

Safety Data Sheet

Section 1: Product & Company Identification

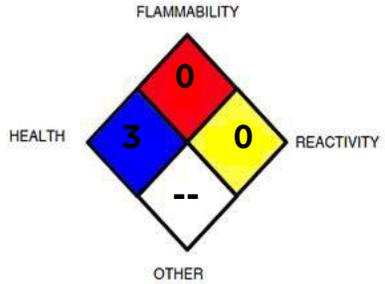
Product Name:	Galanthamine Hydrobromide
Product #:	G-1100
Synonyms:	Galantamine HBr; NSC 100058
Supplier:	AG Scientific Holdings, LLC 9950 Scripps Lake Drive, Suite 104 San Diego, CA 92131 Tele# + 858-452-9925
Emergency Tele#:	ChemTel, Tele# in USA 1-800-255-3924, International 1-813-248-0585

Section 2: Composition / Information on Ingredients

Component	CAS #	EC #	% Composition
Galanthamine HBr	1953-04-4	-	

Section 3: Hazards Identification

Symbols	
HMIS Classification	<p>FLAMMABILITY</p> <p>HEALTH</p> <p>REACTIVITY</p> <p>OTHER</p>

NFPA Classification	
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Section 4: First Aid Measures

General Overview:	Immediately remove any clothing soiled by the product. Symptoms of poisoning may even occur after several hours; therefore, medical observation for at least 48 hours after the accident. In case of irregular breathing or respiratory arrest provide artificial respiration.
Inhalation:	Supply fresh air and to be sure call a doctor. In case of unconsciousness place patient stably in side position for transportation.
Skin:	Immediately wash with water and soap and rinse thoroughly.
Eyes:	Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
Ingestion:	Do not induce vomiting; immediately call for medical help.
	See section 11 for more detailed information on health effects & symptoms.

SECTION 5: Fire Fighting Measures

Flammability of the product:	Product is not flammable.
Extinguishing Media:	Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
Hazardous thermal (de)composition products:	No data available
Special Fire Fighting Procedures:	No special measures required.
Flash Point:	No data available

Section 6: Accidental Release Measures

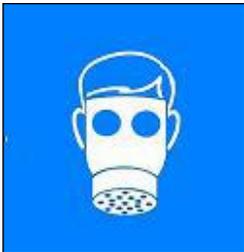
Personal Precautions:	See Section 7 for information on safe handling. See Section 8 for personal precautions.
Environmental Precautions:	Inform respective authorities in case of seepage into water course or sewage system. Do not allow to enter sewers/ surface or ground water.

Methods for Clean-up:	Dispose contaminated material as waste according to item 13. Ensure adequate ventilation.
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SECTION 7: Handling & Storage

Storage:	Store at -20°C
Handling:	Thorough dedusting.

SECTION 8: Exposure controls / Personal Protection

Respiratory Protection:	 <p>In case of brief exposure or low pollution use a respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.</p>
Skin and Body:	  <p>Protective gloves and lab coat.</p>
Eyes:	 <p>Tightly sealed goggles</p>
Ventilation/Engineering Measures:	Ensure adequate ventilation.
Hygiene:	Handle in accordance with good industrial hygiene and safety practice.
Other:	N/A

SECTION 9: Physical and Chemical Properties

Appearance & Odor:	Solid
Formula	$C_{17}H_{21}NO_3 \cdot HBr$
Molecular Wt.	368.3
Melting Pt.	N/A
Boiling Pt.	N/A
Density:	N/A
Vapor Pressure:	N/A
Evaporation Rate:	N/A
Vapor Density:	N/A
Solubility:	PBS (pH 7.2): 2 mg/mL
Flash Point:	N/A
Autoignition Temp:	N/A

SECTION 10: Stability and Reactivity

Stability:	Stable under recommended storage conditions.
Hazardous decomposition products:	No decomposition if used according to specifications.
Materials to Avoid:	No data available
Conditions to avoid:	No data available

SECTION 11: Toxicological Information

RTECS#:	DF8045500
ACUTE Toxicity:	<p>Oral LD50 = 18.7 mg/kg (mouse) Intraperitoneal TDLO = 3 mg/kg (mouse) Intraperitoneal LD50 = 13.7 mg/kg (mouse)</p> <p>Primary irritant effect:</p> <ul style="list-style-type: none"> • On the skin: irritant to skin and mucous membranes • On the eye: irritating effect <p>Sensitization: Sensitization possible through skin contact.</p>
CHRONIC Toxicity:	N/A
Chronic Exposure: Carcinogen: Mutagen: Teratogen: Reproductive:	<p>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.</p> <p>AGGIH: No component of this product present at levels greater than or equal to 0.1% is identified as probable, potential human carcinogen by ACGIH.</p>

	<p>NTP: No component of this product present at levels greater than or equal to 0.1% is identified as known or anticipated human carcinogen by NTP.</p> <p>OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as known or potential human carcinogen by OSHA.</p> <p>EPA: No classification on carcinogenic data is available from EPA</p>
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SECTION 12: Ecological Information

Ecotoxicity:	Water hazard class 3 (Self-assessment): extremely hazardous for water Do not allow product to reach ground water, water course or sewage system, even in small quantities. Danger to drinking water if even extremely small quantities leak into the ground. Also poisonous for fish and plankton in water bodies. Very toxic for aquatic organisms.
Mobility:	No data available
Persistence and degradability:	No data available
Bioaccumulative potential:	No data available
Other adverse effects:	Very toxic for fish.
Corrosivity Characteristic:	No data available
General Notes:	To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

SECTION 13: Disposal Considerations

Residue Waste or Unused product:	Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Contaminated Packaging:	Disposal must be made according to official regulations.

