



# SAFETY DATA SHEET

This safety data sheet was created pursuant to the requirements of:  
OSHA HCS2012

Revision date 17-Jun-2024

Revision Number 1

## 1. Identification

### Product identifier

**Product Name** 1-Oxo Mirtazapine (Mirtazapine Impurity C)

### Other means of identification

**Product Code(s)** TRC-O857990-5MG

**Synonyms** None

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

**Recommended use** This product is for research and development only

**Restrictions on use** Not to be used for human or animal consumption

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

#### Supplier Address

VHG  
LGC Standards  
276 Abby Road  
Manchester, NH 03103  
UNITED STATES OF AMERICA

Tel : +1 (603) 622-7660  
Fax : +1 (603) 622-5180  
Email : lgcusa@lgcgroup.com

Web : lgcstandards.com

**E-mail** sds-request@lgcgroup.com

### Emergency telephone number

#### **Emergency Telephone**

For Hazardous Materials or Dangerous Goods Incident  
Spill, Leak, Fire Exposure, or Accident  
Call CHEMTREC:  
USA & Canada 1-800-424-9300  
Rest of the world +1 703-741-5970

## 2. Hazard(s) identification



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## Classification

Classified according to OSHA.

Acute toxicity - Oral	Category 4
Specific target organ toxicity (single exposure)	Category 3
Chronic aquatic toxicity	Category 2

## Hazards not otherwise classified (HNOC)

Not applicable

## Label elements

### Warning

### Hazard statements

Classified according to OSHA.

Harmful if swallowed

May cause drowsiness or dizziness

Toxic to aquatic life with long lasting effects



### **Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Avoid breathing dust/fume/gas/mist/vapors/spray

Use only outdoors or in a well-ventilated area

### **Precautionary Statements - Response**

IF INHALED: Remove person to fresh air and keep comfortable for breathing

Call a POISON CENTER or doctor if you feel unwell

IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell

Rinse mouth

### **Precautionary Statements - Storage**

Store in a well-ventilated place. Keep container tightly closed

Store locked up



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## Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

## Other information

Toxic to aquatic life.

## 3. Composition/information on ingredients

### Substance

Formula C<sub>17</sub>H<sub>17</sub>N<sub>3</sub>O

Chemical name	CAS No.	Weight-%	Trade secret
(14bRS)-2-Methyl-3,4,10,14b-tetrahydropyrazino[2,1-a]pyrido[2,3-c][2]benzazepin-1(2H)-one	191546-96-0	100	*

## 4. First-aid measures

### Description of first aid measures

General advice	Show this safety data sheet to the doctor in attendance.
Inhalation	Remove to fresh air. IF exposed or concerned: Get medical advice/attention.
Eye contact	Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician.
Skin contact	Wash skin with soap and water.
Ingestion	Do NOT induce vomiting. Rinse mouth. Never give anything by mouth to an unconscious person. Call a physician.

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

Symptoms	Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.
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### Indication of any immediate medical attention and special treatment needed

Note to physicians	Treat symptomatically.
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## 5. Fire-fighting measures



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<b>Suitable Extinguishing Media</b>	Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Large Fire</b>	CAUTION: Use of water spray when fighting fire may be inefficient.
<b>Unsuitable extinguishing media</b>	Do not scatter spilled material with high pressure water streams.
<b>Specific hazards arising from the chemical</b>	No information available.
<b>Explosion data</b>	
<b>Sensitivity to mechanical impact</b>	None.
<b>Sensitivity to static discharge</b>	None.
<b>Special protective equipment and precautions for fire-fighters</b>	Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

<b>Personal precautions</b>	Ensure adequate ventilation. Use personal protective equipment as required. Evacuate personnel to safe areas.
<b>Other information</b>	Refer to protective measures listed in Sections 7 and 8.

### Methods and material for containment and cleaning up

<b>Methods for containment</b>	Prevent further leakage or spillage if safe to do so.
<b>Methods for cleaning up</b>	Pick up and transfer to properly labeled containers.

