SIGMA-ALDRICH

SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 Version 6.0 Revision Date 11.11.2016 Print Date 15.11.2018 GENERIC EU MSDS - NO COUNTRY SPECIFIC DATA - NO OEL DATA

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1	Product identifiers Product name	:	Galantamine natural for system suitability			
	Product Number Brand REACH No. CAS-No.		Y0001190 Sigma-Aldrich A registration number is not available for this substance as the substance or its uses are exempted from registration, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline. 1953-04-4			
1.2						
	Identified uses	•	Laboratory chemicals, Manufacture of substances			
1.3	B Details of the supplier of the safety data sheet					
	Company	:	Sigma-Aldrich Inc. 3050 Spruce Street ST. LOUIS MO 63103 UNITED STATES			
	Telephone Fax	:	+1 314 771-5765 +1 800 325-5052			
1.4	1.4 Emergency telephone number					
	Emergency Phone #	:	(314) 776-6555			

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008 Acute toxicity, Oral (Category 3), H301

For the full text of the H-Statements mentioned in this Section, see Section 16.

2.2 Label elements

Labelling according Regulation (EC) No 1272/2008 Pictogram



Signal word

Danger

Hazard statement(s) H301

Toxic if swallowed.

call a POISON CENTER/doctor.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Immediately

Precautionary statement(s) P301 + P330 + P331 + P310

Supplemental Hazard Statements Sigma-Aldrich - Y0001190

none

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Formula	: C17H21NO3 · HBr
Molecular weight	: 368.3 g/mol
CAS-No.	: 1953-04-4

Hazardous ingredients according to Regulation (EC) No 1272/2008

Component		Classification	Concentration				
Galantamine hydrobromide							
CAS-No. EC-No.	1953-04-4 217-780-5	Acute Tox. 3; H301	<= 100 %				

For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 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. Take victim immediately to hospital. Consult a physician.

In case of eye contact

Flush eyes with water as a precaution.

If swallowed

Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

4.3 Indication of any immediate medical attention and special treatment needed No data available

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media

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

5.2 Special hazards arising from the substance or mixture Carbon oxides, Nitrogen oxides (NOx), Hydrogen bromide gas

5.3 Advice for firefighters Wear self-contained breathing apparatus for firefighting if necessary.

5.4 Further information

No data available

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures Wear respiratory protection. Avoid dust formation. Avoid breathing vapours, mist or gas. Ensure

adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. For personal protection see section 8.

- 6.2 Environmental precautions Prevent further leakage or spillage if safe to do so. Do not let product enter drains.
- 6.3 Methods and materials for containment and cleaning up Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.
- 6.4 Reference to other sections For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. For precautions see section 2.2.

7.2 Conditions for safe storage, including any incompatibilities Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Storage class (TRGS 510): Non-combustible, acute toxic Cat.3 / toxic hazardous materials or hazardous materials causing chronic effects

7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

8.2 Exposure controls

Appropriate engineering controls

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

Personal protective equipment

Eye/face protection

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Body Protection

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use (EN 143) respirator cartridges as a backup to engineering controls. If th full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

a)	Appearance	Form: solid Colour: white			
b)	Odour	No data available			
c)	Odour Threshold	No data available			
d)	рН	No data available			
e)	Melting point/freezing point	Melting point/range: 270 °C			
f)	Initial boiling point and boiling range	No data available			
g)	Flash point	No data available			
h)	Evaporation rate	No data available			
i)	Flammability (solid, gas)	No data available			
j)	Upper/lower flammability or explosive limits	No data available			
k)	Vapour pressure	No data available			
I)	Vapour density	No data available			
m)	Relative density	No data available			
n)	Water solubility	No data available			
0)	Partition coefficient: n- octanol/water	No data available			
p)	Auto-ignition temperature	No data available			
q)	Decomposition temperature	No data available			
r)	Viscosity	No data available			
s)	Explosive properties	No data available			
t)	Oxidizing properties	No data available			
Other safety information No data available					

SECTION 10: Stability and reactivity

10.1 Reactivity No data available

9.2

- **10.2 Chemical stability** Stable under recommended storage conditions.
- **10.3 Possibility of hazardous reactions** No data available
- **10.4 Conditions to avoid** Avoid moisture.

- **10.5** Incompatible materials Strong oxidizing agents
- **10.6** Hazardous decomposition products Hazardous decomposition products formed under fire conditions. - Carbon oxides, Nitrogen oxides (NOx), Hydrogen bromide gas In the event of fire: see section 5

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD50 Oral - Rat - 75 mg/kg(Galantamine hydrobromide)

Skin corrosion/irritation No data available(Galantamine hydrobromide)

Serious eye damage/eye irritation No data available(Galantamine hydrobromide)

Respiratory or skin sensitisation No data available(Galantamine hydrobromide)

Germ cell mutagenicity

No data available(Galantamine hydrobromide)

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(Galantamine hydrobromide)

Specific target organ toxicity - single exposure No data available(Galantamine hydrobromide)

Specific target organ toxicity - repeated exposure No data available

Aspiration hazard

No data available(Galantamine hydrobromide)

Additional Information

RTECS: Not available

Cholinesterase inhibitors can cause heavy salivation and secretion in the defecation, diarrhea, tremor, ataxia, sweating, hypothermia, lowered hear their action at cholinergic nerve sites., Confusion., Hallucinations.(Galantamine hydrobromide)

SECTION 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(Galantamine hydrobromide) Sigma-Aldrich - Y0001190

12.5 Results of PBT and vPvB assessment

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

12.6 Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chem scrubber.

Contaminated packaging

Dispose of as unused product.

SECTION 14: Transport information

14.1	UN number ADR/RID: 1544	IMDG: 1544	IATA: 1544		
14.2	UN proper shipping nameADR/RID:ALKALOIDS, SOLID, N.O.S.IMDG:ALKALOIDS, SOLID, N.O.S.IATA:Alkaloids, solid, n.o.s.				
14.3	Transport hazard class(es) ADR/RID: 6.1	IMDG: 6.1	IATA: 6.1		
14.4	Packaging group ADR/RID: III	IMDG: III	IATA: III		
14.5	Environmental hazards ADR/RID: no	IMDG Marine pollutant: no	IATA: no		
14.6	Special precautions for user No data available				

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

15.2 Chemical safety assessment

For this product a chemical safety assessment was not carried out

SECTION 16: Other information

Full text of H-Statements referred to under sections 2 and 3.

H301 Toxic if swallowed.

Further information

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The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. 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. It does not represent any guarantee of the properties of the product. Sigma-Aldrich Corporation and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See www.sigma-aldrich.com and/or the reverse side of invoice or packing slip for additional terms and conditions of sale.