



# MATERIAL SAFETY DATA SHEET

## 1. Product and Company Identification

<b>Material name</b>	Tylan Premix
<b>Version #</b>	01
<b>Issue date</b>	02-01-2013
<b>CAS #</b>	Mixture
<b>Substance ID</b>	AF0010, AF0020, AF0024, AF0026, AF0040, AF0042, AF0050, AF0055, AF0080, AF0090, AF0091, AF0099, AF0105, AH0042, MS8272, MS8274, MS8275, UC5318
<b>Synonym(s)</b>	Tylosin Premix * Tylosin Phosphate Premix * Tylan 10 Premix * Tylan 20 Premix * Tylan 30 Premix * Tylan 40 Premix * Tylan 50 Premix * Tylan 80 Premix * Tylan * Tylan 100 * Tylan
<b>Manufacturer information</b>	Elanco Animal Health 2500 Innovation Way Greenfield, IN 46140 lilly_msds@lilly.com Phone: 00 + 1+ 317-276-2000 CHEMTREC: 1-800-424-9300 CHEMTREC: (Outside U.S) 00 + 1+703-527-3887

## 2. Hazards Identification

<b>Emergency overview</b>	Causes eye irritation. Severe Allergen. May cause allergic respiratory and skin reactions.
<b>OSHA regulatory status</b>	This product is considered hazardous under 29 CFR 1910.1200 (Hazard Communication).
<b>Potential health effects</b>	
<b>Routes of exposure</b>	Inhalation. Ingestion. Skin contact. Eye contact.
<b>Eyes</b>	May irritate eyes.
<b>Skin</b>	May cause allergic skin reaction.
<b>Inhalation</b>	May cause allergic respiratory reaction.
<b>Ingestion</b>	Do not ingest.
<b>Signs and symptoms</b>	Eye irritation. Rash. Coughing. Shortness of breath. Wheezing.

## 3. Composition / Information on Ingredients

Components	CAS #	Percent
Tylosin Phosphate	1405-53-4	1.7 - 24
Excipient: Grain Dust	NA	75 - 95
Anti-dusting oil	8012-95-1	1 - 2

<b>Composition comments</b>	Excipients may include: Corn cob grits. Rice hulls. The anti-dusting oil reduces potential exposure under normal conditions of use.
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## 4. First Aid Measures

<b>First aid procedures</b>	
<b>Eye contact</b>	In case of eye contact, remove contact lens and rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention immediately.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water. Take off contaminated clothing and wash before reuse. Get medical attention if irritation develops and persists.
<b>Inhalation</b>	Move to fresh air. Oxygen or artificial respiration if needed. Call a physician or poison control center immediately.
<b>Ingestion</b>	Rinse mouth thoroughly. Never give anything by mouth to a victim who is unconscious or is having convulsions. Call a physician or poison control center immediately.
<b>Notes to physician</b>	None known.

**General advice** In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

## 5. Fire Fighting Measures

**Flammable properties** Dust may form explosive mixture with air.

### Extinguishing media

**Suitable extinguishing media** Water. Carbon dioxide (CO<sub>2</sub>). Dry chemical. Foam.

**Unsuitable extinguishing media** None known.

### Protection of firefighters

**Specific hazards arising from the chemical** Hazardous decomposition products formed under fire conditions.

**Protective equipment and precautions for firefighters** Wear self-contained breathing apparatus and protective clothing.

**Fire fighting equipment/instructions** Not available.

## 6. Accidental Release Measures

**Personal precautions** Avoid contact with skin, eyes and clothing. Wear suitable protective clothing, gloves and eye/face protection. See Section 8 of the MSDS for Personal Protective Equipment.

**Environmental precautions** Prevent spilled material from flowing onto adjacent land or into streams, ponds, or lakes. Avoid discharge into drains, water courses or onto the ground.

### Methods for cleaning up

Small Spillages:

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.

Large Spillages:

Prevent further migration into the environment. Remove sources of ignition. Collect in a non-combustible container for prompt disposal. Local authorities should be advised if significant spillages cannot be contained. Large spills due to traffic accidents, etc., should be reported immediately to CHEMTREC and Elanco Animal Health for assistance.

## 7. Handling and Storage

### Handling

Avoid contact with eyes, skin, and clothing. Wash hands thoroughly after handling. Minimize dust generation and accumulation. Keep away from heat and sources of ignition. Avoid release to the environment.

### Storage

Keep container tightly closed. 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

Components	Type	Value	Form
Excipient: Grain Dust (CAS NA)	TWA	4 mg/m <sup>3</sup>	(grain dust)

#### US. ACGIH Threshold Limit Values

##### Components

Components	Type	Value	Form
Anti-dusting oil (CAS 8012-95-1)	TWA	5 mg/m <sup>3</sup>	Inhalable fraction.

