



# SAFETY DATA SHEET

## 1. Identification

<b>Product identifier</b>	<b>Tylan Premix</b>
<b>Other means of identification</b>	
<b>Item Code</b>	AF0010, AF0024, AF0026, AF0040, AF0042, AF0050, AF0055, AF0080, AF0090, AF0091, AF0099, AF0105, AH0042, MS8272, MS8274, MS8275, UC5318
<b>Synonyms</b>	Tylosin Premix * Tylosin Phosphate Premix * Tylan 10 Premix * Tylan 30 Premix * Tylan 40 Premix * Tylan 50 Premix * Tylan 80 Premix * Tylan * Tylan 100 * Tylan
<b>Recommended use</b>	Veterinary Product
<b>Recommended restrictions</b>	None known.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Manufacturer</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 Transportation Emergency Telephone: 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>	Serious eye damage/eye irritation	Category 2A
	Sensitization, respiratory	Category 1
	Sensitization, skin	Category 1
<b>OSHA defined hazards</b>	Combustible dust	

### Label elements



<b>Signal word</b>	Danger
<b>Hazard statement</b>	
H317	May form combustible dust concentrations in air.
H319	May cause an allergic skin reaction.
H334	Causes serious eye irritation.
	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
<b>Precautionary statement</b>	
<b>Prevention</b>	
P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P280	Wear protective gloves/eye protection/face protection.
P285	In case of inadequate ventilation wear respiratory protection.
<b>Response</b>	
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P304 + P340	IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
<b>Storage</b>	Not available.

## Disposal

P501

Dispose of contents/container in accordance with local/regional/national/international regulations.

## Hazard(s) not otherwise classified (HNOC)

None known.

## Supplemental information

None.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Tylosin Phosphate		1405-53-4	1.7 - 24
Excipient: Grain Dust		NA	75 - 95
Anti-dusting oil	MINERAL OIL	8012-95-1	1 - 2
Other components below reportable levels			< 1

### Composition comments

Excipients may include: Corn cob grits. Rice hulls.  
The anti-dusting oil reduces potential exposure under normal handling conditions of use.

## 4. First-aid measures

### Inhalation

Move to fresh air. Oxygen or artificial respiration if needed. Call a physician or poison control center immediately.

### Skin contact

Take off contaminated clothing and wash before reuse. Wash off immediately with soap and plenty of water. Get medical attention if irritation develops and persists.

### Eye contact

In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes.

### Ingestion

Call a physician or poison control center immediately. Never give anything by mouth to a victim who is unconscious or is having convulsions.

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

Shortness of breath. Coughing. Rash. May cause allergic respiratory and skin reactions. Watery eyes. Wheezing.

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

Provide general supportive measures and treat symptomatically. None known.

### General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. IF exposed or concerned: Get medical advice/attention.

## 5. Fire-fighting measures

### Suitable extinguishing media

Water fog. Dry chemical. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

### Unsuitable extinguishing media

None known.

### Specific hazards arising from the chemical

Fire or excessive heat may produce hazardous decomposition products.

### Special protective equipment and precautions for firefighters

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

### Fire fighting equipment/instructions

In the event of fire, cool tanks with water spray.

### General fire hazards

No unusual fire or explosion hazards noted. Dust may form explosive mixture with air.

## 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Wear appropriate personal protective equipment. For personal protection, see section 8 of the SDS. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained.

### Methods and materials for containment and cleaning up

Do not sweep. Collect spill using a vacuum cleaner with a HEPA filter. Be aware of potential for dust explosion when using electrical equipment. If vacuum is not available, lightly mist/wet material and remove by mopping or wet wiping. Collect in a non-combustible container for prompt disposal. Large spills due to traffic accidents, etc., should be reported immediately to CHEMTREC and Elanco Animal Health for assistance. Local authorities should be advised if significant spillages cannot be contained. Should not be released into the environment.

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.

## 7. Handling and storage

**Precautions for safe handling** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Keep away from heat and sources of ignition. Minimize dust generation and accumulation. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices. Wash hands thoroughly after handling. Avoid release to the environment. Avoid contact with eyes, skin, and clothing.

**Conditions for safe storage, including any incompatibilities** Store locked up. Keep container tightly closed. Store in a cool, dry place out of direct sunlight. Store in a cool, dry place with adequate ventilation. Keep away from incompatible materials, open flames, and high temperatures. Avoid contact with oxidizing agents. Do not store in open or unlabelled containers.

