

## Safety Data Sheet

according to UK REACH Regulation

### Halofuginone hydrobromide

Revision date: 27.02.2024

Product code: OP078

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

### 1.1. Product identifier

Halofuginone hydrobromide

#### Further trade names

DL-trans-7-Bromo-6-chloro-3-[3-(3-hydroxy-piperidin-2-yl)-2-oxo-propyl]-3H-quinazolin-4-one hydrobromide

CAS No: 64924-67-0

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

#### Use of the substance/mixture

Reference standard for analysis.

### 1.3. Details of the supplier of the safety data sheet

Company name: WITEGA Laboratorien Berlin-Adlershof GmbH  
Street: James-Franck-Strasse 4  
Place: D-12489 Berlin  
Telephone: +493063922001      Telefax: +493063922007  
e-mail: witega@witega.de  
Internet: www.witega.de

**1.4. Emergency telephone number:** +493063922001

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### GB CLP Regulation

Acute Tox. 1; H310  
Acute Tox. 1; H300  
Acute Tox. 2; H330  
Skin Irrit. 2; H315  
Eye Irrit. 2; H319  
Aquatic Acute 1; H400  
Aquatic Chronic 1; H410

Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

#### GB CLP Regulation

**Signal word:** Danger

**Pictograms:**



#### Hazard statements

H300+H310+H330 Fatal if swallowed, in contact with skin or if inhaled.  
H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H410 Very toxic to aquatic life with long lasting effects.

#### Precautionary statements

P281 Use personal protective equipment as required.  
P262 Do not get in eyes, on skin, or on clothing.  
P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

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P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

#### 2.3. Other hazards

No data available

### SECTION 3: Composition/information on ingredients

#### 3.1. Substances

Sum formula: C<sub>16</sub>H<sub>18</sub>Br<sub>2</sub>CIN<sub>3</sub>O<sub>3</sub>

Molecular weight: 495.60 g/mol

#### Hazardous components

CAS No	Chemical name	Quantity
	EC No	Index No
	REACH No	
	Classification (GB CLP Regulation)	
64924-67-0	Halofuginone hydrobromide	100 %
	Acute Tox. 1, Acute Tox. 2, Skin Irrit. 2, Eye Irrit. 2, Aquatic Acute 1, Aquatic Chronic 1; H310 H300 H330 H315 H319 H400 H410	

Full text of H and EUH statements: see section 16.

#### Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
		Specific Conc. Limits, M-factors and ATE	
64924-67-0		Halofuginone hydrobromide	100 %
		inhalation: ATE = 0,5 mg/l (vapours); inhalation: ATE = 0,05 mg/l (dusts or mists); dermal: ATE = 5 mg/kg; oral: ATE = 0,5 mg/kg	

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

##### General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).

##### After inhalation

Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

##### After contact with skin

Remove contaminated, saturated clothing immediately. Subsequently wash off with: Water and soap

##### After contact with eyes

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist.

##### After ingestion

Rinse mouth immediately and drink plenty of water. Get immediate medical advice/attention.

Do NOT induce vomiting. Never give anything by mouth to an unconscious person or a person with cramps.

#### 4.2. Most important symptoms and effects, both acute and delayed

No data available

#### 4.3. Indication of any immediate medical attention and special treatment needed

No data available

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

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#### **Suitable extinguishing media**

Water spray jet. Foam. Dry extinguishing powder. Carbon dioxide (CO<sub>2</sub>).

#### **5.2. Special hazards arising from the substance or mixture**

In case of fire may be liberated: Pyrolysis products, toxic. In case of fire and/or explosion do not breathe fumes.

#### **5.3. Advice for firefighters**

In case of fire: Wear self-contained breathing apparatus.

### **SECTION 6: Accidental release measures**

#### **6.1. Personal precautions, protective equipment and emergency procedures**

##### **General advice**

Use personal protection equipment. Do not breathe gas/fumes/vapour/spray.

#### **6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

#### **6.3. Methods and material for containment and cleaning up**

##### **Other information**

Take up dust-free and set down dust-free.

#### **6.4. Reference to other sections**

Disposal: see section 13

### **SECTION 7: Handling and storage**

#### **7.1. Precautions for safe handling**

##### **Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation should be used if possible.

##### **Advice on protection against fire and explosion**

Keep away from sources of ignition - No smoking. Take precautionary measures against static discharges.

##### **Advice on general occupational hygiene**

Use personal protection equipment.

#### **7.2. Conditions for safe storage, including any incompatibilities**

##### **Requirements for storage rooms and vessels**

Keep container tightly closed in a cool, well-ventilated place. Avoid: UV-radiation/sunlight

##### **Further information on storage conditions**

storage temperature: 2-8°C

#### **7.3. Specific end use(s)**

none

### **SECTION 8: Exposure controls/personal protection**

#### **8.1. Control parameters**

#### **8.2. Exposure controls**

##### **Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation should be used if possible. If local exhaust ventilation is not possible or not sufficient, the entire working area should be ventilated by technical means.

