

# SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519



## Halofuginone Formulation

Version	Revision Date:	SDS Number:	Date of last issue: 2024/12/03
7.0	2025/04/14	845713-00024	Date of first issue: 2016/08/26

### 1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Halofuginone Formulation

Other means of identification : HALOCUR (A009802)  
HALOCUR ORAL SOLUTION FOR TREATMENT OF CALVES  
(57163)

#### Manufacturer or supplier's details

Company : MSD

Address : No. 485 Jing Tai Road  
Pu Tuo District - Shanghai - China 200331

Telephone : +1-908-740-4000

Emergency telephone number : 86-571-87268110

E-mail address : EHSDATASTEWARD@msd.com

#### Recommended use of the chemical and restrictions on use

Recommended use : Veterinary product

Restrictions on use : Not applicable

### 2. HAZARDS IDENTIFICATION

#### Emergency Overview

Appearance	: liquid
Colour	: yellow
Odour	: odourless

Causes skin irritation. Causes serious eye irritation. Harmful to aquatic life with long lasting effects.

#### GHS Classification

Skin corrosion/irritation	: Category 2
Serious eye damage/eye irritation	: Category 2A
Short-term (acute) aquatic hazard	: Category 3
Long-term (chronic) aquatic hazard	: Category 3

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### GHS label elements

Hazard pictograms	:	
Signal word	:	Warning
Hazard statements	:	H315 Causes skin irritation. H319 Causes serious eye irritation. H412 Harmful to aquatic life with long lasting effects.
Precautionary statements	:	<b>Prevention:</b> P264 Wash skin thoroughly after handling. P273 Avoid release to the environment. P280 Wear protective gloves/ eye protection/ face protection. <b>Response:</b> P302 + P352 IF ON SKIN: Wash with plenty of water. P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P332 + P317 If skin irritation occurs: Get medical help. P337 + P317 If eye irritation persists: Get medical help. P362 + P364 Take off contaminated clothing and wash it before reuse. <b>Disposal:</b> P501 Dispose of contents/ container to an approved waste disposal plant.

### Physical and chemical hazards

Not classified based on available information.

### Health hazards

Causes skin irritation. Causes serious eye irritation.

### Environmental hazards

Harmful to aquatic life. Harmful to aquatic life with long lasting effects.

### Other hazards which do not result in classification

None known.

## 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

### Components

Chemical name	CAS-No.	Concentration (% w/w)
Lactic acid	50-21-5	>= 1 -< 3
Halofuginone	82186-71-8	>= 0.025 -< 0.1

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### 4. FIRST AID MEASURES

- |   |  |
|---|--|
| General advice  | : In the case of accident or if you feel unwell, seek medical advice immediately.<br>When symptoms persist or in all cases of doubt seek medical advice.   |
| If inhaled  | : If inhaled, remove to fresh air.<br>Get medical attention if symptoms occur.   |
| In case of skin contact                                     | : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes.<br>Get medical attention.<br>Wash clothing before reuse.<br>Thoroughly clean shoes before reuse. |
| In case of eye contact                                      | : In case of contact, immediately flush eyes with plenty of water for at least 15 minutes.<br>If easy to do, remove contact lens, if worn.<br>Get medical attention.   |
| If swallowed  | : If swallowed, DO NOT induce vomiting.<br>Get medical attention if symptoms occur.<br>Rinse mouth thoroughly with water.  |
| Most important symptoms and effects, both acute and delayed | : Causes skin irritation.<br>Causes serious eye irritation.  |
| Protection of first-aiders                                  | : First Aid responders should pay attention to self-protection, and use the recommended personal protective equipment when the potential for exposure exists (see section 8).  |
| Notes to physician  | : Treat symptomatically and supportively.  |

### 5. FIREFIGHTING MEASURES

- |                                       |   |
|---------------------------------------|---|
| Suitable extinguishing media          | : Water spray<br>Alcohol-resistant foam<br>Carbon dioxide (CO2)<br>Dry chemical   |
| Unsuitable extinguishing media        | : None known.   |
| Specific hazards during fire-fighting | : Exposure to combustion products may be a hazard to health.  |
| Hazardous combustion products         | : Carbon oxides   |
| Specific extinguishing methods        | : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.<br>Use water spray to cool unopened containers.<br>Remove undamaged containers from fire area if it is safe to do so. |

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Evacuate area.