## 8. Exposure controls/personal protection

### Occupational exposure limits

ACGIH Components	Type	Value	Form
Excipient: Grain Dust <b>US. ACGIH Threshold Limit Values Components</b>	TWA	4 mg/m <sup>3</sup>	(grain dust)
Components	Type	Value	Form
Anti-dusting oil (CAS 8012-95-1) <b>U.S. - OSHA Components</b>	TWA	5 mg/m <sup>3</sup>	Inhalable fraction.
Components	Type	Value	Form
Excipient: Grain Dust <b>US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000) Components</b>	TWA	10 mg/m <sup>3</sup>	(grain dust)
Components	Type	Value	Form
Anti-dusting oil (CAS 8012-95-1) <b>US. NIOSH: Pocket Guide to Chemical Hazards Components</b>	PEL	5 mg/m <sup>3</sup>	Mist.
Components	Type	Value	Form
Anti-dusting oil (CAS 8012-95-1)	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** Lilly Exposure Guideline (LEG): <100 mcg/m<sup>3</sup> 12 hour TWA (Tylosin Base)

**Appropriate engineering controls** Use appropriate control measures such as fume hood, ventilated enclosure, local exhaust ventilation, or down-draft booth.

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

**Eye/face protection** Wear safety glasses with side shields (or goggles). Wear goggles/face shield.

#### Skin protection

##### Hand protection

Wear protective gloves. Chemical-resistant gloves and impermeable body covering to minimize skin contact.

##### Other

Wear appropriate chemical resistant clothing. Chemical-resistant gloves and impermeable body covering to minimize skin contact.

**Respiratory protection** Not available.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

## 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. Use good industrial hygiene practices in handling this material.

In a manufacturing setting, wear chemical-resistant gloves and body covering to minimize skin contact. If handled in a ventilated enclosure, as in a laboratory setting, respirator and goggles or face shield may not be required. Safety glasses are always required.

Under normal use and handling conditions, wear goggles to protect eyes and wear impermeable gloves and protective equipment to avoid direct contact with skin. Wash thoroughly with soap and water after handling.

When mixing and handling, use protective clothing, impervious gloves, and dust respirator (recommended). Operators should wash thoroughly with soap and water after handling. If accidental eye contact occurs, immediately rinse with plenty of water.

## 9. Physical and chemical properties

<b>Appearance</b>	Granular.
<b>Physical state</b>	Solid.
<b>Form</b>	Solid.
<b>Color</b>	Light tan.
<b>Odor</b>	Musty
<b>Odor threshold</b>	No data available.
<b>pH</b>	No data available.
<b>Melting point/freezing point</b>	No data available.
<b>Initial boiling point and boiling range</b>	No data available.
<b>Flash point</b>	No data available.
<b>Evaporation rate</b>	No data available.
<b>Flammability (solid, gas)</b>	No test data available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	No data available.
<b>Flammability limit - upper (%)</b>	No data available.
<b>Explosive limit - lower (%)</b>	No data available.
<b>Explosive limit - upper (%)</b>	No data available.
<b>Vapor pressure</b>	No data available.
<b>Vapor density</b>	No data available.
<b>Relative density</b>	No data available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Insoluble
<b>Partition coefficient (n-octanol/water)</b>	No data available.
<b>Auto-ignition temperature</b>	No data available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Other information</b>	
<b>Density</b>	No data available.
<b>Explosive properties</b>	No data available.
<b>Oxidizing properties</b>	No oxidizing properties.

## 10. Stability and reactivity

**Reactivity** 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>	Will not occur.
<b>Conditions to avoid</b>	Contact with incompatible materials.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	Hazardous decomposition products formed under fire conditions..

## 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Components	Species	Test Results
Tylosin Base (CAS 1401-69-0)		
<b>Acute</b>		
<i>Dermal</i>		
LD	Rabbit	> 2000 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 2060 mg/m <sup>3</sup> , 1 h
<i>Oral</i>		
LD	Rat	> 5000 mg/kg
<i>Other</i>		
LD50	Mouse	321 mg/kg (Intravenous) Tremors.
	Rat	600 mg/kg (Intravenous)

**Skin corrosion/irritation** Rabbit: No irritation (22% Tylosin phosphate mixture)

**Serious eye damage/eye irritation** Causes eye irritation. Rabbit: (22% Tylosin phosphate mixture)

#### Respiratory or skin sensitization

**Respiratory sensitization** May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Skin sensitization** Guinea pig: Causes sensitization. (Tylosin Base)

**Germ cell mutagenicity** Mutagenic in one mammalian test system. Not mutagenic in bacterial cell tests and other mammalian cell tests. Unlikely to pose a genotoxic risk to man. (Tylosin Base)

**Carcinogenicity** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA. Not listed by ACGIH, IARC, NIOSH, NTP OR OSHA. (Tylosin phosphate)  
Animal testing did not show any carcinogenic effects. (Tylosin Base)  
Remaining ingredients: Not listed by ACGIH, NIOSH, NTP or OSHA.

#### IARC Monographs. Overall Evaluation of Carcinogenicity

Anti-dusting oil (CAS 8012-95-1) 3 Not classifiable as to carcinogenicity to humans.

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

Not listed.

