

## 1. Identification

|                                                               |                                                                                                                                                                                                         |
|---------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Product identifier</b>                                     | <b>Vetalar® Injection</b>                                                                                                                                                                               |
| <b>Other means of identification</b>                          | None.                                                                                                                                                                                                   |
| <b>Recommended use</b>                                        | Indicated as an anesthetic for cats and for restraint in subhuman primates.                                                                                                                             |
| <b>Recommended restrictions</b>                               | None known.                                                                                                                                                                                             |
| <b>Manufacturer/Importer/Supplier/Distributor information</b> |                                                                                                                                                                                                         |
| <b>Manufacturer</b>                                           | Boehringer Ingelheim Vetmedica, Inc.                                                                                                                                                                    |
| <b>Address</b>                                                | 2621 North Belt Hwy<br>St. Joseph, MO 64506-2002                                                                                                                                                        |
| <b>Transportation emergency</b>                               | For Chemical Emergency Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night<br>Within USA and Canada: 1-800-424-9300<br>Outside USA and Canada: +1 703-527-3887 (collect calls accepted) |
| <b>Medical Emergency (24HR):</b>                              | (866)638-2226                                                                                                                                                                                           |
| <b>Non-Emergency calls:</b>                                   | (800) 821-7467                                                                                                                                                                                          |

## 2. Hazard(s) identification

|                                                  |                                                                                |
|--------------------------------------------------|--------------------------------------------------------------------------------|
| <b>Physical hazards</b>                          | Not classified.                                                                |
| <b>Health hazards</b>                            | Not classified.                                                                |
| <b>OSHA defined hazards</b>                      | Not classified.                                                                |
| <b>Label elements</b>                            |                                                                                |
| <b>Hazard symbol</b>                             | None.                                                                          |
| <b>Signal word</b>                               | None.                                                                          |
| <b>Hazard statement</b>                          | The mixture does not meet the criteria for classification.                     |
| <b>Precautionary statement</b>                   |                                                                                |
| <b>Prevention</b>                                | Observe good industrial hygiene practices.                                     |
| <b>Response</b>                                  | Wash hands after handling.                                                     |
| <b>Storage</b>                                   | Store away from incompatible materials.                                        |
| <b>Disposal</b>                                  | Dispose of waste and residues in accordance with local authority requirements. |
| <b>Hazard(s) not otherwise classified (HNOC)</b> | None known.                                                                    |
| <b>Supplemental information</b>                  | None.                                                                          |

## 3. Composition/information on ingredients

### Mixtures

| <b>Chemical name</b>   | <b>CAS number</b> | <b>%</b> |
|------------------------|-------------------|----------|
| Ketamine hydrochloride | 1867-66-9         | <15      |

## 4. First-aid measures

|                                                           |                                                                                                                                                           |
|-----------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>                                         | If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist. |
| <b>Skin contact</b>                                       | Rinse skin with water/shower. Get medical attention if irritation develops and persists.                                                                  |
| <b>Eye contact</b>                                        | Rinse with water. Get medical attention if irritation develops and persists.                                                                              |
| <b>Ingestion</b>                                          | Rinse mouth. If ingestion of a large amount does occur, call a poison control center immediately.                                                         |
| <b>Most important symptoms/effects, acute and delayed</b> | Direct contact with eyes may cause temporary irritation. Ingestion of a large quantity may cause nausea and systemic effects.                             |

