

Printing date 02/08/2023

Revision date 02/08/2023

Page 1/7

#### **1** Identification

- Product identifier
- · Trade name: Swertiamarin
- · Article number: 27634
- · CAS Number: 17388-39-5
- · Application of the substance / the mixture This product is for research use - Not for human or veterinary diagnostic or therapeutic use.
- · Details of the supplier of the safety data sheet
- · Manufacturer/Supplier: Cayman Chemical Co. 1180 E. Ellsworth Rd. Ann Arbor, MI 48108 USA
- · Information department: Product safety department · Emergency telephone number: During normal opening times: +1 (734) 971-3335 US/CANADA: 800-424-9300 Outside US/CANADA: 703-741-5970

## 2 Hazard(s) identification

- · Classification of the substance or mixture The substance is not classified, according to the Globally Harmonized System (GHS). · Label elements
- · GHS label elements None
- · Hazard pictograms None
- · Signal word None
- · Hazard statements None
- · Classification system:
- NFPA ratings (scale 0 4)

Health = 0Fire = 0Reactivity = 0

· HMIS-ratings (scale 0 - 4)

HEALTH 0 Health = 00 Fire = 0 FIRE Reactivity = 0 REACTIVITY 0

(Contd. on page 2)

US

Printing date 02/08/2023

Revision date 02/08/2023

(Contd. from page 1)

#### Trade name: Swertiamarin

- · Other hazards
- Results of PBT and vPvB assessment
- **PBT:** Not applicable.
- · **vPvB:** Not applicable.

#### **3 Composition/information on ingredients**

- Chemical characterization: Substances
- · CAS No. Description
- 17388-39-5 Swertiamarin

### 4 First-aid measures

- Description of first aid measures
- · General information: No special measures required.
- After inhalation: Supply fresh air; consult doctor in case of complaints.
- After skin contact: Generally the product does not irritate the skin.
- After eye contact: Rinse opened eye for several minutes under running water.
- After swallowing: If symptoms persist consult doctor.
- · Information for doctor:
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed** No further relevant information available.

## **5 Fire-fighting measures**

- · Extinguishing media
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment. A solid water stream may be inefficient.
- Special hazards arising from the substance or mixture No further relevant information available.
- Advice for firefighters
- · Protective equipment: No special measures required.

### 6 Accidental release measures

- · Personal precautions, protective equipment and emergency procedures Not required.
- Environmental precautions: Do not allow to enter sewers/ surface or ground water.
- Methods and material for containment and cleaning up: Pick up mechanically.
- · Reference to other sections
- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.
- See Section 13 for disposal information.
- Protective Action Criteria for Chemicals
- **PAC-1:** Substance is not listed.
- **PAC-2:** Substance is not listed.
- **PAC-3:** Substance is not listed.

(Contd. on page 3)

Printing date 02/08/2023

Revision date 02/08/2023

(Contd. from page 2)

#### Trade name: Swertiamarin

7 Handling and storage

- · Handling:
- · Precautions for safe handling No special measures required.
- · Information about protection against explosions and fires: No special measures required.
- · Conditions for safe storage, including any incompatibilities
- Storage: Store in accordance with information listed on the product insert.
- Requirements to be met by storerooms and receptacles: No special requirements.
- · Information about storage in one common storage facility: Not required.
- · Further information about storage conditions: None.
- Specific end use(s) No further relevant information available.

#### 8 Exposure controls/personal protection

· Additional information about design of technical systems: No further data; see item 7.

- · Control parameters
- · Components with limit values that require monitoring at the workplace: Not required.
- Additional information: The lists that were valid during the creation were used as basis.
- · Exposure controls
- · Personal protective equipment:
- General protective and hygienic measures:

The usual precautionary measures for handling chemicals should be followed.

- · Breathing equipment: Not required.
- Protection of hands:

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer.

Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

• Eye protection: Not required.

## 9 Physical and chemical properties

- Information on basic physical and chemical properties
- General Information

· Appearance:	
Form:	Solid
Color:	Not determined.
· Odor:	Characteristic
<ul> <li>Structural Formula</li> </ul>	C16H22O10
<ul> <li>Molecular Weight</li> </ul>	374.3 g/mol
· Odor threshold:	Not determined.