Special protective equipment for firefighters : In the event of fire, wear self-contained breathing apparatus.  
Use personal protective equipment.

### 6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures : Use personal protective equipment.  
Follow safe handling advice (see section 7) and personal protective equipment recommendations (see section 8).

Environmental precautions : Avoid release to the environment.  
Prevent further leakage or spillage if safe to do so.  
Prevent spreading over a wide area (e.g. by containment or oil barriers).  
Retain and dispose of contaminated wash water.  
Local authorities should be advised if significant spillages cannot be contained.

Methods and materials for containment and cleaning up : Soak up with inert absorbent material.  
For large spills, provide dyking or other appropriate containment to keep material from spreading. If dyked material can be pumped, store recovered material in appropriate container.  
Clean up remaining materials from spill with suitable absorbent.  
Local or national regulations may apply to releases and disposal of this material, as well as those materials and items employed in the cleanup of releases. You will need to determine which regulations are applicable.  
Sections 13 and 15 of this SDS provide information regarding certain local or national requirements.

### 7. HANDLING AND STORAGE

#### Handling

Technical measures : See Engineering measures under EXPOSURE CONTROLS/PERSONAL PROTECTION section.

Local/Total ventilation : Use only with adequate ventilation.

Advice on safe handling : Do not get on skin or clothing.  
Avoid inhalation of vapour or mist.  
Do not swallow.  
Do not get in eyes.  
Wash skin thoroughly after handling.  
Handle in accordance with good industrial hygiene and safety practice, based on the results of the workplace exposure assessment  
Take care to prevent spills, waste and minimize release to the environment.

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Avoidance of contact : Oxidizing agents

### Storage

Conditions for safe storage : Keep in properly labelled containers.  
Store in accordance with the particular national regulations.

Materials to avoid : Do not store with the following product types:  
Strong oxidizing agents

Packaging material : Unsuitable material: None known.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
Halofuginone	82186-71-8	TWA	5 µg/m3 (OEB 4)	Internal
Further information: DSEN, Skin				
		Wipe limit	50 µg/100 cm²	Internal

**Engineering measures** : The information below is intended for larger pilot/commercial-scale operations and manufacturing. For smaller scale, clinical, or pharmacy settings, site-specific internal risk assessment practices should be conducted to determine appropriate exposure control measures. The health hazard risks of handling this material are dependent on multiple factors, including but not limited to physical form and quantity handled. If applicable, use process enclosures, local exhaust ventilation (e.g., Biosafety Cabinet, Ventilated Balance Enclosures), or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels as low as reasonably achievable.

All engineering controls should be implemented by facility design and operated in accordance with GMP principles to protect products, workers, and the environment.

Essentially no open handling permitted.

Use closed processing systems or containment technologies. If handled in a laboratory, use a properly designed biosafety cabinet, fume hood, or other containment device if the potential exists for aerosolization. If this potential does not exist, handle over lined trays or benchtops.

### Personal protective equipment

Respiratory protection : If adequate local exhaust ventilation is not available or exposure assessment demonstrates exposures outside the recommended guidelines, use respiratory protection.

Filter type : Organic vapour type

Eye/face protection : Wear safety glasses with side shields or goggles.  
If the work environment or activity involves dusty conditions,

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mists or aerosols, wear the appropriate goggles.  
Wear a faceshield or other full face protection if there is a potential for direct contact to the face with dusts, mists, or aerosols.

Skin and body protection : Work uniform or laboratory coat.  
Additional body garments should be used based upon the task being performed (e.g., sleevelets, apron, gauntlets, disposable suits) to avoid exposed skin surfaces.  
Use appropriate degowning techniques to remove potentially contaminated clothing.

