



# SAFETY DATA SHEET

## 1. Identification

<b>Product identifier</b>	<b>Denagard 10 Premix</b>
<b>Other means of identification</b>	
<b>Item Code</b>	AF7400
<b>Synonyms</b>	Denagard 10
<b>Recommended use</b>	Antibiotic feed additive for the control and treatment of certain swine bacterial diseases.
<b>Recommended restrictions</b>	None known.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Company Name</b>	Elanco Animal Health 2500 Innovation Way Greenfield, IN 46140 US
<b>Phone:</b>	1-877-Elanco1 (1-877-352-6261)
<b>Email:</b>	lilly_msds@lilly.com
<b>Emergency Telephone Numbers:</b>	Elanco Product Technical Support / Human or Animal Exposure Reporting: 1-888-545-5973
<b>Transportation Emergency Telephone:</b>	CHEMTREC: 1-800-424-9300 (Outside U.S. 1-703-527-3887)

## 2. Hazard(s) identification

<b>Physical hazards</b>	Not classified.	
<b>Health hazards</b>	Sensitization, respiratory	Category 1
<b>OSHA defined hazards</b>	Combustible dust	

### Label elements



<b>Signal word</b>	Danger
<b>Hazard statement</b>	
H334	May form combustible dust concentrations in air. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
<b>Precautionary statement</b>	
<b>Prevention</b>	
P261	Avoid breathing dust.
P284	In case of inadequate ventilation wear respiratory protection.
<b>Response</b>	
P304 + P341	IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
<b>Storage</b>	Not available.
<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

Chemical name	Common name and synonyms	CAS number	%
Tiamulin hydrogen fumarate		55297-96-6	2.2
Rice Hulls		Not established	93
Mineral Oil		8042-47-5	4

**Composition comments** Remaining components of this product are non-hazardous and/or are present at concentrations below reportable levels.

#### 4. First-aid measures

##### Inhalation

Move to fresh air. Call a physician if symptoms develop or persist.

##### Skin contact

Wash off with soap and water. Get medical attention if irritation develops and persists.

##### Eye contact

Rinse with water. Get medical attention if irritation develops and persists.

##### Ingestion

Rinse mouth. Get medical attention if symptoms occur.

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

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

##### Indication of immediate medical attention and special treatment needed

Swine being treated with Denagard® should not have access to feeds containing polyether ionophores (e.g., lasalocid, monensin, narasin, salinomycin, and semduramicin) as adverse reactions may occur. If signs of toxicity occur, discontinue use.

##### General information

NOT FOR HUMAN USE! Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

#### 5. Fire-fighting measures

##### Suitable extinguishing media

Apply extinguishing media carefully to avoid creating airborne dust.

##### Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire.

##### Specific hazards arising from the chemical

Explosion hazard: Avoid generating dust; fine dust dispersed in air in sufficient concentrations and in the presence of an ignition source is a potential dust explosion hazard.

##### Special protective equipment and precautions for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

##### Fire fighting equipment/instructions

In case of fire and/or explosion do not breathe fumes. Move containers from fire area if you can do so without risk. Use water spray to cool unopened containers.

##### Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

##### General fire hazards

May form combustible dust concentrations in air.

#### 6. Accidental release measures

##### Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Use a NIOSH/MSHA approved respirator if there is a risk of exposure to dust/fume at levels exceeding the exposure limits. For personal protection, see section 8 of the SDS.

##### Methods and materials for containment and cleaning up

Avoid the generation of dusts during clean-up. Collect dust using a vacuum cleaner equipped with HEPA filter. This product is miscible in water. Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. For waste disposal, see section 13 of the SDS.

##### Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

#### 7. Handling and storage

##### Precautions for safe handling

Minimize dust generation and accumulation. Provide appropriate exhaust ventilation at places where dust is formed. Practice good housekeeping.

##### Conditions for safe storage, including any incompatibilities

Store in original tightly closed container. Store in a cool, dry place with adequate ventilation. Keep away from incompatible materials, open flames, and high temperatures.

## 8. Exposure controls/personal protection

### Occupational exposure limits

ACGIH Components	Type	Value	Form
Rice Hulls	TWA	4 mg/m <sup>3</sup>	dust

Comments: (Grain dust)

US. ACGIH Threshold Limit Values Components	Type	Value	Form
Mineral Oil (CAS 8042-47-5)	TWA	5 mg/m <sup>3</sup>	Inhalable fraction.

U.S. - OSHA Components	Type	Value	Form
Rice Hulls	TWA	10 mg/m <sup>3</sup>	dust

Comments: (Grain dust)

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) Components	Type	Value	Form
Mineral Oil (CAS 8042-47-5)	PEL	5 mg/m <sup>3</sup>	Mist.

US. NIOSH: Pocket Guide to Chemical Hazards Components	Type	Value	Form
Mineral Oil (CAS 8042-47-5)	STEL	10 mg/m <sup>3</sup>	Mist.
	TWA	5 mg/m <sup>3</sup>	Mist.

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Exposure guidelines** Novartis Internal Exposure Limit (NPIEL): 0.2 mg/m<sup>3</sup> 8 hour TWA (Tiamulin hydrogen fumarate)

**Appropriate engineering controls** If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** Safety glasses with side shields recommended.

#### Skin protection

**Hand protection** Chemical resistant gloves.

**Other** Wear suitable protective clothing.

**Respiratory protection** Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the respirator. If the applicable occupational exposure level (OEL) is anticipated to be exceeded, wear an approved respirator with sufficient protection factor to control exposure below the OEL.