(Contd. on page 4)

<sup>-</sup> US

Printing date 02/08/2023

#### Revision date 02/08/2023

#### Trade name: Swertiamarin

	(Contd. from page 3)		
· pH-value:	Not applicable.		
<ul> <li>Change in condition</li> <li>Melting point/Melting range:</li> <li>Boiling point/Boiling range:</li> </ul>	Undetermined. Undetermined.		
· Flash point:	Not applicable.		
· Flammability (solid, gaseous):	Product is not flammable.		
· Decomposition temperature:	Not determined.		
· Auto igniting:	Not determined.		
· Danger of explosion:	Product does not present an explosion hazard.		
<sup>·</sup> Explosion limits: Lower: Upper:	Not determined. Not determined.		
· Vapor pressure:	Not applicable.		
<ul> <li>Density:</li> <li>Relative density</li> <li>Vapor density</li> <li>Evaporation rate</li> </ul>	Not determined. Not determined. Not applicable. Not applicable.		
<ul> <li>Solubility in / Miscibility with Water:</li> </ul>	Not determined.		
· Partition coefficient (n-octanol/water): Not determined.			
<ul> <li>Viscosity:</li> <li>Dynamic:</li> <li>Kinematic:</li> <li>SOLUBILITY</li> </ul>	Not applicable. Not applicable. PBS (pH 7.2): 10mg/mL; Ethanol: 3mg/mL; DMSO: 10mg/ mL; DMF: 10mg/mL		
· Other information	No further relevant information available.		

## **10 Stability and reactivity**

· Reactivity No further relevant information available.

- · Chemical stability
- Thermal decomposition / conditions to be avoided:
- No decomposition if used according to specifications.
- Possibility of hazardous reactions No dangerous reactions known.
- Conditions to avoid No further relevant information available.
- · Incompatible materials: strong oxidizing agents
- · Hazardous decomposition products: carbon dioxide, carbon monoxide

## **11 Toxicological information**

• RTECS Number UQ1366700

(Contd. on page 5)

