



SAFETY DATA SHEET

72252 72254 - Thiazovivin

Revision Date 25-Oct-2018

Revision Number 2

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

Product identifier

Product Name Thiazovivin

Other means of identification

Catalog Number 72252 72254

Document Number DX21096

Synonyms Tzv; N-(phenylmethyl)-2-(4-pyrimidinylamino)-4-thiazolecarboxamide;

Recommended use of the chemical and restrictions on use

Recommended Use Laboratory chemicals

STEMCELL TECHNOLOGIES INC.'S QUALITY MANAGEMENT SYSTEM IS CERTIFIED TO ISO 13485. PRODUCTS ARE FOR RESEARCH USE ONLY AND NOT INTENDED FOR HUMAN OR ANIMAL DIAGNOSTIC OR THERAPEUTIC USES UNLESS OTHERWISE STATED.

Details of the supplier of the safety data sheet

Manufacturer/Supplier

STEMCELL Technologies Canada Inc.
Suite 500 - 1618 Station Street
Vancouver, British Columbia V6A 1B6 Canada

Emergency telephone number

Emergency Telephone 1-800-667-0322

2. HAZARDS IDENTIFICATION

Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute toxicity - Oral

Category 4

Hazards not otherwise classified (HNOC)

Not applicable

Label elements

Warning



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Hazard statements

Harmful if swallowed



Appearance Crystalline

Physical state Solid

Odor No information available

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Do not eat, drink or smoke when using this product

Precautionary statements - Response

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

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant

Other Information

Not applicable

Unknown acute toxicity 100 % of the mixture consists of ingredient(s) of unknown toxicity
0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity
100 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity
100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)
100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)
100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance

Synonyms

Tzv;. N-(phenylmethyl)-2-(4-pyrimidinylamino)-4-thiazolecarboxamide;

| Chemical name | CAS No. | Weight-% |
|---|--------------|----------|
| N-benzyl-2-(pyrimidin-4-ylamino)-1,3-thiazole-4-carboxamide | 1226056-71-8 | 100 |

*The exact percentage (concentration) of composition has been withheld as a trade secret.



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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. |
| 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. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician. |

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. FIRE-FIGHTING MEASURES

| | |
|---|--|
| Suitable Extinguishing Media | Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable extinguishing media | CAUTION: Use of water spray when fighting fire may be inefficient. |
| Specific hazards arising from the chemical | No information available. |
| Explosion data | |
| Sensitivity to Mechanical Impact | None. |
| Sensitivity to Static Discharge | None. |
| Special protective equipment for fire-fighters | Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment. |

6. ACCIDENTAL RELEASE MEASURES



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Personal precautions, protective equipment and emergency procedures

Personal precautions Ensure adequate ventilation.

Environmental precautions

Environmental precautions See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so.

Methods for cleaning up Pick up and transfer to properly labeled containers.

Prevention of secondary hazards Clean contaminated objects and areas thoroughly observing environmental regulations.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling Handle in accordance with good industrial hygiene and safety practice.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed in a dry, cool and well-ventilated place. Keep out of the reach of children.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits The following ingredients are the only ingredients of the product above the cut-off level (or level that contributes to the hazard classification of the mixture) which have an exposure limit applicable in the region for which this safety data sheet is intended or other recommended limit. At this time, the other relevant constituents have no known exposure limits from the sources listed here.

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.



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Individual protection measures, such as personal protective equipment

- Eye/face protection** No special protective equipment required.
- Skin and body protection** No special protective equipment required.
- 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.
- General hygiene considerations** Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

- Physical state** Solid
- Appearance** Crystalline
- Color** No information available
- 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 |
| Boiling point / boiling range | No data available | None known |
| Flash point | No data available | None known |
| Evaporation rate | No data available | None known |
| Flammability (solid, gas) | No data available | None known |
| Flammability Limit in Air | No data available | None known |
| Upper flammability limit: | No data available | |
| Lower flammability limit: | No data available | |
| Vapor pressure | No data available | None known |
| Vapor density | No data available | None known |
| Relative density | No data available | None known |
| Water solubility | No data available | None known |
| Solubility in other solvents | ~0.5 mg/mL in a 1:1 solution of DMSO:PBS (pH 7.2); ~1 mg/mL in EtOH; ~14 mg/mL in DMSO; ~10 mg/mL in DMF; | None known |
| Partition coefficient | No data available | None known |
| Autoignition temperature | No data available | None known |
| Decomposition temperature | No data available | None known |
| Kinematic viscosity | No data available | None known |
| Dynamic viscosity | No data available | None known |



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Explosive properties No information available
Oxidizing properties No information available

Other Information

Softening point No information available
Molecular weight 311.4
Molecular formula C15H13N5OS
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.
Hazardous polymerization Hazardous polymerization does not occur.
Conditions to avoid None known based on information supplied.
Incompatible materials Strong oxidizing agents.
Hazardous decomposition products Carbon dioxide (CO₂). Carbon monoxide. Nitrogen oxides (NO_x). Sulfur oxides.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation Specific test data for the substance or mixture is not available.
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 No information available.

Numerical measures of toxicity



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Acute toxicity

The following values are calculated based on chapter 3.1 of the GHS document .

ATEmix (oral) 500.00 mg/kg

Unknown acute toxicity 100 % of the mixture consists of ingredient(s) of unknown toxicity

0 % of the mixture consists of ingredient(s) of unknown acute oral toxicity

100 % of the mixture consists of ingredient(s) of unknown acute dermal toxicity

100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (gas)

100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (vapor)

100 % of the mixture consists of ingredient(s) of unknown acute inhalation toxicity (dust/mist)

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

Skin corrosion/irritation No information available.

Serious eye damage/eye irritation No information available.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity Avoid release into the environment. Runoff from fire control or dilution water may cause pollution.

Persistence and degradability No information available.

Bioaccumulation There is no data for this product.

Other adverse effects No information available.



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13. DISPOSAL CONSIDERATIONS

Waste treatment methods

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

14. TRANSPORT INFORMATION

| | |
|-------------------|---|
| Note: | Transport in accordance with local, state, and federal regulations. |
| DOT | Not regulated |
| TDG | Not regulated |
| MEX | Not regulated |
| ICAO (air) | Not regulated |
| IATA | Not regulated |
| IMDG | Not regulated |
| RID | Not regulated |
| ADR | Not regulated |
| ADN | Not regulated |

15. REGULATORY INFORMATION

International Inventories

| | |
|----------------------|-----------------|
| TSCA | Does not comply |
| DSL/NDSL | Does not comply |
| EINECS/ELINCS | Does not comply |
| ENCS | Does not comply |
| IECSC | Does not comply |
| KECL | Does not comply |
| PICCS | Does not comply |
| AICS | Does not comply |

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory



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DSL/NDSL - 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

| | |
|-----------------------------------|-----|
| Acute health hazard | Yes |
| Chronic Health Hazard | No |
| Fire hazard | No |
| Sudden release of pressure hazard | No |
| Reactive Hazard | No |

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 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

US State Regulations This product does not contain any substances regulated by state right-to-know regulations

U.S. EPA Label Information

EPA Pesticide Registration Number Not applicable



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16. OTHER INFORMATION, INCLUDING DATE OF PREPARATION OF THE LAST REVISION

Prepared By, Quality Control. STEMCELL Technologies Canada Inc.

Revision Date 25-Oct-2018

Revision Note No information available.

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 given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. STEMCELL Technologies Inc. shall not be held liable for any damage resulting from handling or from contact with the product.

End of Safety Data Sheet