## 7. Handling and storage

### Precautions for safe handling

<b>Advice on safe handling</b>	Handle in accordance with good industrial hygiene and safety practice. Ensure adequate ventilation. Avoid breathing vapors or mists. In case of insufficient ventilation, wear suitable respiratory equipment.
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### Conditions for safe storage, including any incompatibilities

<b>Storage Conditions</b>	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach
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of children. Please refer to the manufacturer's certificate for specific storage and transport temperature conditions. Store only in the original receptacle unless other advice is given on the CoA.

## 8. Exposure controls/personal protection

### Control parameters

#### Exposure Limits

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

#### Biological occupational exposure limits

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

### Appropriate engineering controls

#### Engineering controls

Showers  
Eyewash stations  
Ventilation systems.

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

#### Eye/face protection

Avoid contact with eyes. Wear safety glasses with side shields (or goggles).

#### Hand protection

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374.

#### Skin and body protection

Wear suitable protective clothing.

#### Respiratory protection

No protective equipment is needed under normal use conditions. If exposure limits are exceeded or irritation is experienced, ventilation and evacuation may be required.

#### Environmental exposure controls

Do not allow into any sewer, on the ground or into any body of water.

#### General hygiene considerations

Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash hands before breaks and after work. Wear suitable gloves and eye/face protection.

## 9. Physical and chemical properties



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## Information on basic physical and chemical properties

Physical state	Solid
Appearance	Solid
Color	off-white
Odor	No information available
Odor threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	No data available	None known
Melting point / freezing point	No data available	None known
Initial boiling point and boiling range	No data available	None known
Flash point	No data available	None known
Evaporation rate	No data available	None known
Flammability	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Relative vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature		None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

## Other information

Explosive properties	No information available
Oxidizing properties	No information available
Softening point	No information available
Molecular weight	279.34
VOC content	No information available
Liquid Density	No information available
Bulk density	No information available

## 10. Stability and reactivity

Reactivity	No information available.
Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	None under normal processing.
Conditions to avoid	None known based on information supplied.



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**Incompatible materials** None known based on information supplied.

**Hazardous decomposition products** None known based on information supplied.

## 11. Toxicological information

### Information on likely routes of exposure

#### Product Information

Inhalation	May cause drowsiness or dizziness.
Eye contact	Specific test data for the substance or mixture is not available.
Skin contact	Specific test data for the substance or mixture is not available.
Ingestion	Specific test data for the substance or mixture is not available. Harmful if swallowed. (based on components).

### Symptoms related to the physical, chemical and toxicological characteristics

**Symptoms** Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting.

### Acute toxicity

**Numerical measures of toxicity**  
No information available

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

<b>Skin corrosion/irritation</b>	No information available.
<b>Serious eye damage/eye irritation</b>	No information available.
<b>Respiratory or skin sensitization</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.



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<b>Carcinogenicity</b>	No information available.
<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	May cause drowsiness or dizziness.
<b>STOT - repeated exposure</b>	No information available.
<b>Aspiration hazard</b>	No information available.
<b>Other adverse effects</b>	No information available.
<b>Interactive effects</b>	No information available.

## 12. Ecological information

<b>Ecotoxicity</b>	Toxic to aquatic life. Toxic to aquatic life with long lasting effects.
<b>Persistence and degradability</b>	No information available.
<b>Bioaccumulation</b>	There is no data for this product.
<b>Other adverse effects</b>	No information available.

## 13. Disposal considerations

### Disposal methods

<b>Waste from residues/unused products</b>	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
<b>Contaminated packaging</b>	Do not reuse empty containers.