US -

Printing date 02/08/2023

Revision date 02/08/2023

Trade name: Swertiamarin

<ul> <li>on the skin: No irritant effect.</li> <li>on the eye: No irritating effect.</li> <li>Sensitization: No sensitizing effects known.</li> <li>Additional toxicological information:</li> <li>When used and handled according to specifications, the product does not have any harmful effe according to our experience and the information provided to us. The substance is not subject to classification.</li> <li>Carcinogenic categories</li> <li>IARC (International Agency for Research on Cancer) Substance is not listed.</li> <li>NTP (National Toxicology Program) Substance is not listed.</li> <li>OSHA-Ca (Occupational Safety &amp; Health Administration) Substance is not listed.</li> <li>Carcinogenic toxicity: No further relevant information available.</li> <li>Persistence and degradability No further relevant information available.</li> <li>Behavior in environmental systems:</li> <li>Bioaccumulative potential No further relevant information available.</li> <li>Mobility in soil No further relevant information available.</li> <li>Additional ecological information:</li> <li>General notes:</li> <li>Water hazard class 1 (Self-assessment): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground water, water course or sever system.</li> <li>Results of PBT and vPvB assessment</li> <li>PBT: Not applicable.</li> </ul>		rmation on toxicolog	
Oral       TDLO       100 ml/kg (mouse)         LD50       >2,000 mg/kg (mouse)         Intraperitoneal LD50       >8 g/kg (mouse)         Primary irritant effect:       •         on the skin: No irritating effect.       •         Sensitization: No sensitizing effect.       •         Sensitization: No sensitizing effect.       •         Sensitization: No sensitizing effect.       •         When used and handled according to specifications, the product does not have any harmful effer according to our experience and the information provided to us.         The substance is not subject to classification.         • Carcinogenic categories         IARC (International Agency for Research on Cancer) Substance is not listed.         • NTP (National Toxicology Program) Substance is not listed.         • OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.         • OSticity         • Aquatic toxicity: No further relevant information available.         • Persistence and degradability No further relevant information available.         • Behavior in environmental systems:         Bioaccumulative potential No further relevant information available.         • Mobility in soil No further relevant information available.         • Mobility in soil No further relevant information available.         • Additional ecological information:		-	relevant for eleccification.
LD50       >2,000 mg/kg (mouse)         Intraperitoneal LD50       >8 g/kg (mouse)         Primary irritant effect:       on the skin: No irritant effect.         on the system       Sensitization: No sensitizing effect.         Sensitization: No sensitizing effects known.       Additional toxicological information:         When used and handled according to specifications, the product does not have any harmful effect according to our experience and the information provided to us.         The substance is not subject to classification.         Carcinogenic categories         IARC (International Agency for Research on Cancer) Substance is not listed.         NTP (National Toxicology Program) Substance is not listed.         OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.         OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed.         Persistence and degradability No further relevant information available.         Persistence and degradability No further relevant information available.         Behavior in environmental systems:         Bioaccumulative potential No further relevant information available.         Additional ecological information:         General notes:         Water hazard class 1 (Self-assessment): slightly hazardous for water         Do not allow undiluted product or large quantities of it to reach ground water, water course or sewa system.         R			
Intraperitoneal LD50 >8 g/kg (mouse)  Primary irritant effect: on the skin: No irritant effect. Sensitization: No sensitizing effects known. Additional toxicological information: When used and handled according to specifications, the product does not have any harmful effet according to our experience and the information provided to us. The substance is not subject to classification. Carcinogenic categories IARC (International Agency for Research on Cancer) Substance is not listed. NTP (National Toxicology Program) Substance is not listed. NTP (National Toxicology Program) Substance is not listed. OSHA-Ca (Occupational Safety & Health Administration) Substance is not listed. CECOlogical information Coxicity Aquatic toxicity: No further relevant information available. Behavior in environmental systems: Bioaccumulative potential No further relevant information available. Additional ecological information: General notes: Water hazard class 1 (Self-assessment): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground water, water course or sewa system. Results of PBT and vPvB assessment VPVB: Not applicable.	Urai		
<ul> <li>Primary irritant effect:</li> <li>on the skin: No irritant effect.</li> <li>Sensitization: No sensitizing effects known.</li> <li>Additional toxicological information:</li> <li>When used and handled according to specifications, the product does not have any harmful effe according to our experience and the information provided to us.</li> <li>The substance is not subject to classification.</li> <li>Carcinogenic categories</li> <li>IARC (International Agency for Research on Cancer) Substance is not listed.</li> <li>NTP (National Toxicology Program) Substance is not listed.</li> <li>OSHA-Ca (Occupational Safety &amp; Health Administration) Substance is not listed.</li> <li>OSHA-Ca (Occupational Safety &amp; Health Administration) Substance is not listed.</li> <li>Persistence and degradability No further relevant information available.</li> <li>Behavior in environmental systems:</li> <li>Bioaccumulative potential No further relevant information available.</li> <li>Additional ecological information:</li> <li>General notes:</li> <li>Water hazard class 1 (Self-assessment): slightly hazardous for water Do tallow unditude product or large quantities of it to reach ground water, water course or sewa system.</li> <li>Results of PBT and vPvB assessment</li> <li>PBT: Not applicable.</li> <li>vPvB: Not applicable.</li> </ul>			
<ul> <li>on the skin: No irritating effect.</li> <li>on the eye: No irritating effect.</li> <li>Sensitization: No sensitizing effects known.</li> <li>Additional toxicological information:</li> <li>When used and handled according to specifications, the product does not have any harmful effe according to our experience and the information provided to us.</li> <li>The substance is not subject to classification.</li> <li>Carcinogenic categories</li> <li>IARC (International Agency for Research on Cancer) Substance is not listed.</li> <li>NTP (National Toxicology Program) Substance is not listed.</li> <li>OSHA-Ca (Occupational Safety &amp; Health Administration) Substance is not listed.</li> <li>OSHA-Ca (Occupational Safety &amp; Health Administration) Substance is not listed.</li> <li>Persistence and degradability No further relevant information available.</li> <li>Behavior in environmental systems:</li> <li>Bioaccumulative potential No further relevant information available.</li> <li>Additional ecological information:</li> <li>General notes:</li> <li>Water hazard class 1 (Self-assessment): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground water, water course or sewa system.</li> <li>Results of PBT and vPvB assessment</li> <li>PBT: Not applicable.</li> </ul>	Drim		~o g/kg (mouse)
