1. PRODUCT AND COMPANY IDENTIFICATION

Product name : Dopamine hydrochloride

Product Number : H60255
Brand : Aldrich
Product Use : For laboratory research purposes.

Supplier : Sigma-Aldrich Canada, Ltd
Manufacturer : Sigma-Aldrich Corporation
2149 Winston Park Drive
OAKVILLE ON L6H 6J8
CANADA

Telephone : +19058299500
Fax : +19058299292
Emergency Phone # : 1-800-424-9300

Preparation Information : Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

Target Organs
Cardiovascular system., Nerves.Cardiovascular system., Nerves.

WHMIS Classification
Not WHMIS controlled. Not WHMIS controlled.

GHS Classification
Acute toxicity, Oral (Category 4)
Acute aquatic toxicity (Category 1)

GHS Label elements, including precautionary statements

Pictogram

Signal word Warning

Hazard statement(s)
H302 Harmful if swallowed.
H400 Very toxic to aquatic life.

Precautionary statement(s)
P273 Avoid release to the environment.

HMIS Classification
Health hazard: 2
Chronic Health Hazard: *
Flammability: 0
Physical hazards: 0

Potential Health Effects

Inhalation May be harmful if inhaled. Causes respiratory tract irritation.
Skin Harmful if absorbed through skin. Causes skin irritation.
Eyes
Ingestion
Causes eye irritation.
Harmful if swallowed.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms:
- 3,4-Dihydroxyphenethylaminehydrochloride
- 4-(2-Aminoethyl)-1,2-benzenediolhydrochloride
- 2-(3,4-Dihydroxyphenyl)ethylaminehydrochloride
- 3-Hydroxytyraminehydrochloride

Formula: \( C_8H_{11}NO_2 \cdot HCl \)
Molecular Weight: 189.64 g/mol

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<thead>
<tr>
<th>CAS-No.</th>
<th>EC-No.</th>
<th>Index-No.</th>
<th>Concentration</th>
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<td>62-31-7</td>
<td>200-527-8</td>
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4. FIRST AID MEASURES

General advice
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

If inhaled
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact
Wash off with soap and plenty of water. Consult a physician.

In case of eye contact
Flush eyes with water as a precaution.

If swallowed
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

5. FIRE-FIGHTING MEASURES

Conditions of flammability
Not flammable or combustible.

Suitable extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

Special protective equipment for fire-fighters
Wear self contained breathing apparatus for fire fighting if necessary.

Hazardous combustion products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Hydrogen chloride gas

Explosion data - sensitivity to mechanical impact
no data available

Explosion data - sensitivity to static discharge
no data available

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.
**Methods and materials for containment and cleaning up**
Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

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7. HANDLING AND STORAGE

**Precautions for safe handling**
Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed. Normal measures for preventive fire protection.

**Conditions for safe storage**
Protect against light. Keep container tightly closed in a dry and well-ventilated place.

- Recommended storage temperature: 2 - 8 °C
- Light sensitive. Keep in a dry place.

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8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

**Personal protective equipment**

- **Respiratory protection**
  For nuisance exposures use type P95 (US) or type P1 (EU EN 143) particle respirator. For higher level protection use type OV/AG/P99 (US) or type ABEK-P2 (EU EN 143) respirator cartridges. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

- **Hand protection**
  Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

- **Eye protection**
  Safety glasses with side-shields conforming to EN166. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

- **Skin and body protection**
  Complete suit protecting against chemicals. The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

- **Hygiene measures**
  Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

- **Specific engineering controls**
  Use mechanical exhaust or laboratory fumehood to avoid exposure.

