SAFETY DATA SHEET
KETOCHLOR® Medicated Shampoo
(Chlorhexidine Gluconate, Ketoconazole)

1. IDENTIFICATION

Product Name
KETOCHLOR® Medicated Shampoo
(Chlorhexidine Gluconate, Ketoconazole)

Recommended use of the chemical and restrictions on use
Identified uses
Shampoo for dogs, cats and horses
Restrictions on Use
For animal use only.

Company Identification
Virbac AH, Inc.
P.O. Box 162059
Fort Worth, Texas 76161

Customer Information Number
(800) 338-3659

Emergency Telephone Number
CHEMTREC Number
(800) 424-9300

Other Emergency Number:
Human Toll-free 833-224-2009
Animal Toll-free 833-224-2013

Issue Date
March 4, 2020

Supersedes Date
April 24, 2017

Safety Data Sheet prepared in accordance with OSHA’s Hazard Communication Standard (29 CFR 1910.1200) and the Globally Harmonized System of Classification and Labelling of Chemicals (GHS)

2. HAZARDS IDENTIFICATION

Hazard Classification
Serious eye damage/eye irritation - Category 2A
Toxic to Reproduction - Category 1B
Specific Target Organ Toxicity (Repeated Exposure) – Category 2
Acute hazard to the aquatic environment - Category 2 (This classification not adopted by OSHA.)

Label Elements
Hazard Symbols

Signal Word: Danger

Hazard Statements
Causes serious eye irritation.
May damage fertility or the unborn child (oral exposure).
May cause damage to organs through prolonged or repeated use (oral exposure).
Toxic to aquatic life.
2. HAZARDS IDENTIFICATION

Precautionary Statements
Prevention
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear eye protection, face protection, protective clothing and protective gloves.
Wash hands thoroughly after handling.
Do not breath mist, vapors or spray.
Avoid release to the environment.
Response
If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists, get medical advice/attention.
If exposed or concerned: Get medical advice/attention.
Get medical advice/attention if you feel unwell.
Storage
Store locked up.
Disposal
Dispose of contents/container in accordance with local and national regulations.

Other Hazards
None

Specific Concentration Limits
The values listed below represent the percentages of ingredients of unknown toxicity.
Acute oral toxicity 10 - 20%
Acute dermal toxicity 10 - 20%
Acute inhalation toxicity 30 - 40%
Acute aquatic toxicity 10 - 20%

3. COMPOSITION/INFORMATION ON INGREDIENTS

Synonyms:
This product is a mixture.

<table>
<thead>
<tr>
<th>Component Name</th>
<th>CAS Number</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>60 - 70%</td>
</tr>
<tr>
<td>Sodium Olefin Sulfonate</td>
<td>68439-57-6</td>
<td>1 - 10%</td>
</tr>
<tr>
<td>Chlorhexidine Gluconate</td>
<td>18472-51-0</td>
<td>1 - 5%</td>
</tr>
<tr>
<td>Cocamidopropyl betaine</td>
<td>61789-40-0</td>
<td>1 - 5%</td>
</tr>
<tr>
<td>Ketoconazole</td>
<td>65277-42-1</td>
<td>1 - 5%</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Description of necessary first-aid measures
Eyes
Immediately flood the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

Skin
Wash skin with soap and water. Obtain medical attention if redness or soreness persists.
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(Chlorhexidine Gluconate, Ketoconazole)

4. FIRST AID MEASURES

Ingestion
Call a poison control center or doctor immediately for treatment advice. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.

Inhalation
Remove person to fresh air. Seek medical attention if symptoms persist.

Most important symptoms/effects, acute and delayed
Aside from the information found under Description of necessary first aid measures (above) and Indication of immediate medical attention and special treatment needed, no additional symptoms and effects are anticipated.

Indication of immediate medical attention and special treatment needed
Notes to Physicians
Treat symptomatically.

5. FIRE - FIGHTING MEASURES

Extinguishing Media
Use extinguishing media appropriate for surrounding materials.

Unusual Fire and Explosion Hazards
None known

Protective Equipment for Fire-Fighting
Wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures
Wear appropriate protective clothing.

Environmental Precautions
Prevent the material from entering drains or watercourses.

Methods and materials for containment and cleaning up
Wipe up and transfer into suitable containers for recovery or disposal. Prevent the material from entering drains or watercourses.

7. HANDLING AND STORAGE

Precautions for safe handling
Wear appropriate protective clothing. Avoid contact with skin, eyes and clothing. Wash and remove contaminated clothing before reuse. Wash hands thoroughly after handling and before eating, drinking or smoking.

Conditions for safe storage
Store in original container in a cool, dry place.
8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters
Exposure limits are listed below, if they exist.

Chlorhexidine Gluconate
None established
Sodium Olefin Sulfonate
None established
Cocamidopropyl Betaine
None established
Ketoconazole
None established

Appropriate engineering controls
No specific measures necessary. Good general room ventilation is expected to be adequate to control airborne levels.

Individual protection measures
Respiratory Protection
Not required under normal conditions of use.

Skin Protection
Gloves

Eye/Face Protection
Safety glasses or goggles.

Body Protection
Normal work wear.

9. PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Appearance</td>
<td>Physical State: Liquid</td>
</tr>
<tr>
<td></td>
<td>Color: Yellow/orange</td>
</tr>
<tr>
<td>Odor</td>
<td>Fruity</td>
</tr>
<tr>
<td>Odor Threshold</td>
<td>No data available</td>
</tr>
<tr>
<td>pH</td>
<td>No data available</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>No data available</td>
</tr>
<tr>
<td>Boiling Range/Point (°C/F)</td>
<td>No data available</td>
</tr>
<tr>
<td>Melting Point (°C/F)</td>
<td>No data available</td>
</tr>
<tr>
<td>Flash Point (PMCC) (°C/F)</td>
<td>Not flammable</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No data available</td>
</tr>
<tr>
<td>Evaporation Rate (BuAc=1)</td>
<td>No data available</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Soluble</td>
</tr>
<tr>
<td>Vapor Density (Air = 1)</td>
<td>No data available</td>
</tr>
<tr>
<td>VOC</td>
<td>No data available</td>
</tr>
<tr>
<td>Partition coefficient (n-octanol/water)</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not applicable</td>
</tr>
<tr>
<td>Auto-ignition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>No data available</td>
</tr>
<tr>
<td>Upper explosive limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Lower explosive limit</td>
<td>No data available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>No data available</td>
</tr>
</tbody>
</table>
10. STABILITY AND REACTIVITY

Reactivity
Data is not available.

Chemical Stability
Stable under normal conditions.

Possibility of hazardous reactions
Hazardous polymerization will not occur.

Conditions to Avoid
Heat - high temperatures

Incompatible Materials
None known.

Hazardous Decomposition Products
Oxides of carbon - oxides of nitrogen - ammonia - low molecular weight hydrocarbons - oxides of sulfur

11. TOXICOLOGICAL INFORMATION

Acute Toxicity
Chlorhexidine Gluconate
Oral LD50 (rat, female) 2000 mg/kg
Dermal LD50 (rabbit) >5000 mg/kg (analogous compound)
Sodium Olefin Sulfonate
Oral LD50 (rat) 1300-2400 mg/kg
Dermal LD50 (rabbit) >2000 mg/kg
Cocamidopropyl betaine
Oral LD50 (rat) 5000 mg/kg
Ketoconazole
Oral LD50 (rat) 227166 mg/kg

Specific Target Organ Toxicity (STOT) – single exposure
No relevant studies identified.

Specific Target Organ Toxicity (STOT) – repeat exposure
Ketoconazole: When used orally, ketoconazole has been associated with hepatic toxicity. Adverse effects to the endocrine system have been reported in humans being treated with ketoconazole.

Serious Eye damage/Irritation
Chlorhexidine Gluconate: Causes serious eye damage.
Surfactant: Severely irritating (7 days, Draize, rabbit, 10% suspension)
Sodium Olefin Sulfonate: Causes serious eye irritation.(40% solution)
Cocamidopropyl betaine: Causes moderate eye irritation.

Skin Corrosion/Irritation
Available data indicates this product is is not expected to cause skin irritation.
11. TOXICOLOGICAL INFORMATION

Respiratory or Skin Sensitization
Sodium Olefin Sulfonate: Not a dermal sensitizer (Dermal Sensitization)
Cocamidopropyl betaine: No evidence of delayed contact hypersensitivity (guinea pig- Delayed Contact Sensitization Study) or sensitization (Human Patch Test)

Carcinogenicity
Not considered carcinogenic by NTP, IARC, and OSHA.

Germ Cell Mutagenicity
Available data indicates this product is not expected to be mutagenic.

Reproductive Toxicity
Ketoconazole: In high dose animal oral reproductive and developmental toxicity studies, ketoconazole was evaluated as teratogenic and embryotoxic. This reproductive toxicity was at doses not relevant to topical use of this drug. There are no adequate and well-controlled studies in pregnant women.

Aspiration Hazard
Not an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicity
Chlorhexidine Gluconate
LC50 fish 2.08 mg/l 96h
EC50 daphnia magna 0.048 mg/l 48h
ErC50 algae 0.081 mg/l 72h
Sodium Olefin Sulfonate
LC50 fish 2.50 mg/l 96h
EC50 daphnia 4.48 mg/l 48h
EC50 algae 45 mg/l 72h
Ketoconazole
EC50 algae 0.99 mg/l 96h
Aquatic Chronic - Category 1, Very toxic to aquatic life with long lasting effects (ECHA classification)
Cocamidopropyl betaine
LC50 fish 0.7 mg/l 96h
EC50 crustacea 1.9 mg/l 48h

Mobility in soil
No relevant studies identified.

Persistence/Degradability
Sodium Olefin Sulfonate: Readily biodegradable

Bioaccumulative Potential
No relevant studies identified.

Other adverse effects
No relevant studies identified.
13. DISPOSAL CONSIDERATIONS

Disposal Methods
Dispose of in accordance with all applicable local and national regulations.

14. TRANSPORT INFORMATION

Contact supplier for transport information.

15. REGULATORY INFORMATION

United States TSCA Inventory
This product is excluded from the US EPA Toxic Substance Control Act and is regulated under the Food, Drug and Cosmetic Act.

SARA Title III Sect. 311/312 Categorization
Eye irritation – Reproductive toxicity – Specific target organ toxicity (repeated exposure)

SARA Title III Sect. 313
The following chemicals are listed in Section 313 at or above de minimis concentrations: None.

16. OTHER INFORMATION

Legend
ACGIH: American Conference of Governmental Industrial Hygienists
BOD: Biological Oxygen Demand
CAS#: Chemical Abstracts Service Number
FIFRA: Federal Insecticide, Fungicide and Rodenticide Act
IARC: International Agency for Research on Cancer
LC50: Lethal Concentration 50%
LD50: Lethal Dose 50%
N/A: Denotes no applicable information found or available
NTP: National Toxicology Program
OSHA: Occupational Safety and Health Administration
PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit
TLV: Threshold Limit Value
TSCA: Toxic Substance Control Act

Revision Date:
Replaces: April 24, 2017
Changes made: Update to emergency numbers.

Information Source and References
This SDS is prepared by Hazard Communication Specialists based on information provided by internal company references.

Prepared By: EnviroNet LLC.

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16. OTHER INFORMATION

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