


Material Safety Data Sheet

DOT	HCS Risk Phrases	Protective Clothing
Not regulated in the USA if transported in non-bulk quantities (<119 gallons)	Combustible liquid	

Section 1: Product Identification and Uses

Common/Trade name	Denagard® (Tiamulin) Liquid Concentrate NADA: 140-916	CI#	Not available
Synonyms	Not available	TSCA	No products found
Chemical name	Not available	CAS#	Not available
Chemical formula	Not available	Code	MSDS ID#: P140-916
Chemical family	Semisynthetic antibiotic, diterpenoid chemical class	Molecular weight	Not available
Supplier	Boehringer Ingelheim Vetmedica, Inc. 2621 North Belt Hwy St. Joseph MO 64506-2002	Manufacturer	Boehringer Ingelheim Vetmedica, Inc. 2621 North Belt Hwy St. Joseph MO 64506-2002 816-233-2571
Material uses	Livestock remedy for use in drinking water of swine.		

Section 2: Hazardous Ingredients

Name	CAS#	% by Weight	TLV/PEL	LC50 / LD 50
Tiamulin	55297-95-5	12.3%	No effect level 3 mg/kg (as hydrogen fumarate)	LD50: (Rats) 2230 mg/kg
Ethanol	67-17-5	34.0 mg/ml	1000 ppm TLV	Not available

Section 3: First Aid Measures

Eye contact	Flush eyes with copious amounts of water. Get medical attention if irritation persists.
Skin contact	Remove contaminated clothing. Wash affected area with water. If irritation persists, seek medical attention.
Hazardous skin contact	No additional information.
Slight inhalation	Remove victim to fresh air. Seek medical attention if necessary.
Hazardous inhalation	No additional information.
Slight ingestion	Notify physician or Poison Control Center immediately.
Hazardous ingestion	No additional information.

Section 4: Physical Data

Physical state and appearance	Liquid	Odor	No specific odor
PH	3.5 – 4.5	Taste	Not available
Odor threshold	Not available	Color	Clear

Volatility	87% @ 100°C
Melting/Sublimation point	185°F
Boiling/Condensation point	Not available
Specific gravity (Water=1)	1.05 g/ml
Vapor density	Not available
Vapor pressure	Not available
Water/oil dist. Coeff.	Not available
Ionicity (surface active agent)	Not available
Critical temperature	Not available
Instability temperature	Not available
Conditions of instability	Not available
Dispersion properties	Not available
Solubility	Active ingredient very soluble

Section 5: Fire and Explosion Data

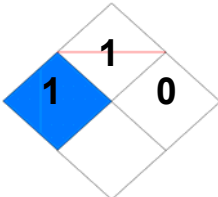
The product is:	Combustible
Auto-ignition temperature	Not available
Fire degradation products	Not available
Flash points	112 ° F
Flammable limits	Not available
Fire extinguishing procedures	Special Fire Fighting Procedures: Recommend pressure-demand, self-contained breathing apparatus (SCBA). Wear full protective equipment and isolate area.
Flammability	Combustible
Risks of explosion	Not available

Section 6: Reactivity Data

Stability	The product is stable.
Hazardous decomp. products	Not hazardous. In case of fire, avoid inhalation of fumes.
Degradability	Not available
Product of degradation	Possibly hazardous short term degradation products are not likely.
Corrosivity	No specific information is available in our database regarding the corrosivity of this product in the presence of various materials.
Reactivity	Do not store in direct sunlight or excessive heat. Monensin, salenomycin and narasin are incompatible with tiamulin in vivo. Avoid cross contamination of feeds with these drugs.

Section 7: Toxicological Properties	
Routes of entry	Injection, ingestion, inhalation
TLV	Not available
Toxicity for animals	LD50: Not available LC50: Not available
Chronic effects on humans	Carcinogenic Effects: None Mutagenic Effects: Not available Teratogenic Effects: Not available Developmental Toxicity: Not available. There is no known effect from chronic exposure to this product. Repeated or prolonged exposure is not known to aggravate medication conditions.
Acute effects on humans	Not for human use. Animal injection only, accidental injection to humans can cause local reactions. Contact a physician immediately if accidental injection occurs.