##### **Individual protection measures, such as personal protective equipment**

##### **Eye/face protection**

Eye glasses with side protection

##### **Hand protection**

Wear suitable gloves. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

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#### Skin protection

lab coat

#### Respiratory protection

In case of inadequate ventilation wear respiratory protection.

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state:	solid	
Colour:	white	
Odour:	odourless	
Melting point/freezing point:		248 °C
Boiling point or initial boiling point and boiling range:		No data available
Flammability:		No data available
Lower explosion limits:		No data available
Upper explosion limits:		No data available
Flash point:		No data available
Auto-ignition temperature:		No data available
Decomposition temperature:		No data available
pH-Value:		No data available
Water solubility:		No data available
Solubility in other solvents		No data available
Partition coefficient n-octanol/water:		No data available
Vapour pressure:		No data available
Density:		No data available
Relative vapour density:		No data available

### 9.2. Other information

#### Information with regard to physical hazard classes

Explosive properties

No data available

Self-ignition temperature

Solid:

No data available

Gas:

No data available

Oxidizing properties

No data available

#### Other safety characteristics

Evaporation rate:

No data available

#### Further Information

none

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

Reacts with : Oxidising agent, Alkali (lye), Etchant and acids

### 10.2. Chemical stability

The product is chemically stable under recommended conditions of storage, use and temperature.

### 10.3. Possibility of hazardous reactions

No known hazardous reactions.

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#### 10.4. Conditions to avoid

Do not expose to temperatures exceeding 50 °C/122 °F.

#### 10.5. Incompatible materials

Oxidising agent, Alkali (lye), Etchant and acids

#### 10.6. Hazardous decomposition products

In case of fire may be liberated: Pyrolysis products, toxic.

### SECTION 11: Toxicological information

#### 11.1. Information on hazard classes as defined in GB CLP Regulation

##### Acute toxicity

Fatal if swallowed, in contact with skin or if inhaled.

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
64924-67-0	Halofuginone hydrobromide				
	oral	ATE 0,5 mg/kg			
	dermal	ATE 5 mg/kg			
	inhalation vapour	ATE 0,5 mg/l			
	inhalation dust/mist	ATE 0,05 mg/l			

##### Irritation and corrosivity

Causes skin irritation.

Causes serious eye irritation.

##### Sensitising effects

Based on available data, the classification criteria are not met.

##### Carcinogenic/mutagenic/toxic effects for reproduction

Based on available data, the classification criteria are not met.

##### STOT-single exposure

Based on available data, the classification criteria are not met.

##### STOT-repeated exposure

Based on available data, the classification criteria are not met.

##### Aspiration hazard

Based on available data, the classification criteria are not met.

##### Specific effects in experiment on an animal

No data available

### SECTION 12: Ecological information

#### 12.1. Toxicity

No data available

#### 12.2. Persistence and degradability

No data available

#### 12.3. Bioaccumulative potential

No indication of bioaccumulation potential.

#### 12.4. Mobility in soil

No data available

#### 12.5. Results of PBT and vPvB assessment

This substance does not meet the PBT/vPvB criteria of UK REACH.

This substance does not meet the PBT/vPvB criteria of REACH, Annex XIII.

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#### 12.6. Endocrine disrupting properties

This substance does not have endocrine disrupting properties with respect to non-target organisms.

#### 12.7. Other adverse effects

No data available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

##### Disposal recommendations

Dispose of waste according to applicable legislation.

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

##### Contaminated packaging

This material and its container must be disposed of as hazardous waste.

### SECTION 14: Transport information

#### Land transport (ADR/RID)

14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.

#### Inland waterways transport (ADN)

14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.

#### Marine transport (IMDG)

14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.

#### Air transport (ICAO-TI/IATA-DGR)

14.2. UN proper shipping name: No dangerous good in sense of this transport regulation.

#### 14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

#### 14.6. Special precautions for user

No data available

#### 14.7. Maritime transport in bulk according to IMO instruments

No dangerous good in sense of this transport regulation.

### SECTION 15: Regulatory information

#### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

##### National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water hazard class (D): 3 - highly hazardous to water

#### 15.2. Chemical safety assessment

For this substance a chemical safety assessment has not been carried out.

### SECTION 16: Other information

#### Relevant H and EUH statements (number and full text)

H300	Fatal if swallowed.
H300+H310+H330	Fatal if swallowed, in contact with skin or if inhaled.
H310	Fatal in contact with skin.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.

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H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.

#### Further Information

This information is based on our present state of knowledge. However, it should not constitute a guarantee for any specific product properties and shall not establish a legally valid relationship. The substances are only for R&D. Do not use as a drug, in household or other applications.