Hand protection

Material : Chemical-resistant gloves

Remarks : Consider double gloving.

Hygiene measures : If exposure to chemical is likely during typical use, provide eye flushing systems and safety showers close to the working place.  
When using do not eat, drink or smoke.  
Wash contaminated clothing before re-use.  
The effective operation of a facility should include review of engineering controls, proper personal protective equipment, appropriate degowning and decontamination procedures, industrial hygiene monitoring, medical surveillance and the use of administrative controls.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : yellow

Odour : odourless

Odour Threshold : No data available

pH : 2.1 - 3

Melting point/freezing point : No data available

Initial boiling point and boiling range : No data available

Flash point : No data available

Evaporation rate : No data available

Flammability (solid, gas) : Not applicable

Flammability (liquids) : No data available

Upper explosion limit / Upper : No data available

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flammability limit

Lower explosion limit / Lower flammability limit : No data available

Vapour pressure : No data available

Relative vapour density : No data available

Density : No data available

Solubility(ies)  
Water solubility : No data available

Partition coefficient: n-octanol/water : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Viscosity  
Viscosity, kinematic : No data available

Explosive properties : Not explosive

Oxidizing properties : The substance or mixture is not classified as oxidizing.

Molecular weight : No data available

Particle characteristics  
Particle size : No data available

### 10. STABILITY AND REACTIVITY

Reactivity	: Not classified as a reactivity hazard.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: Can react with strong oxidizing agents.
Conditions to avoid	: None known.
Incompatible materials	: Oxidizing agents
Hazardous decomposition products	: No hazardous decomposition products are known.

### 11. TOXICOLOGICAL INFORMATION

Exposure routes : Inhalation  
Skin contact  
Ingestion  
Eye contact

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### Acute toxicity

Not classified based on available information.

#### Product:

Acute oral toxicity	: Acute toxicity estimate: > 5,000 mg/kg Method: Calculation method
Acute inhalation toxicity	: Acute toxicity estimate: > 10 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: Calculation method

#### Components:

##### Lactic acid:

Acute oral toxicity	: LD50 (Rat): > 2,000 mg/kg Remarks: Based on data from similar materials
Acute inhalation toxicity	: LC50 (Rat): > 5 mg/l Exposure time: 4 h Test atmosphere: dust/mist Method: OECD Test Guideline 403 Assessment: Corrosive to the respiratory tract. Remarks: Based on data from similar materials
Acute dermal toxicity	: LD50 (Rabbit): > 2,000 mg/kg Assessment: The substance or mixture has no acute dermal toxicity Remarks: Based on data from similar materials

##### Halofuginone:

Acute oral toxicity	: LD50 (Rat): 30 mg/kg LD50 (Mouse): 5 mg/kg
Acute inhalation toxicity	: LC50 (Rat): 0.053 mg/l Test atmosphere: dust/mist
Acute dermal toxicity	: LD50 (Rabbit): 16 mg/kg

### Skin corrosion/irritation

Causes skin irritation.

#### Components:

##### Lactic acid:

Species	: Rabbit
Method	: OECD Test Guideline 404
Result	: Corrosive after 1 to 4 hours of exposure
Remarks	: Based on data from similar materials



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### Halofuginone:

Species	: Rabbit
Result	: Skin irritation

### Serious eye damage/eye irritation

Causes serious eye irritation.

### Components:

#### Lactic acid:

Species	: Chicken eye
Remarks	: Based on data from similar materials
Result	: Irreversible effects on the eye

### Halofuginone:

Result	: Severe irritation
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### Respiratory or skin sensitisation

#### Skin sensitisation

Not classified based on available information.

#### Respiratory sensitisation

Not classified based on available information.

### Components:

#### Lactic acid:

Test Type	: Buehler Test
Exposure routes	: Skin contact
Species	: Guinea pig
Result	: negative
Remarks	: Based on data from similar materials

### Halofuginone:

Exposure routes	: Dermal
Species	: Guinea pig
Result	: Sensitiser

### Germ cell mutagenicity

Not classified based on available information.