Section 8: Preventive Measures	
Waste information	Dispose of in accordance with all City, State and Federal regulations. Not a hazardous toxic waste. Contact manufacturer for disposal of out-dated material.
Waste stream	Not available
Storage	Keep container dry. Keep in a cool place. Ground all equipment containing material. Keep container tightly closed. Keep in a cool, well-ventilated place. Combustible material should be stored away from extreme heat and away from strong oxidizing agents.
Precautions	Read complete package label before use. Use only as directed.
Small spill and leak	Cover spills with vermiculite or other suitable absorbent and place in appropriate container for disposal.
Large spill and leak	Keep away from heat and sources of ignition. Finish cleaning by spreading water on the contaminated surface and allow to evacuate through the sanitary system.
Protective Clothing	Goggles, gloves

Section 9: Classification									
DOT	Not regulated in USA if transported in non-bulk quantities (<119 gallons)								
Maritime transportation	Not regulated								
HCS	Combustible liquid								
Federal and State Regulations	Combustible liquid								
HMIS (U.S.A.)	<table border="1"> <tr> <td>Health Hazard</td> <td>1</td> </tr> <tr> <td>Fire Hazard</td> <td>1</td> </tr> <tr> <td>Reactivity</td> <td>0</td> </tr> <tr> <td>Personal Protection</td> <td>B</td> </tr> </table> <p>National Fire Protection Association (U.S.A.)</p>  <p>Fire Hazard Reactivity Specific hazard</p>	Health Hazard	1	Fire Hazard	1	Reactivity	0	Personal Protection	B
Health Hazard	1								
Fire Hazard	1								
Reactivity	0								
Personal Protection	B								

Section 10: Protective Measures	
Protective clothing	Splash goggles, gloves
Engineering controls	No special ventilation requirements

Section 11: Other Information	
References	Not available
Validated by Company: 3/22/05	

CALL 1(800) 821-7467
Emergency Medical: (800)530-5432
Chemtrec: (800)424-9300

The information provided herein is offered by Boehringer Ingelheim Vetmedica, Inc. ("BIV") in good faith as accurate as of the date hereof, but without guarantee. This information includes information which has been generated by other parties and provided to BIV, and which BIV has not independently verified. The information provided herein relates only to the specific product designated, and may not be valid where such product is used in combination with any other materials or in any process. The information provided herein is offered solely for your consideration, investigation and verification, and Boehringer Ingelheim Vetmedica, Inc. ("BIV") expressly disclaims all liability for reliance thereon. BIV EXPRESSLY DISCLAIMS ALL WARRANTIES OF EVERY KIND AND NATURE (INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) WITH RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT. In addition, since the conditions of use and suitability of the product for particular uses are beyond BIV's control, ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE ASSUMED BY THE USER, AND BIV EXPRESSLY DISCLAIMS ANY AND ALL LIABILITY AS TO ANY RESULTS OBTAINED OR ARISING FROM ANY USE OF THE PRODUCT. Use or retransmission of the information contained herein in any other format than the format as presented is strictly prohibited. Nothing herein shall be construed as a permission or recommendation for the use of the product in a manner that might infringe an existing patent. BIV neither represents nor warrants that the format, content or product formulas contained in this document comply with the laws of any other country except the United States of America.

© Copyright 2001 Boehringer Ingelheim Vetmedica, Inc. All rights reserved.

The information provided herein is offered by Boehringer Ingelheim Vetmedica, Inc. ("BIV") in good faith as accurate as of the date hereof, but without guarantee. This information includes information which has been generated by other parties and provided to BIV, and which BIV has not independently verified. The information provided herein relates only to the specific product designated, and may not be valid where such product is used in combination with any other materials or in any process. The information provided herein is offered solely for your consideration, investigation and verification, and Boehringer Ingelheim Vetmedica, Inc. ("BIV") expressly disclaims all liability for reliance thereon. **BIV EXPRESSLY DISCLAIMS ALL WARRANTIES OF EVERY KIND AND NATURE (INCLUDING WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE) WITH RESPECT TO THE USE OR SUITABILITY OF THE PRODUCT.** In addition, since the conditions of use and suitability of the product for particular uses are beyond BIV's control, **ALL RISKS OF USE OF THE PRODUCT ARE THEREFORE ASSUMED BY THE USER, AND BIV EXPRESSLY DISCLAIMS ANY AND ALL LIABILITY AS TO ANY RESULTS OBTAINED OR ARISING FROM ANY USE OF THE PRODUCT.**

Use or re-transmission of the information contained herein in any other format than the format as presented is strictly prohibited. Nothing herein shall be construed as a permission or recommendation for the use of the product in a manner that might infringe an existing patent. BIV neither represents nor warrants that the format, content or product formulas contained in this document comply with the laws of any other country except the United States of America.
© Copyright 2001 Boehringer Ingelheim Vetmedica, Inc. All rights reserved.