|                                                                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Indication of immediate medical attention and special treatment needed</b> | Not for human use. For use in animals only. Treat symptomatically. Persons developing anaphylactic (life threatening) reactions, such as difficulty in breathing or unconsciousness, must receive immediate medical attention.                                                                                                                                                                                                                                                                                                                |
| <b>General information</b>                                                    | Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.                                                                                                                                                                                                                                                                                                                                                                                                                              |
| <b>5. Fire-fighting measures</b>                                              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Suitable extinguishing media</b>                                           | Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| <b>Unsuitable extinguishing media</b>                                         | None known.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Specific hazards arising from the chemical</b>                             | During fire, gases hazardous to health may be formed. Combustion products may include: carbon oxides, nitrogen oxides, hydrogen chloride.                                                                                                                                                                                                                                                                                                                                                                                                     |
| <b>Special protective equipment and precautions for firefighters</b>          | Self-contained breathing apparatus and full protective clothing must be worn in case of fire.                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Fire fighting equipment/instructions</b>                                   | Move containers from fire area if you can do so without risk.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Specific methods</b>                                                       | Use standard firefighting procedures and consider the hazards of other involved materials.                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>General fire hazards</b>                                                   | No unusual fire or explosion hazards noted.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>6. Accidental release measures</b>                                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Personal precautions, protective equipment and emergency procedures</b>    | Keep unnecessary personnel away. For personal protection, see section 8 of the SDS.                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Methods and materials for containment and cleaning up</b>                  | Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Cover with plastic sheet to prevent spreading. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.<br><br>Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.<br><br>Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS. |
| <b>Environmental precautions</b>                                              | Avoid discharge into drains, water courses or onto the ground.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| <b>7. Handling and storage</b>                                                |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Precautions for safe handling</b>                                          | Avoid prolonged exposure. Use care in handling/storage. Observe good industrial hygiene practices.                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Conditions for safe storage, including any incompatibilities</b>           | Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS). Store away from foodstuffs. Store material between 20°C (68°F) and 25°C (77°F).                                                                                                                                                                                                                                                                                                                                               |
| <b>8. Exposure controls/personal protection</b>                               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Occupational exposure limits</b>                                           | No exposure limits noted for ingredient(s).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Biological limit values</b>                                                | No biological exposure limits noted for the ingredient(s).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| <b>Appropriate engineering controls</b>                                       | Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.                                                                                                                                                                                     |
| <b>Individual protection measures, such as personal protective equipment</b>  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Eye/face protection</b>                                                    | Wear safety glasses with side shields (or goggles).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| <b>Skin protection</b>                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Hand protection</b>                                                        | Wear appropriate chemical resistant gloves.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Skin protection</b>                                                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| <b>Other</b>                                                                  | Wear suitable protective clothing.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| <b>Respiratory protection</b>                                                 | If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.                                                                                                                                                                                                                                                                                           |
| <b>Thermal hazards</b>                                                        | Wear appropriate thermal protective clothing, when necessary.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>General hygiene considerations</b>                                         | Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.                                                                                                                                                                                                                                                                                                                         |

## 9. Physical and chemical properties

### Appearance

|                |            |
|----------------|------------|
| Physical state | Liquid.    |
| Form           | Liquid.    |
| Color          | Yellowish. |

**Odor** Not available.

**Odor threshold** Not available.

**pH** 3.5 - 5.5

**Melting point/freezing point** 32 °F (0 °C) based on data for: Water for injection

**Initial boiling point and boiling range** 212 °F (100 °C)

**Flash point** Not available.

**Evaporation rate** Not available.

**Flammability (solid, gas)** Not applicable.

### Upper/lower flammability or explosive limits

**Flammability limit - lower (%)** Not available.

**Flammability limit - upper (%)** Not available.

**Explosive limit - lower (%)** Not available.

**Explosive limit - upper (%)** Not available.

**Vapor pressure** 18 mm Hg (68 °F (20 °C))

**Vapor density** Not available.

**Relative density** 1 (water = 1)

### Solubility(ies)

**Solubility (water)** Soluble in cold and hot water

**Partition coefficient (n-octanol/water)** Not available.

**Auto-ignition temperature** Not available.

**Decomposition temperature** Not available.

**Viscosity** Not available.

## 10. Stability and reactivity

**Reactivity** The product is stable and non-reactive under normal conditions of use, storage and transport.

**Chemical stability** Material is stable under normal conditions.

**Possibility of hazardous reactions** No dangerous reaction known under conditions of normal use.

**Conditions to avoid** Contact with incompatible materials. High temperatures.

**Incompatible materials** Oxidizing agents and reducing agents.

**Hazardous decomposition products** No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

**Inhalation** No adverse effects due to inhalation are expected.

**Skin contact** No adverse effects due to skin contact are expected.

**Eye contact** Direct contact with eyes may cause temporary irritation.

**Ingestion** Expected to be a low ingestion hazard.

**Symptoms related to the physical, chemical and toxicological characteristics** Direct contact with eyes may cause temporary irritation. Ingestion of a large quantity may cause nausea and systemic effects.

### Information on toxicological effects

**Acute toxicity** Not expected to be acutely toxic.

**Components** **Species** **Test Results**

Ketamine hydrochloride (CAS 1867-66-9)

**Acute**

**Oral**

|      |       |           |
|------|-------|-----------|
| LD50 | Mouse | 617 mg/kg |
|      | Rat   | 447 mg/kg |

**Skin corrosion/irritation** Prolonged skin contact may cause temporary irritation.

**Serious eye damage/eye irritation** Direct contact with eyes may cause temporary irritation.

**Respiratory or skin sensitization**

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** This product is not expected to cause skin sensitization.