### Components:

#### Lactic acid:

Genotoxicity in vitro	: Test Type: Bacterial reverse mutation assay (AMES)
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Method: OECD Test Guideline 471

Result: negative

Remarks: Based on data from similar materials

Test Type: In vitro mammalian cell gene mutation test

Method: OECD Test Guideline 476

Result: negative

Remarks: Based on data from similar materials

Test Type: Chromosome aberration test in vitro

Method: OECD Test Guideline 473

Result: negative

Remarks: Based on data from similar materials

### Halofuginone:

Genotoxicity in vitro

: Test Type: Ames test

Result: positive

Test Type: Mouse Lymphoma

Result: negative

Test Type: Chromosomal aberration

Test system: human lymphoblastoid cells

Result: negative

Test Type: DNA damage and repair, unscheduled DNA synthesis in mammalian cells (in vitro)

Result: negative

Genotoxicity in vivo

: Test Type: Micronucleus test

Species: Mouse

Cell type: Bone marrow

Application Route: Oral

Result: negative

Test Type: Cytogenetic assay

Species: Rat

Application Route: Oral

Result: negative

Test Type: DNA Repair

Species: Mouse

Application Route: Oral

Result: negative

### Carcinogenicity

Not classified based on available information.

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### Components:

#### **Lactic acid:**

Species	: Rat
Application Route	: Ingestion
Exposure time	: 2 Years
Result	: negative
Remarks	: Based on data from similar materials

#### **Halofuginone:**

Species	: Mouse
Application Route	: Oral
NOAEL	: 0.24 mg/kg body weight
Result	: negative

Species	: Rat
Application Route	: Oral
Exposure time	: 63 weeks
NOAEL	: 0.36 mg/kg body weight
Result	: negative

Species	: Rat
Application Route	: Oral
Exposure time	: 26 Months
NOAEL	: 0.09 - 0.18 mg/kg body weight
Result	: negative

### **Reproductive toxicity**

Not classified based on available information.

### Components:

#### **Lactic acid:**

Effects on foetal development	: Test Type: Embryo-foetal development Species: Mouse Application Route: Ingestion Result: negative
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#### **Halofuginone:**

Effects on fertility	: Test Type: Fertility Species: Mouse Application Route: Oral Fertility: NOAEL: 0.126 mg/kg body weight Result: No effects on fertility  Test Type: Fertility Species: Dog Application Route: Oral Fertility: LOAEL: 0.067 mg/kg body weight
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	Result: Effects on fertility
	Test Type: Three-generation reproduction toxicity study
	Species: Mouse
	Application Route: Oral
	General Toxicity F1: LOAEL: 0.063 mg/kg body weight
	Symptoms: Reduced body weight
	Result: No effects on fertility and early embryonic development were detected.
Effects on foetal development	: Test Type: Embryo-foetal development
	Species: Rat
	Application Route: Oral
	General Toxicity Maternal: LOAEL: 0.34 mg/kg body weight
	Embryo-foetal toxicity: NOAEL: 0.67 mg/kg body weight
	Result: No embryo-foetal toxicity, No teratogenic effects
	Test Type: Embryo-foetal development
	Species: Rabbit
	Application Route: Oral
	General Toxicity Maternal: NOAEL: 0.025 mg/kg body weight
	Embryo-foetal toxicity: NOAEL: 0.076 mg/kg body weight
	Result: No embryo-foetal toxicity, No teratogenic effects
Reproductive toxicity - Assessment	: Some evidence of adverse effects on sexual function and fertility, based on animal experiments.

### STOT - single exposure

Not classified based on available information.

### STOT - repeated exposure

Not classified based on available information.

### Components:

#### Halofuginone:

Target Organs	: Blood
Assessment	: Causes damage to organs through prolonged or repeated exposure.

