

SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

Product identifiers

Product name : Isoproterenol solution

Relevant identified uses of the substance or mixture

For research use only. Not for use in diagnostic procedures.

Details of the supplier of the safety data sheet

Montana Molecular
366 Gallatin Park Drive, Unit A
Bozeman, MT 59715

Emergency telephone

Emergency Phone #. In case of emergency contact CHEMTREC. 24 Hours/day; 7 Days/week

CHEMTREC (USA): 800-424-9300

CHEMTREC (International) +1-703-527-3887

SECTION 2: Hazards identification

Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

The substance is not classified, according to the Globally Harmonized System (GHS).

GHS Label elements, including precautionary statements

Pictogram

Not applicable

Signal Word

Not applicable

Hazard Statements

Not applicable

Precautionary Statements

Do not breathe vapor or spray.

Wash hands thoroughly after handling.

Hazards not otherwise classified (HNOC) or not covered by GHS

none

SECTION 3: Composition/information on ingredients

Mixtures

Chemical name	CAS number	Concentration
Isoproterenol	54750-10-6	0.4% (10 mM)

Non-hazardous ingredients include water. Hydrochloric acid is used to adjust the pH.

SECTION 4: First aid measures

Description of first-aid measures

General advice

Note to physician: treat symptomatically

Inhalation

Move to fresh air. If breathing is difficult, give oxygen. If breathing is stopped, give artificial respiration.

Skin contact

Remove contaminated clothing and shoes. Wash skin thoroughly with plenty of water. If irritation develops, seek medical advice.

Eye contact

Immediately flush eyes with plenty of water for at least 20 minutes, occasionally lifting the upper and lower eyelids. Check and remove contact lenses. Seek medical advice.

If swallowed

Remove from source of exposure. If signs of toxicity occur, seek medical attention. Provide symptomatic/supportive care as necessary. Notes to physician: blood pressure and ECG may be monitored and the following treatment used, as appropriate: tachycardia in asthmatic patients may be treated with cardio-selective beta-blockers (metoprolol or atenolol, but used cautiously since cardio-selectivity may not be absolute). Non-asthmatics may be treated with propranolol; blood pressure may be regulated with rapid-acting vasodilators (nitrites, sodium nitroprusside) or alphablocking agents (quinidine, phentolamine).

Most important symptoms and effects, both acute and delayed

No further information available

Indication of any immediate medical attention and special treatment needed

No further information available

SECTION 5: Firefighting measures

Extinguishing media

Suitable extinguishing media

Use extinguishing media appropriate for primary cause of fire such as carbon dioxide, dry chemical extinguishing powder or foam.

Unsuitable extinguishing media

No information available

Special hazards arising from the substance or mixture

None anticipated for this aqueous product.

Special protective equipment and precautions for firefighters

No special provisions required beyond normal firefighting equipment such as flame and chemical resistant clothing and self contained breathing apparatus.

SECTION 6: Accidental release measures**Methods and materials for containment and cleaning up**

Isolate area around spill. Put on suitable protective clothing and equipment as specified by site spill control procedures. Absorb the liquid with suitable material and clean affected area with soap and water. Dispose of spill materials according to the applicable federal, state, or local regulations.

SECTION 7: Handling and storage**Precautions for safe handling**

For precautions see section 2

Conditions for safe storage, including any incompatibilities**Storage conditions**

Store in accordance with information listed on the product insert

SECTION 8: Exposure controls/personal protection**Control parameters****Ingredients with permissible exposure limits**

Contains no substances with permissible exposure limits.

Exposure controls**Appropriate engineering controls**

No special environmental controls are required.

Personal protective equipment**Eye/face protection**

Safety glasses

Skin protection

Latex or nitrile gloves

Body Protection

Protective clothing

Respiratory protection

Not required

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

Appearance	Form: liquid
Color	No data available
Odor	No data available
Odor threshold	No data available
pH	2.5-4.5
Melting point/freezing point	No data available
Initial boiling point and boiling range	No data available
Flash point	Not applicable
Evaporation rate	No data available
Flammability (solid, gas)	Product is not flammable
Upper/lower flammability or explosive limits	No data available
Vapor pressure	No data available
Vapor density	No data available
Density	No data available
Relative density	No data available
Solubility	Soluble in water
Partition coefficient: n-octanol/water	No data available
Autoignition temperature	Not applicable
Decomposition temperature	No data available
Viscosity	No data available
Explosive properties	Not classified as explosive
Oxidizing properties	none

SECTION 10: Stability and reactivity

Reactivity

No data available

Chemical stability

Stable under normal conditions.

Possibility of hazardous reactions

No data available

Conditions to avoid

Protect from light

Incompatible materials

No data available

Hazardous decomposition products

No dangerous decomposition products known

SECTION 11: Toxicological information

Acute toxicity

Not determined for the product formulation. Information for the active ingredient is as follows:

Ingredient	Percent	Test Type	Route of administration	Value	Unit	Species
Isoproterenol hydrochloride	100	LD50	Oral	2221	mg/kg	Rat
				1260	mg/kg	Mouse
				2070	mg/kg	Rabbit
				600	mg/kg	Dog
Isoproterenol hydrochloride	100	LD50	Intravenous	26.9	mg/kg	Rat
				77	mg/kg	Mouse
				27	mg/kg	Rabbit
				50	mg/kg	Dog

Skin contact

No data available

Eye contact

No data available

Inhalation

No data available

Ingestion

No data available

Additional toxicological information

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Carcinogenic categories

IARC

No ingredient of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP

No ingredient 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 on OSHA's list of regulated carcinogens.

SECTION 12: Ecological information

Aquatic or terrestrial toxicity

No data available

Persistence and degradability

No data available

Bioaccumulative potential

No data available

Mobility in soil

No data available

Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

Other adverse effects

No data available

SECTION 13: Disposal considerations

Product

Waste material must be disposed of in accordance with the national and local regulations. Leave chemicals in original containers. Handle uncleaned containers like the product itself.

SECTION 14: Transport information

UN/NA Number:

None

UN/NA proper shipping name:

Not applicable

IATA:

Not hazardous goods

DOT (US):

Not hazardous goods

IMDG:

Not hazardous goods

SECTION 15: Regulatory information

CERCLA Reportable Quantity

This material does not contain any components with a CERCLA RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity

This material does not contain any components with a section 302 EHS TPQ.

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.

RCRA status

Not listed

Prop 65 (California)

Not listed

TSCA

Product contains substance(s) not listed on TSCA inventory.

SECTION 16: Other information

Disclaimer

The information is believed to be correct to the best of our knowledge at the date published. The document is designed solely as a guideline. It does not represent any guarantee of the properties of the product. Montana Molecular, LLC and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.

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