

SAFETY DATA SHEET

Cat# 2163-5, -25, Milrinone

SDS DATE: Sep 13, 2012

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Milrinone
PRODUCT CODES: Cat# 2163-5, -25
MANUFACTURER: BioVision, Inc.
DIVISION:
ADDRESS: 155 S. Milpitas Boulevard, Milpitas, CA 95035
EMERGENCY PHONE: 858-373-8066
CHEMTREC PHONE:
OTHER CALLS: 408-493-1800
FAX PHONE: 408-493-1801

SECTION 2: COMPOSITION/INFORMATION ON INGREDIENTS

Product Name	Description	Volume	Safety Information
Milrinone	Solid	1 ml	See below

SECTION 3: HAZARDS IDENTIFICATION

Component/Chemical Name	CAS Number	EC-No.	Molecular Weight	Chemical Formula
Milrinone	78415-72-2	278-903-6	211.22	C ₁₂ H ₉ N ₃ O

Milrinone:

Emergency Overview

OSHA Hazards: Target Organ Effect, Toxic by inhalation, Toxic by ingestion, Toxic by skin absorption

Target Organs: Heart, Smooth muscle

GHS Classification: Acute toxicity, Oral (Category 3)
Acute toxicity, Inhalation (Category 3)
Acute toxicity, Dermal (Category 3)

GHS Label elements, including precautionary statements

Pictogram



Signal word: Danger
Hazard statement(s): H301+H311 Toxic if swallowed or in contact with skin
H331 Toxic if inhaled.
Precautionary statement(s): P261 Avoid breathing dust/fumes/gas/mist/vapors/spray.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/protective clothing.
P284 Wear respiratory protection.
P301+P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P302+P352 IF ON SKIN: Was with plenty of soap and water.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P311 Call A POISON CENTER or doctor/physician.

HMIS Classification

Health hazard: 2
Flammability: 0
Physical hazards: 0

NFPA Rating

Health hazard: 2
Fire: 0
Reactivity Hazard: 0

Potential Health Effects

Inhalation Toxic if inhaled. May cause respiratory tract irritation.
Skin Toxic if absorbed through skin. May cause skin irritation.
Eyes May cause eye irritation.
Ingestion Toxic if swallowed.

SECTION 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. Take victim immediately to hospital. Consult a physician.

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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 combustion products formed under fire conditions— no data available.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal precautions: Wear respiratory protection. 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.

Methods for cleaning up: Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

SECTION 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.

Conditions for safe storage

Keep container tightly closed in a dry and well-ventilated place.

Recommended storage temperature: -20°C

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Contains no substances with occupational exposure limit values.

Personal protective equipment

Respiratory protection

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N99 (US) or type P2 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. 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

Face shield and safety glasses 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

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	Milrinone
Appearance:	Off-white solid
pH:	No data available
Water Solubility:	No data available
Other Solubility:	DMSO (>10 mg/ml)
Boiling Point (°C):	No data available
Melting Point (°C):	>280 °C (>536 °F)
Flash Point (°C):	No data available
Ignition Temperature (°C):	No data available
Density:	No data available

SECTION 10: STABILITY AND REACTIVITY

Property	Milrinone
Chemical stability	Stable under recommended storage conditions
Conditions to avoid:	No data available
Materials to avoid:	Strong oxidizing agents, strong acids
Hazardous decomposition products:	Carbon oxides, nitrogen oxides

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SECTION 11: TOXICOLOGICAL INFORMATION

Milrinone:

Acute toxicity: LD50 Oral - rat - 91 mg/kg

Skin corrosion/irritation: no data available

Serious eye damage/eye irritation: no data available

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.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity: no data available

Teratogenicity: no data available

Specific target organ toxicity - single exposure (GHS): no data available

Specific target organ toxicity - repeated exposure (GHS): no data available

Aspiration hazard: no data available

Potential health effects

Inhalation Toxic if inhaled. May cause respiratory tract irritation.

Skin Toxic if absorbed through skin. May cause skin irritation.

Eyes May cause eye irritation.

Ingestion Toxic if swallowed.

Signs and Symptoms of Exposure: Exposure may cause gastrointestinal disturbance and/or blood disorders. 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: DW1762000

SECTION 12: ECOLOGICAL INFORMATION

Milrinone:

Toxicity: no data available

Persistence and degradability: no data available

Bioaccumulative potential: no data available

Mobility in soil: no data available

PBT and vPvB assessment: no data available

Other adverse effects: no data available

SECTION 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. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

Contaminated packaging: Dispose of as unused product.

SECTION 14: TRANSPORT INFORMATION

Milrinone:

DOT (US)

UN-Number: 2811, Class: 6.1 Packing group: III; Proper shipping name: Toxic solids, organic, n.o.s. (Milrinone); Marine pollutant: No; Poison Inhalation Hazard: No

IMDG

UN-Number: 2811, Class: 6.1 Packing group: III; EMS-No: F-A, S-A; Proper shipping name: TOXIC SOLID, ORGANIC, N.O.S. (Milrinone); Marine pollutant: No

IATA

UN-Number: 2811, Class: 6.1 Packing group: III; Proper shipping name: Toxic solid, organic, n.o.s. (Milrinone)

SECTION 15: REGULATORY INFORMATION

Milrinone:

OSHA Hazards: Target Organ Effect, Toxic by inhalation, Toxic by ingestion, Toxic by skin absorption

SARA 302 Components: SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components: SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards: Acute Health Hazard

Massachusetts Right To Know Components: No components are subject of the Massachusetts Right to Know Act.

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Pennsylvania Right To Know Components: Milrinone, CAS-No. 78415-72-2

New Jersey Right To Know Components: Milrinone, CAS-No. 78415-72-2

California Prop. 65 Components: This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

EU regulations

Component	Risk Phrases	Safety Phrases
Milrinone	R24/25/26	S22, S26, S36/37/39, S45

SECTION 16: OTHER INFORMATION

OTHER INFORMATION:

PREPARATION INFORMATION:

DISCLAIMER:

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. BioVision, Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale.