



MATERIAL SAFETY DATA SHEET
KETOCHLOR[®] Medicated Shampoo
with SPHERULITES[®] Microcapsules
ANTI-IRRITANT ANTI-ADHESIVE TECHNOLOGY[®]
Product Codes: 002808, 002810 and 002816

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATIONS AND OF THE COMPANY UNDERTAKING

Product Name KETOCHLOR[®] Medicated Shampoo with SPHERULITES[®] Microcapsules
Product Description ANTI-IRRITANT ANTI-ADHESIVE TECHNOLOGY[®] Shampoo for dogs, cats and horses
Manufacturer/Supplier Virbac AH, Inc.
Address P.O. Box 162059
Fort Worth, Texas 76161
Phone Number (800) 338-3659 for Technical Support
Chemtrec Number (24 hour) (800) 424-9300
Emergency Number: (800) 338-3659 for Human and Animal Medical Emergencies
MSDS Revision Date: March 3, 2011
Supersedes MSDS Dated: May 10, 2010

Material Safety Data Sheet in compliance with OSHA's Hazcom Standard (29 CFR 1910.1200)

2. HAZARDS IDENTIFICATION

Emergency Overview

CAUTION!

Avoid contact with eyes and skin.
Harmful if swallowed.
Avoid breathing vapors.
Keep out of reach of children.
Read entire label before each use.

Routes of Entry

Eye contact - Skin contact - Ingestion - Inhalation - Absorption

Carcinogenic Status

Not considered carcinogenic by NTP, IARC, and OSHA.

Target Organs

Eyes - Skin - Respiratory System - Liver - Endocrine System - Reproductive System

Health Effects - Eyes

Contact with eyes can cause irritation.

Health Effects - Skin

Contact with skin can cause irritation.

Health Effects - Ingestion

Harmful if swallowed. Ingestion of this material may cause gastrointestinal effects such as nausea, vomiting and diarrhea. Prolonged, repeated exposure may cause adverse liver, endocrine and reproductive effects.

Health Effects - Inhalation

No adverse effects are expected during normal conditions of use. Prolonged, repeated inhalation may cause irritation or nose, throat and respiratory tract. Prolonged, repeated exposure may cause adverse liver, endocrine and reproductive effects.



3. COMPOSITION/INFORMATION ON INGREDIENTS

Component Name	CAS Number	Concentration
Chlorhexidene Gluconate	18472-51-0	~2%
Sodium Olefin Sulfonate	68439-57-6	1 - 10%
Surfactant(s)	N/A	1 - 5%
Lactic Acid	79-33-4	0.1 - <1%
Cocamidopropyl betaine	61789-40-0	1 - 5 %
Ketoconazole	65277-42-1	~1%

4. FIRST AID MEASURES

Eyes

Immediately flood the eye with plenty of water for at least 15-20 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.

Skin

If irritation develops wash skin thoroughly with soap and water. Obtain medical attention if redness or soreness persists.

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.

Advice to Physicians

Treat symptomatically.

5. FIRE - FIGHTING MEASURES

Extinguishing Media

Use extinguishing media appropriate for surrounding materials.

Unusual Fire and Explosion Hazards

Can release hazardous vapors during a fire.

Protective Equipment for Fire-Fighting

Wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

Wear appropriate protective clothing. Wipe up and transfer into suitable containers for recovery or disposal. Prevent the material from entering drains or watercourses.

7. HANDLING AND STORAGE

Store in original container in a cool, dry place. Store away from children and pets. Do not store near foodstuffs. Do not contaminate water, food or feed by storage. Wear appropriate protective clothing. Avoid contact with eyes. Wash hands thoroughly after handling and before eating, drinking or smoking. Store at room temperature between 59°F and 86°F.



8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Occupational Exposure Standards

Exposure limits are listed below, if they exist.

Chlorhexidene Gluconate

None established

Surfactant(s)

None established

Sodium Olefin Sulfonate

None established

Cocamidopropyl Betaine

None established

Lactic Acid

None established

Ketoconazole

None established

Engineering Control Measures

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

Respiratory Protection

Not required under normal conditions of use. Professional groomers and those with repeated and extended exposures should consider the use of respiratory protection if there is a risk of exposure to high vapor concentrations. The specific respirator selected must be based on the airborne concentration found in the workplace and must not exceed the working limits of the respirator.

Hand Protection

Elbow length chemical resistant gloves.

Eye Protection

Safety glasses or goggles.

Body Protection

Waterproof apron.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State	Liquid
Color	Yellow/orange
Odor	Floral
pH	No data available
Specific Gravity	No data available
Boiling Range/Point (°C/F)	No data available
Melting Point (°C/F)	No data available
Flash Point (PMCC) (°C/F)	Not flammable
Explosion Limits (%)	No data available
Vapor Pressure	No data available
Density	No data available
Solubility in Water	Soluble
Vapor Density (Air = 1)	No data available

10. STABILITY AND REACTIVITY

Stability

Stable under normal conditions.



10. STABILITY AND REACTIVITY

Conditions to Avoid

Heat - high temperatures

Materials to Avoid

Strong oxidizers - acids - bases

Hazardous Polymerization

Will not occur.

Hazardous Decomposition Products

Oxides of carbon – oxides of nitrogen - ammonia – low molecular weight hydrocarbons – oxides of sulfur

11. TOXICOLOGICAL INFORMATION

See product packaging for additional information.

Acute Toxicity

Chlorhexidine Gluconate: Oral LD50 (rat) (male) 2,292 mg/kg (female) 3,055 mg/kg (analogous compound) Dermal LD50 (rabbit) >2000 mg/kg (analogous compound) Inhalation LC50 (rat) 0.30mg/l (males), 0.43 mg/l (females) (analogous compound)

Lactic acid: LD50 Rat oral 3730 mg/kg, LC50 Rat inhalation 7.94 mg/L/4 hr

Sodium Olefin Sulfonate: Oral LD50 (rat) 1300-2400 mg/kg, Dermal LD50 (rabbit) 1130-2150 mg/kg

Cocamidopropyl betaine: Oral LD50 (rat) 5000 mg/kg

Ketoconazole: LD50 Oral (rat) 227 mg/kg

Specific Target Organ Systemic Toxicity (single and repeat)

Chlorhexidine Gluconate: In a dermal toxicity study with rabbits that were topically treated, systemic liver effects were noted at the 500mg/kg/day level. (analogous compound)

Cocamidopropyl betaine: 28 day Subchronic Toxicity Study (rat) (doses: 100, 500, 1000 mg/kg): No adverse effects observed at 100 mg/kg

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/Eye Irritation

Chlorhexidine Gluconate: Irritating to the eye. (analogous compound)

Surfactant: Severely irritating (7 days, Draize, rabbit, 10% suspension)

Sodium Olefin Sulfonate: Causes moderate eye irritation at 10% active and no irritation at 1% active (Primary Eye Irritation- rabbit 24 hr)

Cocamidopropyl betaine: Causes moderate eye (Primary Eye Irritation - rabbit)

Skin Corrosion/Irritation

Surfactant: Moderately irritating (72h, Draize, rabbit, 10% suspension)

Chlorhexidine Gluconate: Subchronic toxicity, rat, dermal – dermal irritant (analogous compound)

Sodium Olefin Sulfonate: Causes moderate skin irritation at 10% (Primary Skin Irritation - rabbit 24hr), Slight Skin irritation at 1% active (Primary Irritation Patch Test - human)

Cocamidopropyl betaine: Causes mild skin irritation (Primary Skin Irritation - rabbit)

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

Sodium Olefin Sulfonate: No increased incidences of tumors in rats fed up to 500ppm (rat)

Cocamidopropyl betaine: Not a carcinogen (Carcinogenicity Study- dermal - mice -20 months)

Ketoconazole: No evidence of carcinogenicity was found with oral or topical ketoconazole administration in studies of rats and mice.



11. TOXICOLOGICAL INFORMATION

Germ Cell Mutagenicity

Chlorhexidine Gluconate: Gene mutation – no adverse effect (analogous compound)
Chlorhexidine Gluconate: Chromosome effects – no adverse effects (analogous compound)
Chlorhexidine Gluconate: DNA Damage – no adverse effects (analogous compound)
Lactic acid: Tests on bacterial or mammalian cell cultures did not show mutagenic effects.
Sodium Olefin Sulfonate: Not mutagenic (Ames test)
Cocamidopropyl betaine: Not mutagenic (Ames test and Mouse Micronuclear Assay)
Ketoconazole: There was no evidence of mutagenicity with the Ames salmonella microsomal activator assay. In addition, ketoconazole single oral doses as high as 80 mg/kg were not mutagenic to germ cells (dominant lethal test in male and female mice). Ketoconazole was also not genotoxic based on the in vivo sister chromatid exchange assay (humans) and dominant lethal and micronucleus tests (mice)

Toxicity to Reproduction

Chlorhexidine Gluconate: Teratology- rat – no adverse effect (analogous compound)
Lactic acid: A reproductive toxicity study in mice (oral) showed maternal effects and developmental abnormalities to the fetal musculoskeletal system.
Sodium Olefin Sulfonate: No reproductive or developmental effects were observed at doses that show no or slight maternal toxicity (up to 2 mg/kg)
Ketoconazole: Teratogenicity, embryotoxicity, maternal toxicity, and dystocia have been observed in rats given oral ketoconazole, possibly due to the sensitivity of female rats to the drug. Ketoconazole has been shown to be present in human milk. However, it is not known whether topical ketoconazole is systemically absorbed in sufficient quantities to produce detectable levels in breast milk. Ketoconazole impaired the reproductive performance of male and female rats.

12. ECOLOGICAL INFORMATION

Mobility

No relevant studies identified.

Persistence/Degradability

Glycol: Inherently biodegradable.

Bio-accumulation

No relevant studies identified.

Ecotoxicity

Chlorhexidine Gluconate: LC50 Oncorhynchus Mykiss (Rainbow trout, Donaldson trout) 1.9 ppm/96 hr
LC50 Lepomis macrochirus (Bluegill sunfish) 0.6 ppm/96 hr (analogous cmpd)

13. DISPOSAL CONSIDERATIONS

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

14. TRANSPORT INFORMATION

Contact supplier for transport information.

15. REGULATORY INFORMATION

US REGULATIONS (Federal, State) and INTERNATIONAL CHEMICAL REGISTRATION LAWS

TSCA Listing

This product contains an ingredient that is not listed on the EPA Toxic Substance Control Act Chemical Substance (TSCA) Inventory.



15. REGULATORY INFORMATION

DSL (Canadian) Listing

This product contains ingredients that have not been verified for listing on the Domestic Substance List (DSL).

WHMIS Classification

D.2.A

This product was classified in accordance with the hazard criteria of the Canadian Controlled Products Regulations and the MSDS contains all the information required by these regulations.

MA Right To Know Law

This product contains the following chemicals on the Massachusetts Right to Know Law: None

PA Right To Know Law

This product contains the following chemicals on the Pennsylvania Hazardous Substance List: None

NJ Right To Know Law

This product contains the following chemicals on the New Jersey Workplace Hazardous Substance List: None

California Proposition 65

This product contains the following materials which the State of California has found to cause cancer, birth defects or other reproductive harm: Acrylamide (79-06-1) trace – Formaldehyde (50-00-0) trace

SARA Title III Sect. 311/312 Categorization

Immediate (acute) Delayed (chronic)

SARA Title III Sect. 313

This product contains the following chemicals that are listed in Section 313 at or above de minimis concentrations: None

16. OTHER INFORMATION

NFPA Ratings

NFPA Code for Flammability - 0

NFPA Code for Health - 1

NFPA Code for Reactivity - 0

NFPA Code for Special Hazards – 0

HMIS Ratings

HMIS Code for Flammability - 0

HMIS Code for Health – 1*

HMIS Code for Reactivity - 0

HMIS Code for Personal Protection - See Section 8

Abbreviations

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



16. OTHER INFORMATION

Abbreviations

PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit
TLV: Threshold Limit Value
TSCA: Toxic Substance Control Act

For further information call: (800) 338-3659

Prepared By: EnviroNet LLC

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