

# SAFETY DATA SHEET



## Ketamine Hydrochloride Injection

### Section 1. Identification

**Product identifier** : Ketamine Hydrochloride Injection

**Other means of identification** : KETASET  
Ketaset Injectable  
Ketaset®  
Rogarsetic  
Vetalar

**Product type** : Liquid.

#### Relevant identified uses of the substance or mixture and uses advised against

##### Identified uses

Anesthetic.

##### Uses advised against

Not for human use

**Supplier's details** : Zoetis Canada Inc.  
16740 Trans-Canada Highway  
Kirkland, Quebec, H9H 4M7  
  
1-800-461-0917  
All Safety Data Sheets are available via our Zoetis Canada website at  
<https://www.zoetis.ca/sds/sds.aspx>

**Emergency telephone number (with hours of operation)** : CHEMTREC (24 hours): 1-800-424-9300  
  
International CHEMTREC (24 hours): +1-703-527-3887  
  
Rocky Mountain Poison & Drug Safety: 1-866-531-8896  
Product support/Technical services: 1-888-963-8471  
  
Zoetis Inc.  
10 Sylvan Way  
Parsippany, New Jersey 07054 (USA)

### Section 2. Hazard identification

**Classification of the substance or mixture** : Not classified.

#### GHS label elements

**Signal word** : No signal word.

**Hazard statements** : No known significant effects or critical hazards.

#### Precautionary statements

**Prevention** : Not applicable.

**Response** : Not applicable.

**Storage** : Not applicable.

**Disposal** : Not applicable.

**Supplemental label elements** : Anesthetic drug: may cause central nervous system and cardiovascular system effects. May be absorbed through the skin and cause systemic effects.

## Section 3. Composition/information on ingredients

**Substance/mixture** : Mixture

Ingredient name	Synonyms	% (w/w)	Identifiers	
ketamine hydrochloride	-	≥10 - ≤30	CAS: 1867-66-9	

Ranges if listed above for hazardous ingredient(s) are prescribed ranges. The actual concentration(s) or actual concentration range(s) are being withheld as a trade secret.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First-aid measures

### Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Get medical attention if irritation occurs.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical attention if symptoms occur. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Flush contaminated skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur.
- Ingestion** : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel. Get medical attention if symptoms occur.

### Most important symptoms/effects, acute and delayed

Direct contact with eyes may cause temporary irritation. Exposed individuals may experience eye tearing, redness, and discomfort. Ketamine is an anesthetic agent which is known to cause double vision, motor incoordination, delirium, hallucinations, irrational behavior, and temporary elevation of blood pressure and pulse rate.

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training.

## Section 5. Fire-fighting measures

### Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

**Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.

- Hazardous thermal decomposition products** : Decomposition products may include the following materials: carbon dioxide, carbon monoxide, nitrogen oxides, halogenated compounds

## Section 5. Fire-fighting measures

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : Keep unnecessary personnel away.
- For emergency responders** : Keep unnecessary personnel away. If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

### Methods and materials for containment and cleaning up

- Small spill** : Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contain and collect spillage with non-combustible, absorbent material e. g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

## Section 7. Handling and storage

### Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8).
- Advice on general occupational hygiene** : Avoid accidental injection. Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.
- Conditions for safe storage, including any incompatibilities** : Store between the following temperatures: 15 to 30°C (59 to 86°F). Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
ketamine hydrochloride	<b>Zoetis OEL (ZOETIS OEL)</b> TWA: 200 µg/m <sup>3</sup> .

#### Biological exposure indices

No exposure indices known.

#### Control Banding Approach

Not available.

- Appropriate engineering controls** : Good general ventilation should be sufficient to control worker exposure to airborne contaminants.
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

### Individual protection measures

- Hygiene measures** : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.
- Eye/face protection** : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: safety glasses with side-shields.
- Skin protection**
- Hand protection** : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.
- Body protection** : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

### Appearance

- Physical state** : Liquid. [Liquid solution]
- Color** : Colorless. to Pale yellow
- Odor** : Not available.
- Odor threshold** : Not available.
- pH** : 3.5 to 5.5

## Section 9. Physical and chemical properties

<b>Melting point/freezing point</b>	: Not available.
<b>Boiling point or initial boiling point and boiling range</b>	: Not available.
<b>Flash point</b>	: Closed cup: >93.3°C (>199.9°F)
<b>Evaporation rate</b>	: Not available.
<b>Flammability</b>	: Not available.
<b>Lower and upper explosion limit/flammability limit</b>	: Not available.
<b>Vapor pressure</b>	: Not available.
<b>Relative vapor density</b>	: Not available.
<b>Relative density</b>	: 1.01 to 1.03
<b>Solubility in water</b>	: Not available.
<b>Miscible with water</b>	: Yes.
<b>Partition coefficient: n-octanol/water</b>	: Not applicable.
<b>Auto-ignition temperature</b>	: Not available.
<b>Decomposition temperature</b>	: Not available.
<b>Viscosity</b>	: Dynamic (room temperature): Not available. Kinematic (room temperature): Not available. Kinematic (40°C (104°F)): Not available.

### Particle characteristics

<b>Pmax</b>	: Not available.
<b>Kst</b>	: Not available.
<b>Min. Ignition Temperature (Dust)</b>	: Not available.
<b>Minimum ignition energy (MIE) - dust cloud</b>	: Not available.
<b>Median particle size</b>	: Not applicable.

