA: _

14.6 Environmental hazards

ADR/RID: _	IMDG: _	IATA: _

14.7 Special precautions for user

No data available.

15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

mixture: No data available ◦

Chemical Safety Assessment: No data available.

16. ADDITIONAL INFORMATION

The above information pertains to this product as currently formulated, and is based on the information available at this time. Addition of reducers or other additives to this product may substantially alter the composition and hazards of the product. Since conditions of use are outside our control, we make no warranties, express or implied, and assume no liability in connection with any use of this information.