**Reproductive toxicity** No effects identified in animal studies. (Tylosin Base)

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

**Specific target organ toxicity - repeated exposure** No effects identified in animal studies. (Tylosin Base)

**Aspiration hazard** No aspiration toxicity classification

**Further information** Salivation, diarrhea, and vomiting after repeated large oral doses. (Tylosin Base)

## 12. Ecological information

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

Components	Species	Test Results
Tylosin Base (CAS 1401-69-0)		
<i>Acute</i>		
	EC50	140 mg/kg (Oats, seedling)

Components	Species	Test Results
		53 mg/kg (Soybean, seedling)
		43 mg/kg (Tomato, seedling)
	LC50	> 102.6 mg/kg, 14 days (Eisenia fetida, earthworm)
Other	EC50	Pseudokirchnerella subcapitata 0.22 mg/l, 72 hours (green algae) (average specific growth rate)
	LC50	Duck > 5000 mg/kg, 5 days (Anas platyrhynchos, Mallard) (Dietary)
		Quail > 5000 mg/kg, 5 days (Bobwhite) (Dietary)
		> 2000 mg/kg, 14 days (Bobwhite)
<b>Aquatic</b>		
<i>Acute</i>		
Crustacea	EC50	Daphnia magna > 300 mg/l, 48 hours (Water flea)
Fish	LC50	Bluegill (Lepomis macrochirus) > 300 mg/l, 96 hours
		Rainbow Trout > 300 mg/l, 96 hours (Oncorhynchus mykiss)

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

**Bioaccumulative potential** No data available for this product.

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

Tylosin Base 17 (pH 7 and 9)  
5 (pH 5)

**Mobility in soil** Soil degradation half-life (100 ppm): 62 days (tylosin factor A); 37 days (tylosin factor D)  
Soil degradation half-life (1 mg/kg; 4 soils): 50.3 to 105 days  
Leaching in soil column: none

**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.

**Ecotoxicological Properties**

**Drinking Water**

Components	Test Results
Tylosin Base	36 µg/l, (Lilly Aquatic Exposure Guideline)

**Chronic Exposure of Aquatic Organisms**

Components	Test Results
Tylosin Base	99 µg/l, (Lilly Aquatic Exposure Guideline)

**Acute Exposure of Aquatic Organisms**

Components	Test Results
Tylosin Base	220 µg/l, (Lilly Aquatic Exposure Guideline)

**13. Disposal considerations**

**Disposal instructions** Do not allow this material to drain into sewers/water supplies. Dispose of contents/container in accordance with local/regional/national/international regulations.

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

**14. Transport information**

**General information** Effective January 1, 2015 by Special Provision, UN3077 and UN3082 when packaged in inner packages of 5L / 5 KG or less are not subject to the dangerous goods regulations.

**DOT**

Not regulated as dangerous goods.

**IATA**

**UN number** UN3077  
**UN proper shipping name** Environmentally hazardous substance, solid, n.o.s. (Tylosin Phosphate)

**Transport hazard class(es)**

<b>Class</b>	9
<b>Subsidiary risk</b>	-
<b>Packing group</b>	III
<b>Environmental hazards</b>	Yes
<b>ERG Code</b>	9L
<b>Special precautions for user</b>	Not available.
<b>Other information</b>	
<b>Passenger and cargo aircraft</b>	Allowed.
<b>Cargo aircraft only</b>	Allowed.

**IMDG**

<b>UN number</b>	UN3077
<b>UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Tylosin Phosphate)
<b>Transport hazard class(es)</b>	
<b>Class</b>	9
<b>Subsidiary risk</b>	-
<b>Packing group</b>	III
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	Yes
<b>EmS</b>	F-A, S-F
<b>Special precautions for user</b>	Not available.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** This substance/mixture is not intended to be transported in bulk.

**IATA; IMDG****Marine pollutant****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 listed.

## 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.

## US state regulations

### US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

### US. Massachusetts RTK - Substance List

Anti-dusting oil (CAS 8012-95-1)

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

Anti-dusting oil (CAS 8012-95-1)

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

Anti-dusting oil (CAS 8012-95-1)

### US. Rhode Island RTK

Not regulated.

### US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

## 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** 06-26-2014

**Revision date** 12-05-2014

**Version #** 02

**Lilly Lab Code**  
Health: 2  
Fire: 1  
Reactivity: 0  
Special 1: A

### List of abbreviations

LEG = Lilly Exposure Guideline

**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**

Stability and reactivity: Hazardous decomposition products  
Toxicological Information: Toxicological Data  
Ecological Information: Ecotoxicity  
Ecological information: Ecotoxicity  
Disposal considerations: Disposal instructions  
Transport information: General information  
Regulatory Information: Risk Phrases - Class.  
Other information, including date of preparation or last revision: Disclaimer  
GHS: Classification