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: The product is stable.
<b>Possibility of hazardous reactions</b>	: Under normal conditions of storage and use, hazardous reactions will not occur.
<b>Conditions to avoid</b>	: No specific data.
<b>Incompatible materials</b>	: No specific data.
<b>Remarks</b>	: Reactive or incompatible with the following materials: oxidizing materials.
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

**Product/ingredient name**

ketamine hydrochloride

**Result****Mouse - Intravenous - LD50**

55.9 mg/kg

**Rat - Intravenous - LD50**

58.9 mg/kg

**Mouse - Oral - LD50**

617 mg/kg

**Rat - Oral - LD50**

447 mg/kg

**Rat - Oral - LD50**

447 mg/kg

**Conclusion/Summary [Product]** : May be harmful if swallowed.

#### Skin corrosion/irritation

Not available.

**Conclusion/Summary [Product]** : Not applicable.

#### Serious eye damage/eye irritation

Not available.

**Conclusion/Summary [Product]** : Not applicable.

#### Respiratory corrosion/irritation

Not available.

**Conclusion/Summary [Product]** : Not applicable.

#### Respiratory or skin sensitization

Not available.

#### Skin

**Conclusion/Summary [Product]** : Not applicable.

#### Respiratory

**Conclusion/Summary [Product]** : Not applicable.

#### Specific target organ toxicity (single exposure)

Not applicable.

#### Specific target organ toxicity (repeated exposure)

Not applicable.

#### Aspiration hazard

Not applicable.

## Section 11. Toxicological information

### Information on the likely routes of exposure

Not available.

### Potential acute health effects

Direct contact with eyes may cause temporary irritation. Exposed individuals may experience eye tearing, redness, and discomfort. Ketamine is an anesthetic agent which is known to cause double vision, motor incoordination, delirium, hallucinations, irrational behavior, and temporary elevation of blood pressure and pulse rate.

### Potential chronic health effects

#### Product/ingredient name

ketamine hydrochloride

#### Result

**Sub-acute - Dog - Intramuscular - NOAEL**

40 mg/kg [6 weeks]

**Sub-acute - Rat - Intravenous - NOAEL**

10 mg/kg [6 weeks]

#### General

: No known significant effects or critical hazards.

### Germ cell mutagenicity

Not available.

#### Conclusion/Summary [Product]

: No known significant effects or critical hazards.

### Carcinogenicity

Not available.

#### Conclusion/Summary [Product]

: No known significant effects or critical hazards.

### Reproductive toxicity

Not available.

#### Conclusion/Summary [Product]

: No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapors) (mg/l)	Inhalation (dusts and mists) (mg/l)
Ketamine Hydrochloride Injection	4470.4	N/A	N/A	N/A	N/A
ketamine hydrochloride	447	N/A	N/A	N/A	N/A

## Section 12. Ecological information

### Toxicity

Not available.

**Conclusion/Summary [Product]** : No known significant effects or critical hazards.

### Persistence and degradability

Not available.

**Conclusion/Summary [Product]** : Not available.

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
ketamine hydrochloride	2.18	-	Low

### Mobility in soil

**Soil/Water partition coefficient** : Not available.

### Other adverse effects

No known significant effects or critical hazards.

## Section 13. Disposal considerations

**Disposal methods** : Considering the relevant known environmental and human health hazards of the material, review and implement appropriate technical and procedural waste water and waste disposal measures to prevent occupational exposure and environmental release. It is recommended that waste minimization be practiced. The best available technology should be utilized to prevent environmental releases. This may include destructive techniques for waste and wastewater. The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## Section 14. Transport information

	TDG Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-



## Section 14. Transport information

<b>Transport hazard class(es)</b>	-	-	-
<b>Packing group</b>	-	-	-
<b>Environmental hazards</b>	No.	No.	No.

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

## Section 15. Regulatory information

### Canadian lists

**Canadian NPRI** : None of the components are listed.

**CEPA Toxic substances** : None of the components are listed.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

### Inventory list

**Australia** : Not determined.

**Canada** : Not determined.

**China** : Not determined.

**Eurasian Economic Union** : **Russian Federation inventory:** All components are listed or exempted.

**Japan** : **Japan inventory (CSCL):** Not determined.

**Japan inventory (ISHL):** Not determined.

**New Zealand** : All components are listed or exempted.

**Philippines** : All components are listed or exempted.

**Republic of Korea** : Not determined.

**Taiwan** : All components are listed or exempted.

**Thailand** : Not determined.

**Turkey** : Not determined.

**United States** : Not determined.

**Viet Nam** : All components are listed or exempted.

## Section 16. Other information

### History

**Date of issue/Date of revision** : 9/10/2025

**Date of previous issue** : 5/27/2025

**Version** : 1.01

**Key to abbreviations** : ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
DOT = Department of Transportation  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
HPR = Hazardous Products Regulations  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
IMO = International Maritime Organization  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
N/A = Not available  
SGG = Segregation Group  
TDG = Transportation of Dangerous Goods  
UN = United Nations

### Procedure used to derive the classification

Not classified.

**References** : Not available.

### Notice to reader

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