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## 14. Transport information

### DOT

UN number or ID number	UN3077
Extended proper shipping name	Environmentally hazardous substance, solid, n.o.s. ((14bRS)-2-Methyl-3,4,10,14b-tetrahydropyrazino[2,1-a]pyrido[2,3-c][2]benzazepin-1(2H)-one)
Transport hazard class(es)	9
Packing group	III
Special Provisions	8, 146, 335, 384, 441, A112, B54, B120, IB8, IP3, N20, N91, T1, TP33
DOT Marine Pollutant	I
Marine pollutant	(14bRS)-2-Methyl-3,4,10,14b-tetrahydropyrazino[2,1-a]pyrido[2,3-c][2]benzazepin-1(2H)-one
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. ((14bRS)-2-Methyl-3,4,10,14b-tetrahydropyrazino[2,1-a]pyrido[2,3-c][2]benzazepin-1(2H)-one), 9, III, Marine pollutant
Emergency Response Guide Number	171

### TDG

UN number or ID number	UN3077
UN proper shipping name	Environmentally hazardous substance, solid, n.o.s. ((14bRS)-2-Methyl-3,4,10,14b-tetrahydropyrazino[2,1-a]pyrido[2,3-c][2]benzazepin-1(2H)-one)
Transport hazard class(es)	9
Packing group	III
Special Provisions	16, 99
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. ((14bRS)-2-Methyl-3,4,10,14b-tetrahydropyrazino[2,1-a]pyrido[2,3-c][2]benzazepin-1(2H)-one), 9, III

### MEX

UN number or ID number	UN3077
UN proper shipping name	Environmentally hazardous substance, solid, n.o.s. ((14bRS)-2-Methyl-3,4,10,14b-tetrahydropyrazino[2,1-a]pyrido[2,3-c][2]benzazepin-1(2H)-one)
Transport hazard class(es)	9
Packing group	III
Technical Name	(14bRS)-2-Methyl-3,4,10,14b-tetrahydropyrazino[2,1-a]pyrido[2,3-c][2]benzazepin-1(2H)-one
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. ((14bRS)-2-Methyl-3,4,10,14b-tetrahydropyrazino[2,1-a]pyrido[2,3-c][2]benzazepin-1(2H)-one), 9, III
Special Provisions	274, 331, 335, 375

### IATA



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Transport hazard class(es)	9
Packing group	III
Technical Name	(14bRS)-2-Methyl-3,4,10,14b-tetrahydropyrazino[2,1-a]pyrido[2,3-c][2]benzazepin-1(2H)-one
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. ((14bRS)-2-Methyl-3,4,10,14b-tetrahydropyrazino[2,1-a]pyrido[2,3-c][2]benzazepin-1(2H)-one), 9, III
Special Provisions	A97, A158, A179, A197, A215
ERG Code	9L

## IMDG

UN number or ID number	UN3077
UN proper shipping name	Environmentally hazardous substance, solid, n.o.s. ((14bRS)-2-Methyl-3,4,10,14b-tetrahydropyrazino[2,1-a]pyrido[2,3-c][2]benzazepin-1(2H)-one)
Transport hazard class(es)	9
Packing group	III
EmS-No.	F-A, S-F
Special Provisions	274, 335, 966, 967, 969
Marine pollutant	P
Marine Pollutant	(14bRS)-2-Methyl-3,4,10,14b-tetrahydropyrazino[2,1-a]pyrido[2,3-c][2]benzazepin-1(2H)-one
Description	UN3077, Environmentally hazardous substance, solid, n.o.s. ((14bRS)-2-Methyl-3,4,10,14b-tetrahydropyrazino[2,1-a]pyrido[2,3-c][2]benzazepin-1(2H)-one), 9, III, Marine pollutant

## 15. Regulatory information

### International Inventories

#### TSCA

LGC has not confirmed that the chemical substances in this product are on the TSCA Inventory, and LGC is distributing this product solely for use either in applications statutorily exempt from TSCA and regulated under other laws (e.g., FFDCA, FIFRA) or in research and development activities in accordance with the TSCA Inventory R&D exemption provided at 40 CFR 720.36. It is the end-user's responsibility to understand and follow the requirements that apply to its use of this product.