<ul> <li>Carcinogenic categories</li> <li>IARC (International Agency for Research on Cancer) Substance is not listed.</li> <li>NTP (National Toxicology Program) Substance is not listed.</li> <li>OSHA-Ca (Occupational Safety &amp; Health Administration) Substance is not listed.</li> </ul> 2 Ecological information <ul> <li>Toxicity</li> <li>Aquatic toxicity: No further relevant information available.</li> <li>Persistence and degradability No further relevant information available.</li> <li>Behavior in environmental systems:</li> <li>Bioaccumulative potential No further relevant information available.</li> <li>Additional ecological information:</li> <li>General notes:</li> <li>Water hazard class 1 (Self-assessment): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground water, water course or sewa system. Results of PBT and vPvB assessment PBT: Not applicable. <ul> <li>vPvB: Not applicable.</li> </ul></li></ul>	• on t • on t • Sens • Add Whe acco	he skin: No irritant eff he eye: No irritating ef sitization: No sensitiz itional toxicological en used and handled ording to our experience	fect. ing effects known. i <b>nformation:</b> according to specifications, the product does not have any harmful effe æ and the information provided to us.
<ul> <li>Toxicity</li> <li>Aquatic toxicity: No further relevant information available.</li> <li>Persistence and degradability No further relevant information available.</li> <li>Behavior in environmental systems:</li> <li>Bioaccumulative potential No further relevant information available.</li> <li>Mobility in soil No further relevant information available.</li> <li>Additional ecological information:</li> <li>General notes:</li> <li>Water hazard class 1 (Self-assessment): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground water, water course or sewa system.</li> <li>Results of PBT and vPvB assessment</li> <li>PBT: Not applicable.</li> <li>vPvB: Not applicable.</li> </ul>	· IAR( · NTP	C (International Agen (National Toxicolog	i <b>cy for Research on Cancer)</b> Substance is not listed. <b>y Program)</b> Substance is not listed.
<ul> <li>Toxicity</li> <li>Aquatic toxicity: No further relevant information available.</li> <li>Persistence and degradability No further relevant information available.</li> <li>Behavior in environmental systems:</li> <li>Bioaccumulative potential No further relevant information available.</li> <li>Mobility in soil No further relevant information available.</li> <li>Additional ecological information:</li> <li>General notes:</li> <li>Water hazard class 1 (Self-assessment): slightly hazardous for water Do not allow undiluted product or large quantities of it to reach ground water, water course or sewa system.</li> <li>Results of PBT and vPvB assessment</li> <li>PBT: Not applicable.</li> <li>vPvB: Not applicable.</li> </ul>			
	· Toxi · Aqua · Pers	icity atic toxicity: No furth sistence and degrada	er relevant information available. I <b>bility</b> No further relevant information available.
	• Toxi • Aqua • Pers • Beha • Bioa • Mob • Add • Add • Gen • Wate Do r • syste • Res • PBT • vPvl • Othe	icity atic toxicity: No furth sistence and degrada avior in environment accumulative potenti bility in soil No further itional ecological info eral notes: er hazard class 1 (Self not allow undiluted pro em. ults of PBT and vPvE : Not applicable. B: Not applicable.	er relevant information available. <b>(bility</b> No further relevant information available. <b>(al systems:</b> <b>al</b> No further relevant information available. relevant information available. <b>ormation:</b> 5-assessment): slightly hazardous for water boduct or large quantities of it to reach ground water, water course or sewa <b>3 assessment</b> <b>6</b> further relevant information available.
<ul> <li>Waste treatment methods</li> <li>Recommendation: Smaller quantities can be disposed of with household waste.</li> </ul>	<ul> <li>Toxi</li> <li>Aqua</li> <li>Persi</li> <li>Bioa</li> <li>Bioa</li> <li>Mob</li> <li>Add</li> <li>Gen</li> <li>Wate</li> <li>Do r</li> <li>syste</li> <li>Resi</li> <li>PBT</li> <li>vPvl</li> <li>Othe</li> <li>Dis</li> <li>Was</li> </ul>	icity atic toxicity: No furth sistence and degrada avior in environment accumulative potenti bility in soil No further itional ecological info eral notes: er hazard class 1 (Self not allow undiluted pro- em. ults of PBT and vPvE : Not applicable. B: Not applicable. er adverse effects No posal consideration ste treatment method	er relevant information available. ability No further relevant information available. al No further relevant information available. relevant information available. ormation: 
	<ul> <li>Toxi</li> <li>Aqua</li> <li>Persi</li> <li>Beha</li> <li>Bioa</li> <li>Mob</li> <li>Add</li> <li>Gen</li> <li>Wate</li> <li>Do r</li> <li>syste</li> <li>PBT</li> <li>vPvl</li> <li>Othe</li> <li>Dis</li> <li>Was</li> <li>Reco</li> <li>Unc</li> </ul>	icity atic toxicity: No furth sistence and degrada avior in environment accumulative potenti bility in soil No further itional ecological infe- eral notes: er hazard class 1 (Self not allow undiluted pro- em. ults of PBT and vPvE : Not applicable. B: Not applicable. B: Not applicable. B: Not applicable. bit adverse effects No posal considerati ste treatment method ommendation: Smalle	er relevant information available. ability No further relevant information available. al No further relevant information available. relevant information available. ormation: 
<ul> <li>Recommendation: Smaller quantities can be disposed of with household waste.</li> <li>Uncleaned packagings:</li> </ul>	<ul> <li>Toxi</li> <li>Aqua</li> <li>Persi</li> <li>Beha</li> <li>Bioa</li> <li>Mob</li> <li>Add</li> <li>Gen</li> <li>Wate</li> <li>Do r</li> <li>syste</li> <li>PBT</li> <li>vPvl</li> <li>Othe</li> <li>Dis</li> <li>Was</li> <li>Reco</li> <li>Unc</li> </ul>	icity atic toxicity: No furth sistence and degrada avior in environment accumulative potenti bility in soil No further itional ecological infe- eral notes: er hazard class 1 (Self not allow undiluted pro- em. ults of PBT and vPvE : Not applicable. B: Not applicable. B: Not applicable. B: Not applicable. bit adverse effects No posal considerati ste treatment method ommendation: Smalle	er relevant information available. hbility No further relevant information available. al systems: al No further relevant information available. relevant information available. ormation: f-assessment): slightly hazardous for water iduct or large quantities of it to reach ground water, water course or sewa assessment o further relevant information available. further relevant information available. forms s er quantities can be disposed of with household waste. sal must be made according to official regulations.