### Repeated dose toxicity

### Components:

#### Lactic acid:

Species	: Rat
NOAEL	: > 100 mg/kg
Application Route	: Ingestion
Exposure time	: 13 Weeks
Remarks	: Based on data from similar materials

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Species	: Rat
LOAEL	: 886 mg/kg
Application Route	: Skin contact
Exposure time	: 13 Weeks

### Halofuginone:

Species	: Mouse
NOAEL	: 0.07 mg/kg
LOAEL	: 0.16 mg/kg
Application Route	: Oral
Exposure time	: 4 Weeks
Target Organs	: Blood

Species	: Rat
NOAEL	: 0.13 mg/kg
LOAEL	: 0.88 mg/kg
Application Route	: Oral
Exposure time	: 13 Weeks
Target Organs	: Liver

Species	: Dog
NOAEL	: 0.067 mg/kg
LOAEL	: 0.134 mg/kg
Application Route	: Oral
Exposure time	: 13 Weeks
Target Organs	: Blood

Species	: Dog
NOAEL	: 0.075 mg/kg
LOAEL	: 0.16 mg/kg
Application Route	: Oral
Exposure time	: 26 Weeks
Target Organs	: Blood

### Aspiration toxicity

Not classified based on available information.

### Experience with human exposure

#### Components:

#### Halofuginone:

General Information	: No human information is available.
Inhalation	: Remarks: May cause irritation of respiratory tract.
Skin contact	: Remarks: May cause skin irritation and/or dermatitis. May cause sensitisation by skin contact. Can be absorbed through skin.
Eye contact	: Remarks: May irritate eyes.

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### 12. ECOLOGICAL INFORMATION

#### Ecotoxicity

##### Components:

##### Lactic acid:

Toxicity to fish	: LC50 (Danio rerio (zebra fish)): > 100 mg/l Exposure time: 96 h Method: OECD Test Guideline 203 Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): > 100 mg/l Exposure time: 48 h Method: OECD Test Guideline 202 Remarks: Based on data from similar materials
Toxicity to algae/aquatic plants	: ErC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials  NOEC (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l Exposure time: 72 h Method: OECD Test Guideline 201 Remarks: Based on data from similar materials
Toxicity to microorganisms	: EC50: > 10 - 100 mg/l Exposure time: 3 h Method: OECD Test Guideline 209 Remarks: Based on data from similar materials

##### Halofuginone:

Toxicity to fish	: LC50 (Oncorhynchus mykiss (rainbow trout)): 1.8 mg/l Exposure time: 96 h Remarks: Based on data from similar materials  LC50 (Cyprinus carpio (Carp)): 0.3 mg/l Exposure time: 72 h Remarks: Based on data from similar materials  LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.12 mg/l Exposure time: 96 h Remarks: Based on data from similar materials
Toxicity to daphnia and other aquatic invertebrates	: EC50 (Daphnia magna (Water flea)): 0.02 mg/l Exposure time: 48 h Remarks: Based on data from similar materials

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Toxicity to algae/aquatic plants : EC50 (Chlorella pyrenoidosa (algae)): 46 mg/l  
Method: OECD Test Guideline 201  
Remarks: Based on data from similar materials

M-Factor (Acute aquatic toxicity) : 10

M-Factor (Chronic aquatic toxicity) : 10

### Persistence and degradability

#### Components:

##### Lactic acid:

Biodegradability : Result: Not readily biodegradable.  
Remarks: Based on data from similar materials

##### Halofuginone:

Biodegradability : Result: Not readily biodegradable.

### Bioaccumulative potential

#### Components:

##### Lactic acid:

Partition coefficient: n-octanol/water : log Pow: -0.62

##### Halofuginone:

Partition coefficient: n-octanol/water : log Pow: 1.18

### Mobility in soil

#### Components:

##### Halofuginone:

Distribution among environmental compartments : log Koc: 3.87  
Method: FDA 3.08

### Other adverse effects

No data available

## 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : Do not dispose of waste into sewer.  
Dispose of in accordance with local regulations.  
Contaminated packaging : Empty containers should be taken to an approved waste han-

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ding site for recycling or disposal.  
If not otherwise specified: Dispose of as unused product.