**Germ cell mutagenicity** No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.

**Carcinogenicity** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Not listed.

**NTP Report on Carcinogens**

Not listed.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not regulated.

**Reproductive toxicity** This product is not expected to cause reproductive or developmental effects.

**Specific target organ toxicity - single exposure** Not classified.

**Specific target organ toxicity - repeated exposure** Not classified.

**Aspiration hazard** Not an aspiration hazard.

**Chronic effects** Possible hyper sensitization (development of abnormal sensitivity).

**12. Ecological information**

**Ecotoxicity** The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential** No data available.

**Mobility in soil** No data available.

**Other adverse effects** No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

**13. Disposal considerations**

**Disposal instructions** Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

**Local disposal regulations** Dispose in accordance with all applicable regulations.

**Hazardous waste code** The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Waste from residues / unused products** Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging** Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

**14. Transport information**

**DOT**

Not regulated as dangerous goods.

**IATA**

Not regulated as dangerous goods.

**IMDG**

Not regulated as dangerous goods.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not established.**15. Regulatory information****US federal regulations** One or more components are not listed on TSCA. Therefore, it can only be used for TSCA exempt purposes such as R&D or veterinary use. FEDERAL LAW RESTRICTS THIS DRUG TO USE BY OR ON ORDER OF LICENSED VETERINARIANS.**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Not listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not regulated.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)****SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** No**SARA 313 (TRI reporting)**

Not regulated.

**Other federal regulations****Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Not regulated.

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.**US state regulations****US. Massachusetts RTK - Substance List**

Not regulated.

**US. New Jersey Worker and Community Right-to-Know Act**

Not listed.

**US. Pennsylvania Worker and Community Right-to-Know Law**

Not listed.

**US. Rhode Island RTK**

Not regulated.

**California Proposition 65**California Safe Drinking Water and Toxic Enforcement Act of 2016 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).**International Inventories**

| Country(s) or region | Inventory name                                             | On inventory (yes/no)* |
|----------------------|------------------------------------------------------------|------------------------|
| Australia            | Australian Inventory of Chemical Substances (AICS)         | Yes                    |
| Canada               | Domestic Substances List (DSL)                             | No                     |
| Canada               | Non-Domestic Substances List (NDSL)                        | No                     |
| China                | Inventory of Existing Chemical Substances in China (IECSC) | No                     |

| Country(s) or region        | Inventory name                                                         | On inventory (yes/no)* |
|-----------------------------|------------------------------------------------------------------------|------------------------|
| Europe                      | European Inventory of Existing Commercial Chemical Substances (EINECS) | Yes                    |
| Europe                      | European List of Notified Chemical Substances (ELINCS)                 | No                     |
| Japan                       | Inventory of Existing and New Chemical Substances (ENCS)               | No                     |
| Korea                       | Existing Chemicals List (ECL)                                          | No                     |
| New Zealand                 | New Zealand Inventory                                                  | Yes                    |
| Philippines                 | Philippine Inventory of Chemicals and Chemical Substances (PICCS)      | Yes                    |
| Taiwan                      | Taiwan Chemical Substance Inventory (TCSI)                             | Yes                    |
| United States & Puerto Rico | Toxic Substances Control Act (TSCA) Inventory                          | No                     |

\*A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

## 16. Other information, including date of preparation or last revision

|                            |                                                                                                                                                                                                                                                                            |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Issue date</b>          | 27-April-2015                                                                                                                                                                                                                                                              |
| <b>Revision date</b>       | 15-May-2018                                                                                                                                                                                                                                                                |
| <b>Version #</b>           | 02                                                                                                                                                                                                                                                                         |
| <b>Further information</b> | Refer to NFPA 654, Standard for the Prevention of Fire and Dust Explosions from the Manufacturing, Processing, and Handling of Combustible Particulate Solids, for safe handling. HMIS® is a registered trade and service mark of the American Coatings Association (ACA). |
| <b>HMIS® ratings</b>       | Health: 1<br>Flammability: 1<br>Physical hazard: 0                                                                                                                                                                                                                         |

### NFPA ratings



### Disclaimer

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