Chemical name	CAS No.	Inventory Listing Status	Commercial Activity Designation
(14bRS)-2-Methyl-3,4,10,14b-tetrahydr	191546-96-0	-	Unknown *



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Chemical name	CAS No.	Inventory Listing Status	Commercial Activity Designation
opyrazino[2,1-a]pyrido[2,3-c][2]benzazepin-1(2H)-one			

\*Contact supplier for details. One or more substances in this product are either not listed on the US TSCA inventory, listed on the confidential US TSCA inventory or are otherwise exempted from inventory listing requirements

<b>DSL/NDL</b>	Contact supplier for inventory compliance status.
<b>EINECS/ELINCS</b>	Contact supplier for inventory compliance status.
<b>ENCS</b>	Contact supplier for inventory compliance status.
<b>IECSC</b>	Contact supplier for inventory compliance status.
<b>KECI</b>	Contact supplier for inventory compliance status.
<b>PICCS</b>	Contact supplier for inventory compliance status.
<b>AIIC</b>	Contact supplier for inventory compliance status.

## Legend:

- TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDL** - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS** - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS** - Japan Existing and New Chemical Substances
- IECSC** - China Inventory of Existing Chemical Substances
- KECL** - Korean Existing and Evaluated Chemical Substances
- PICCS** - Philippines Inventory of Chemicals and Chemical Substances
- AICS** - Australian Inventory of Chemical Substances

## US Federal Regulations

### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

### SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

### CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

### CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level



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pertaining to releases of this material.

## US State Regulations

### California Proposition 65

This product does not contain any Proposition 65 chemicals.

### U.S. State Right-to-Know Regulations

This product does not contain any substances regulated under applicable state right-to-know regulations

## U.S. EPA Label Information

**EPA Pesticide Registration Number** Not applicable

## 16. Other information

<b>NFPA</b>	<b>Health hazards</b> 2	<b>Flammability</b> 0	<b>Instability</b> 0	<b>Special hazards</b> -
<b>HMIS</b>	<b>Health hazards</b> 2	<b>Flammability</b> 0	<b>Physical hazards</b> 0	<b>Personal protection</b> X

### Key or legend to abbreviations and acronyms used in the safety data sheet

#### **Legend Section 8: Exposure controls/personal protection**

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	Sk*	Skin designation

### **Key literature references and sources for data used to compile the SDS**

Agency for Toxic Substances and Disease Registry (ATSDR)  
U.S. Environmental Protection Agency ChemView Database  
European Food Safety Authority (EFSA)  
Environmental Protection Agency  
Acute Exposure Guideline Level(s) (AEGL(s))  
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act  
U.S. Environmental Protection Agency High Production Volume Chemicals  
Food Research Journal  
Hazardous Substance Database  
International Uniform Chemical Information Database (IUCLID)  
Japan GHS Classification  
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)  
NIOSH (National Institute for Occupational Safety and Health)  
National Library of Medicine's ChemID Plus (NLM CIP)  
National Library of Medicine's PubMed database (NLM PUBMED)  
U.S. National Toxicology Program (NTP)  
New Zealand's Chemical Classification and Information Database (CCID)  
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications



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Organization for Economic Co-operation and Development High Production Volume Chemicals Program  
Organization for Economic Co-operation and Development Screening Information Data Set  
World Health Organization

**Revision date**

17-Jun-2024

**Revision Note**

No information available.

**Disclaimer**

The information in this Safety Data Sheet meets the requirements of the United States OCCUPATIONAL SAFETY AND HEALTH ACT and regulations promulgated thereunder (29 CFR 1910.1200 et. seq.) This document is intended only as a guide to the appropriate precautionary handling of the material by a person trained in, or supervised by a person trained in, chemical handling. The user is responsible for determining the application. Depending on usage, protective clothing including eye and face guards and respirators must be used to avoid contact with material or breathing chemical vapors/fumes. Exposure to this product may have serious adverse health effects. This chemical may interact with other substances. Since the potential uses are so varied, we cannot warn of all of the potential dangers of use or interaction with other chemicals or materials. We warrant that the chemical meets the specifications set forth on the label. We (LGC/VHG/ARMI) disclaim any other warranties, expressed or implied with regard to the product supplied hereunder, its merchantability or its fitness for a particular purpose. The user should recognize that this product can cause severe injury and even death, especially if improperly handled or the known dangers of use are not heeded. Read all precautionary information.

**End of Safety Data Sheet**