SECTION 14: Transportation Information

UN ID#:	UN3288
ADR / RID (LAND):	N/A
DOT regulations:	<p>Toxic solid, inorganic, n.o.s. (Galanthamine hydrobromide) Class 6.1 Toxic substances Label 6.1</p> <p>Quantity limitations:</p> <ul style="list-style-type: none"> On passenger aircraft/rail: 25 kg On cargo aircraft only: 100 kg
IMDG/IMO (SEA):	TOXIC SOLID, INORGANIC, N.O.S. (Galanthamine hydrobromide)

	<p>Class 6.1 Toxic substances Label 6.1</p> <p>Limited Quantities (LQ): 500 g Excepted Quantities (EQ): Code: E4</p> <ul style="list-style-type: none"> • Maximum net quantity per inner packaging: 1 g • Maximum net quantity per outer packaging: 500 g
IATA/DGR (AIR):	<p>Toxic solid, inorganic, n.o.s. (Galanthamine hydrobromide) Class 6.1 Toxic substances Label 6.1</p> <p>Remarks: When sold in quantities of less than or equal to 1 mL, or 1 g, with an Excepted Quantity Code of E1, E2, E4, or E5, this item meets the De Minimis Quantities exemption, per IATA 2.6.10. Therefore, packaging does not have to be labeled as Dangerous Goods/Excepted Quantity.</p>
Special Provisions:	<p>Warning: Toxic substances Hazard identification number: 60 EMS Number: F-A,S-A Stowage category: B</p>

SECTION 15: Regulatory Information

Health Phrases:	<p>Danger!</p> <p>H300 Fatal if swallowed. H315 Causes skin irritation. H319 Causes serious eye irritation. H317 May cause an allergic skin reaction. H335 May cause respiratory irritation. H373 May cause damage to organs through prolonged or repeated exposure. H400 Very toxic to aquatic life. H410 Very toxic to aquatic life with long lasting effects.</p>
Risk Phrases:	<p>P260 Do not breathe dust/fume/gas/mist/vapors/spray. P264 Wash thoroughly after handling. P270 Do not eat, drink, or smoke when using this product. P271 Use only outdoors or in a well-ventilated area. P272 Contaminated work clothing must not be allowed out of the workplace. P273 Avoid release to the environment. P280 Wear protective gloves / eye protection / face protection.</p>
Safety Phrases:	<p>P301+P310 If swallowed: Immediately call a poison center/doctor. P321 Specific treatment (see on this label). P330 Rinse mouth. P302+P352 If on skin: Wash with plenty of water. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.</p>

	<p>P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P312 Call a poison center/doctor if you feel unwell.</p> <p>P314 Get medical advice/attention if you feel unwell.</p> <p>P362+P364 Take off contaminated clothing and wash it before reuse.</p> <p>P333+P313 If skin irritation or rash occurs: Get medical advice/attention.</p> <p>P337+P313 If eye irritation persists: Get medical advice/attention.</p> <p>P363 Wash contaminated clothing before reuse.</p> <p>P391 Collect spillage.</p> <p>P403+P233 Store in a well-ventilated place. Keep container tightly closed.</p> <p>P405 Store locked up.</p> <p>P501 Dispose of contents/container in accordance with local/regional/national/international regulations.</p>
EU Regulations:	N/A
US Regulations:	<p>TSCA: Not listed</p> <p>California Proposition 65: No products were found</p>
U.S. Federal Regulations:	<p>SARA 302/304 emergency planning and notification: No products were found.</p> <p>SARA 311/312 MSDS distribution-chemical inventory-hazard identification: No products were found.</p> <p>SARA 313 toxic chemicals notification and release reporting: No products were found.</p> <p>Clean Water Act (CWA) 307: No products were found.</p> <p>Clean Water Act (CWA) 311: No products were found.</p> <p>Clean Air Act (CAA) 112 accidental release prevention: No products were found.</p> <p>Clean Air Act (CAA) 112 regulated flammable substances: No products were found.</p> <p>Clean Air Act (CAA) 112 regulated toxic substances: No products were found.</p> <p>OSHA: Acute Tox. 2, STOT RE 2, Aquatic Acute 1, Aquatic Chronic 1, Skin Irrit. 2, Eye Irrit. 2A, Skin Sens. 1, STOT SE 3</p>
WHMIS (Canada):	N/A

SECTION 16: Other Information

LIABILITY STATEMENT: *The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guide. AG Scientific shall not be held liable for any damages resulting from handling or from contact with the above product. AG Scientific products are for research purposes only. Not for human use or consumption.*