Printing date 02/08/2023

#### Revision date 02/08/2023

#### Trade name: Swertiamarin

(Contd. from page 5)

14 Transport information		
· UN-Number · DOT, IMDG, IATA	not regulated	
<ul> <li>UN proper shipping name</li> <li>DOT, IMDG, IATA</li> </ul>	not regulated	
· Transport hazard class(es)		
· DOT, ADN, IMDG, IATA · Class	not regulated	
<ul> <li>Packing group</li> <li>DOT, IMDG, IATA</li> </ul>	not regulated	
· Environmental hazards:	Not applicable.	
· Special precautions for user	Not applicable.	
<ul> <li>Transport in bulk according to Annex MARPOL73/78 and the IBC Code</li> </ul>	<b>k II of</b> Not applicable.	
· UN "Model Regulation":	not regulated	

#### **15 Regulatory information**

• Safety, health and environmental regulations/legislation specific for the substance or mixture No further relevant information available.

· Sara

- · Section 355 (extremely hazardous substances): Substance is not listed.
- · Section 313 (Specific toxic chemical listings): Substance is not listed.
- TSCA (Toxic Substances Control Act): Substance is not listed.
- · Hazardous Air Pollutants Substance is not listed.

· Proposition 65

- · Chemicals known to cause cancer: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for females: Substance is not listed.
- · Chemicals known to cause reproductive toxicity for males: Substance is not listed.
- · Chemicals known to cause developmental toxicity: Substance is not listed.
- · Carcinogenic categories
- · EPA (Environmental Protection Agency) Substance is not listed.
- · TLV (Threshold Limit Value) Substance is not listed.
- · NIOSH-Ca (National Institute for Occupational Safety and Health) Substance is not listed.
- · Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

### **16 Other information**

All chemicals may pose unknown hazards and should be used with caution. This SDS applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. Cayman Chemical Company assumes no responsibility for incidental or consequential damages, including lost profits, arising from the use of these data. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Cayman Chemical Company assumes no responsibility for the completeness or accuracy of the information contained herein.

(Contd. on page 7)

US

Printing date 02/08/2023

## Revision date 02/08/2023

## Trade name: Swertiamarin

	(Contd. from page 6)
<ul> <li>Department issuing SDS: Environment protection department.</li> </ul>	
Contact: -	
· Date of preparation / last revision 02/08/2023	
Abbreviations and acronyms:	
IMDG: International Maritime Code for Dangerous Goods	
DOT: US Department of Transportation	
IATA: International Air Transport Association	
CAS: Chemical Abstracts Service (division of the American Chemical Society)	
NFPA: National Fire Protection Association (USA)	
HMIS: Hazardous Materials Identification System (USA)	
LC50: Lethal concentration, 50 percent LD50: Lethal dose, 50 percent	
PBT: Persistent, Bioaccumulative and Toxic	
vPvB: very Persistent and very Bioaccumulative	
NIOSH: National Institute for Occupational Safety	
OSHA: Occupational Safety & Health	
TLV: Threshold Limit Value	
PEL: Permissible Exposure Limit	
REL: Recommended Exposure Limit	
	US