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9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**
- Form: powder
- Colour: white

**Safety data**
- **pH**: 3.0 - 5.5 at 40.0 g/l at 20 °C (68 °F)
- **Melting/freezing point**: Melting point/range: 248 - 250 °C (478 - 482 °F) - lit.
- **Boiling point**: no data available
- **Flash point**: no data available
- **Ignition temperature**: no data available
- **Autoignition**: no data available
temperature
Lower explosion limit no data available
Upper explosion limit no data available
Vapour pressure no data available
Density no data available
Water solubility no data available
Partition coefficient: log Pow: -2.58 at 25 °C (77 °F)
Relative vapour density no data available
Odour no data available
Odour Threshold no data available
Evaporation rate no data available

10. STABILITY AND REACTIVITY

Chemical stability
Stable under recommended storage conditions.

Possibility of hazardous reactions
no data available

Conditions to avoid
Light.

Materials to avoid
Strong oxidizing agents

Hazardous decomposition products
Hazardous decomposition products formed under fire conditions. - Carbon oxides, nitrogen oxides (NOx), Hydrogen chloride gas

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Oral LD50
LD50 Oral - rat - 1,870 mg/kg

Inhalation LC50
LC50 Inhalation - rat - 4 h - > 5.0 mg/l

Dermal LD50
no data available

Other information on acute toxicity
LD50 Intravenous - rat - 4.8 mg/kg

Skin corrosion/irritation
Skin - rabbit - No skin irritation - OECD Test Guideline 404

Serious eye damage/eye irritation
Eyes - rabbit - No eye irritation - OECD Test Guideline 405

Respiratory or skin sensitization
no data available

Germ cell mutagenicity
no data available
Carcinogenicity
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

Reproductive toxicity
no data available

Teratogenicity
no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available

Aspiration hazard
no data available

Potential health effects
Inhalation May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion Harmful if swallowed.
Skin Harmful if absorbed through skin. Causes skin irritation.
Eyes Causes eye irritation.

Signs and Symptoms of Exposure
Nausea, Headache, Vomiting, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergistic effects
no data available

Additional Information
RTECS: UX1092000

12. ECOLOGICAL INFORMATION

Toxicity
Toxicity to fish static test LC50 - Leuciscus idus (Golden orfe) - 2,200.0 - 4,600.0 mg/l - 96.0 h
Method: DIN 38412
Toxicity to daphnia and other aquatic invertebrates. static test EC50 - Daphnia magna (Water flea) - 24.5 mg/l - 48 h
Method: OECD Test Guideline 202
Toxicity to algae static test EC50 - Algae - < 1 mg/l - 72 h
Method: OECD Test Guideline 201

Persistence and degradability
Remarks: According to the results of tests of biodegradability this product is not readily biodegradable.

Bioaccumulative potential
Bioaccumulation is unlikely.

Mobility in soil
no data available

PBT and vPvB assessment
no data available
Other adverse effects
An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic life.

13. DISPOSAL CONSIDERATIONS

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN-Number: 3077   Class: 9   Packing group: III
Proper shipping name: Environmentally hazardous substances, solid, n.o.s. (Dopamine hydrochloride)
Marine pollutant: Marine pollutant
Poison Inhalation Hazard: No

IMDG
UN-Number: 3077   Class: 9   Packing group: III   EMS-No: F-A, S-F
Proper shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Dopamine hydrochloride)
Marine pollutant: Marine pollutant

IATA
UN-Number: 3077   Class: 9   Packing group: III
Proper shipping name: Environmentally hazardous substance, solid, n.o.s. (Dopamine hydrochloride)

Further information
EHS-Mark required (ADR 2.2.9.1.10, IMDG code 2.10.3) for single packagings and combination packagings containing inner packagings with Dangerous Goods > 5L for liquids or > 5kg for solids.

15. REGULATORY INFORMATION

DSL Status
This product contains the following components listed on the Canadian NDSL list. All other components are on the Canadian DSL list.

Dopamine hydrochloride   CAS-No. 62-31-7

WHMIS Classification
Not WHMIS controlled. Not WHMIS controlled.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

16. OTHER INFORMATION

Further information
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