**Thermal hazards** Not available.

**General hygiene considerations** 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** Solid.

**Form** Granular Crystals.

**Color** Not available.

**Odor** Very Slight

**Odor threshold** Not available.

**pH** Not available.

**Melting point/freezing point** Not available.

**Initial boiling point and boiling range** Not available.

**Flash point** Not available.

<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	No test data available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Explosive limit - lower (%)</b>	Not available.
<b>Explosive limit - upper (%)</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Soluble.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.

## 10. Stability and reactivity

<b>Reactivity</b>	The product is stable and non-reactive under normal conditions of use, storage and transport.
<b>Chemical stability</b>	Material is stable under normal conditions.
<b>Possibility of hazardous reactions</b>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Keep away from heat, sparks and open flame. Minimize dust generation and accumulation. Avoid high humidity conditions. Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Components	Species	Test Results
Mineral Oil (CAS 8042-47-5)		
<b><u>Acute</u></b>		
<b>Dermal</b>		
LD		> 2000 mg/kg
<b>Inhalation</b>		
LC50		> 5.2 mg/l, 4 hr
<b>Oral</b>		
LD		> 5000 mg/kg No mortality.
Tiamulin hydrogen fumarate (CAS 55297-96-6)		
<b><u>Acute</u></b>		
<b>Oral</b>		
LD50	Rat	2230 mg/kg
<b>Skin corrosion/irritation</b>	Rabbit: No skin irritation. (Active ingredient(s)) Based on available data, the classification criteria are not met.	
<b>Serious eye damage/eye irritation</b>	Rabbit: Mild eye irritation. (Active ingredient) Based on available data, the classification criteria are not met.	
<b>Respiratory or skin sensitization</b>		
<b>Respiratory sensitization</b>	May cause allergy or asthma symptoms or breathing difficulties if inhaled. (Grain dust)	

**Skin sensitization** Guinea pig: Not a skin sensitizer. (Active ingredient(s))  
Based on available data, the classification criteria are not met.

**Germ cell mutagenicity** In vitro and in vivo tests did not show mutagenic effects. (Active ingredient(s))  
Based on available data, the classification criteria are not met.

**Carcinogenicity** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. No effects identified in animal studies. (Active ingredient(s))  
Based on available data, the classification criteria are not met.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Mineral Oil (CAS 8042-47-5) 3 Not classifiable as to carcinogenicity to humans.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not regulated.

**US. National Toxicology Program (NTP) Report on Carcinogens**

Not listed.

**Reproductive toxicity** No effects identified in animal studies. (Active ingredient(s))  
Based on available data, the classification criteria are not met.

**Specific target organ toxicity - single exposure** Respiratory tract irritation. (Active ingredient)  
Based on available data, the classification criteria are not met.

**Specific target organ toxicity - repeated exposure** No significant target organ toxicity reported. (Active ingredient)  
Based on available data, the classification criteria are not met.

**Aspiration hazard** Not applicable.

**Further information** Did not show carcinogenic, teratogenic or mutagenic effects in animal experiments.

**12. Ecological information**

**Ecotoxicity** Harmful to aquatic life with long lasting effects.

Components		Species	Test Results
Mineral Oil (CAS 8042-47-5)			
<b>Aquatic</b>			
<i>Acute</i>			
Crustacea	LC50	Daphnia magna	> 100 mg/l, 48 h
Fish	LC50	Oncorhynchus mykiss	> 100 mg/l, 96 h
<i>Chronic</i>			
Fish	NOAEL	Oncorhynchus mykiss	> 1000 mg/l, 28 d
Tiamulin hydrogen fumarate (CAS 55297-96-6)			
<b>Aquatic</b>			
<i>Acute</i>			
Algae	EC50	Green algae (Selenastrum capricornutum)	0.165 mg/l
Crustacea	EC50	Daphnia magna	40 mg/l, 48 hours
Fish	LC50	Rainbow trout, donaldson trout (Oncorhynchus mykiss)	5.2 mg/l, 96 hours
<b>Terrestrial</b>			
Other	LC50	Earthworm (Eisenia foetida)	> 1000 mg/kg, 14 days
	NOEC	Earthworm (Eisenia foetida)	1000 mg/kg

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

**Bioaccumulative potential**

**Partition coefficient n-octanol / water (log Kow)**

Tiamulin hydrogen fumarate 5.93

**Mobility in soil** No data available.

**Other adverse effects** Not available.

**13. Disposal considerations**

**Disposal methods/information** Dispose of contents/container in accordance with local/regional/national/international regulations.

## 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 applicable.

## 15. Regulatory information

**US federal regulations** This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

### 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 1910.1001-1050)

Not regulated.

### Superfund Amendments and Reauthorization Act of 1986 (SARA)

**Hazard categories** Immediate Hazard - Yes  
Delayed Hazard - No  
Fire Hazard - Yes  
Pressure Hazard - No  
Reactivity Hazard - 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.

### International Inventories

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	No

\*A "Yes" indicates that all components of this product comply 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

**Issue date** 02-24-2017

**Revision date** 02-24-2017

**Version #** 02

**Disclaimer**

As of the date of issuance, we are providing available information relevant to the handling of this material in the workplace. All information contained herein is offered with the good faith belief that it is accurate. THIS MATERIAL SAFETY DATA SHEET SHALL NOT BE DEEMED TO CREATE ANY WARRANTY OF ANY KIND (INCLUDING WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE). In the event of an adverse incident associated with this material, this safety data sheet is not intended to be a substitute for consultation with appropriately trained personnel. Nor is this safety data sheet intended to be a substitute for product literature which may accompany the finished product.

For additional information contact:

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**Revision information**

Composition / Information on Ingredients: Disclosure Overrides  
Ecological information: Other adverse effects  
Disposal considerations: Disposal methods/information  
Regulatory information: US federal regulations  
GHS: Classification