### 14. TRANSPORT INFORMATION

#### International Regulations

##### UNRTDG

UN number	:	Not applicable
Proper shipping name	:	Not applicable
Class	:	Not applicable
Subsidiary risk	:	Not applicable
Packing group	:	Not applicable
Labels	:	Not applicable
Environmentally hazardous	:	no

##### IATA-DGR

UN/ID No.	:	Not applicable
Proper shipping name	:	Not applicable
Class	:	Not applicable
Subsidiary risk	:	Not applicable
Packing group	:	Not applicable
Labels	:	Not applicable
Packing instruction (cargo aircraft)	:	Not applicable
Packing instruction (passenger aircraft)	:	Not applicable

##### IMDG-Code

UN number	:	Not applicable
Proper shipping name	:	Not applicable
Class	:	Not applicable
Subsidiary risk	:	Not applicable
Packing group	:	Not applicable
Labels	:	Not applicable
EmS Code	:	Not applicable
Marine pollutant	:	no

#### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

#### National Regulations

##### GB 6944/12268

UN number	:	Not applicable
Proper shipping name	:	Not applicable
Class	:	Not applicable
Subsidiary risk	:	Not applicable
Packing group	:	Not applicable
Labels	:	Not applicable
Marine pollutant	:	no



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### Special precautions for user

Not applicable

## 15. REGULATORY INFORMATION

### National regulatory information

#### Law on the Prevention and Control of Occupational Diseases

#### Regulations on Safety Management of Hazardous Chemicals

Catalogue of Hazardous Chemicals : This product is not listed in the catalogue of hazardous chemicals, but it meets the definition of hazardous chemicals and its principles of determination.

Identification of Major Hazard Installations for Hazardous Chemicals (GB 18218) : Not listed

Hazardous Chemicals for Priority Management under SAWS : Not listed

Catalogue of Specially Controlled Hazardous Chemicals : Not listed

List of Explosive Precursors : Not listed

### Regulations on Labour Protection in Workplaces where Toxic Substances are Used

Catalogue of Highly Toxic Chemicals : Not listed

### Regulation of Environmental Management on the First Import of Chemicals and the Import and Export of Toxic Chemicals

China Severely Restricted Toxic Chemicals for Import and Export : Not listed

### Regulation on the Administration of Precursor Chemicals

Catalogue and Classification of Precursor Chemicals : Not listed

### Yangtze River Protection Law

This product does not contain any dangerous chemicals prohibited for inland river transport.

### Regulations of Ozone Depleting Substances Management

List of Controlled Ozone Depleting Substances Import and Export : Not listed

List of Controlled Ozone Depleting Substances : Not listed

### Environmental Protection Law

List of Priority Controlled Chemicals : Not listed

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List of Key Controlled New Pollutants : Not listed

### The components of this product are reported in the following inventories:

AICS	: not determined
DSL	: not determined
IECSC	: not determined

## 16. OTHER INFORMATION

Revision Date : 2025/04/14

### Further information

Sources of key data used to compile the Safety Data Sheet : Internal technical data, data from raw material SDSs, OECD eChem Portal search results and European Chemicals Agency, <http://echa.europa.eu/>

Items where changes have been made to the previous version are highlighted in the body of this document by two vertical lines.

Date format : yyyy/mm/dd

### Full text of other abbreviations

AIIC - Australian Inventory of Industrial Chemicals; ANTT - National Agency for Transport by Land of Brazil; ASTM - American Society for the Testing of Materials; bw - Body weight; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; Nch - Chilean Norm; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NOM - Official Mexican Norm; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No

# SAFETY DATA SHEET

according to GB/T 16483 and GB/T 17519



## Halofuginone Formulation

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1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TDG - Transportation of Dangerous Goods; TECI - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative; WHMIS - Workplace Hazardous Materials Information System

### Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and shall not be considered a warranty or quality specification of any type. The information provided relates only to the specific material identified at the top of this SDS and may not be valid when the SDS material is used in combination with any other materials or in any process, unless specified in the text. Material users should review the information and recommendations in the specific context of their intended manner of handling, use, processing and storage, including an assessment of the appropriateness of the SDS material in the user's end product, if applicable.

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