



100-0267 100-0268 - Perhexiline Maleate

Revision Date 14-Mar-2023 Revision Number 1.1

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

| Product identifier | | |
|--|---------------------|--|
| Product Name | Perhexiline Maleate | |
| Other means of identification | | |
| Catalog Number | 100-0267 100-0268 | |
| Document Number | 1000007612 | |
| Synonym | None | |
| Recommended use of the chemical and restrictions on use | | |
| Recommended Use | Laboratory chemical | |
| 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 not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Hazards not otherwise classified (HNOC)

Label elements





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The product contains no substances which at their given concentration, are considered to be hazardous to health.

Appearance Crystalline

Physical state Solid

Odor No data available

Other Information

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

100 % 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

Not a hazardous substance or mixture according to the Globally Harmonized System (GHS)

| Chemical name | CAS No. | Weight-% |
|--|-----------|----------|
| 2-(2,2-dicyclohexylethyl)-piperidine, 2Z-butenedioate | 6724-53-4 | 100 |

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

4. FIRST AID MEASURES

Description of first aid measures

| 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 | Clean mouth with water and drink afterwards plenty of water. |





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Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Personal precautions, protective equipment and emergency procedures

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 Impac Sensitivity to Static Discharge | t None. 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

| 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. | |





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| 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, includ | ling any incompatibilities | |
| Storage Conditions | Store in accordance with information listed on the Product Information Sheet (PIS). | |
| | | |
| 8. EXP | OSURE 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. | |
| Individual protection measures, su | ich 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 | |

9. PHYSICAL AND CHEMICAL PROPERTIES





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| Information on | hasic nhysica | I and chemical | nronerties |
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| Innormation on | Dasic Diresica | i and chemical | DIODELLES |

| information on basic physical and o | | |
|--|-------------------------------------|------------------|
| Physical state | Solid | |
| Appearance | Crystalline | |
| Color | No information available | |
| Odor | No data available | |
| Odor threshold | No data available | |
| | | |
| Property | Values | Remarks • Method |
| рН | 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) | Product is not flammable. | None known |
| Flammability Limit in Air | | 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 | DMF: 25 mg/mL; DMSO: 30 mg/mL; | None known |
| ······ | DMSO:PBS (pH 7.2) (1:1): 0.5 mg/mL; | |
| | Ethanol: 5 mg/mL; | |
| 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 |
| Explosive properties | No data available | |
| Oxidizing properties | No information available | |
| •····································· | | |
| Other Information | | |
| Softening point | No information available | |
| Molecular weight | 393.6 | |
| Molecular formula | C19H35N • C4H4O4 | |
| VOC Content (%) | No information available | |
| Liquid Density | No information available | |
| Bulk density | No information available | |
| - and actionly | | |

10. STABILITY AND REACTIVITY

| Reactivity | No information available. |
|------------------------------------|---|
| Chemical stability | Stable under recommended transport or storage conditions. |
| Possibility of hazardous reactions | None under normal processing. |





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| 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 (NOx).

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. |
| Symptoms related to the physical, chemical and toxicological characteristics | |

Symptoms

No information available.

Numerical measures of toxicity

Acute toxicity

Unknown acute toxicity

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

100 % 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) **Product Information**

Oral LD50

2150 mg/kg (rat); 2641 mg/kg (mouse);

| Chemical name | Oral LD50 | Dermal LD50 | Inhalation LC50 |
|------------------------------------|--------------------|-------------|-----------------|
| 2-(2,2-dicyclohexylethyl)-piperidi | = 2150 mg/kg (Rat) | - | - |
| ne, 2Z-butenedioate | | | |
| 6724-53-4 | | | |

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





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| Skin corrosion/irritation | No information available. | |
|--|--|--|
| Product Information | | |
| Serious eye damage/eye irritation | No information available. | |
| Product Information | | |
| Respiratory or skin sensitization Product Information | No information available. | |
| | | |
| Germ cell mutagenicity | No information available. | |
| Product Information | | |
| Carcinogenicity | No information available. | |
| Reproductive toxicity | No information available. | |
| Product Information | | |
| STOT - single exposure | No information available. | |
| Product Information | | |
| STOT - repeated exposure | No information available. Product Information | |
| Aspiration hazard RTECS # | No information available. TM7068000 | |

12. ECOLOGICAL INFORMATION

| Ecotoxicity | The environmental impact of this product has not been fully investigated. Product Information | | |
|--|---|--|--|
| Persistence and degradability Bioaccumulation | No information available. There is no data for this product. | | |
| Other adverse effects | No information available. | | |

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused

Dispose of in accordance with local regulations. Dispose of waste in accordance with





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| products | environmental legislation. | |
|------------------------|--------------------------------|--|
| Contaminated packaging | Do not reuse empty containers. | |

14. TRANSPORT INFORMATION

| 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 | Complies |
| ENCS | Does not comply |
| IECSC | Does not comply |
| KECL | Does not comply |
| PICCS | Does not comply |
| AICS | Complies |
| | |

Legend:

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

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





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AICS - Australian Inventory of Chemical Substances

US Federal Regulations

<u>SARA 313</u>

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 | No |
| 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

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

Prepared By,

Quality Control. STEMCELL Technologies Canada Inc.

14-Mar-2023

Revision Date





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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