#### U.S. - OSHA

##### Components

Components	Type	Value	Form
Excipient: Grain Dust (CAS NA)	TWA	10 mg/m <sup>3</sup>	(grain dust)

**US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value	Form
Anti-dusting oil (CAS 8012-95-1)	PEL	5 mg/m3	Mist.

**Exposure guidelines** Lilly Exposure Guideline (LEG): <100 mcg/m3 12 hour TWA (Tylosin Base)

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

**Personal protective equipment**

**Eye / face protection** Wear goggles/face shield.

**Skin protection** Chemical resistant gloves and impermeable body covering to minimize skin contact.

**Respiratory protection** Use an approved respirator. Select appropriate respirator for physical characteristics of material. Select respirator with appropriate protection factor.

**General hygiene considerations** 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. Operators should wash thoroughly with soap and water after handling. If accidental eye contact occurs, immediately rinse with plenty of water.

**9. Physical & Chemical Properties**

**Appearance** Granular.

**Form** Solid.

**Color** Light tan.

**Odor** Musty

**Odor threshold** No data available.

**pH** No data available.

**Vapor pressure** No data available.

**Vapor density** No data available.

**Boiling point** No data available.

**Melting point/Freezing point** No data available.

**Solubility (water)** Insoluble

**Specific gravity** No data available.

**Relative density** No data available.

**Flash point** No data available.

**Flammability limits in air, upper, % by volume** No data available.

**Flammability limits in air, lower, % by volume** No data available.

**Auto-ignition temperature** No data available.

**Evaporation rate** No data available.

**Partition coefficient (n-octanol/water)** No data available.

**Other data**

**Density** No data available.

**Explosive limit - lower (%)** No data available.

**Explosive limit - upper (%)** No data available.

<b>Explosive properties</b>	No data available.
<b>Flammability (solid, gas)</b>	No test data available.
<b>Minimum Ignition Temperature</b>	No data available.
<b>Oxidizing properties</b>	No oxidizing properties.
<b>Physical state</b>	Solid.

## 10. Chemical Stability & Reactivity Information

<b>Conditions to avoid</b>	Not available.
<b>Incompatible materials</b>	None known.
<b>Hazardous decomposition products</b>	Hazardous decomposition products formed under fire conditions.
<b>Possibility of hazardous reactions</b>	Will not occur.

## 11. Toxicological Information

### Toxicological data

Components	Species	Test Results
Tylosin Base (CAS 1401-69-0)		
<b>Acute</b>		
<i>Dermal</i>		
LD50	Rabbit	> 2000 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 2060 mg/m <sup>3</sup> , 1 h
<i>Oral</i>		
LD50	Rat	> 5000 mg/kg
<i>Other</i>		
LD50	Mouse	321 mg/kg
	Rat	600 mg/kg
Tylosin Phosphate (CAS 1405-53-4)		
<b>Acute</b>		
<i>Oral</i>		
LD	Rat	6200 mg/kg
<b>Sensitization</b>	Guinea pig: Causes sensitization. (Tylosin Base)	
<b>Routes of exposure</b>	Inhalation. Ingestion. Skin contact. Eye contact.	
<b>Local effects</b>	Rabbit: Irritating to eyes. (22% Tylosin phosphate mixture)	
<b>Carcinogenicity</b>	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. Based on available data, the classification criteria are not met.	
<b>ACGIH Carcinogens</b>		
Anti-dusting oil (CAS 8012-95-1)	A4 Not classifiable as a human carcinogen.	
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
Anti-dusting oil (CAS 8012-95-1)	3 Not classifiable as to carcinogenicity to humans.	
<b>Skin corrosion/irritation</b>	Rabbit: No irritation (22% Tylosin phosphate mixture)	
<b>Mutagenicity</b>	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) Based on available data, the classification criteria are not met.	
<b>Reproductive effects</b>	No effects identified in animal studies. (Tylosin Base) Based on available data, the classification criteria are not met.	
<b>Further information</b>	Salivation, diarrhea, and vomiting after repeated large oral doses. (Tylosin Base)	

## 12. Ecological Information

### Ecotoxicological data

Components		Species	Test Results	
Tylosin Base (CAS 1401-69-0) <i>Acute</i>		EC50	140 mg/kg, (Oats, seedling) 53 mg/kg, (Soybean, seedling) 43 mg/kg, (Tomato, seedling)	
		LC50	> 102.6 mg/kg, 14 days, (Eisenia fetida, earthworm)	
	Crustacea	EC50	Daphnia magna > 300 mg/l, 48 hours	
	Other	EC50	Duck	> 5000 mg/kg, 5 days, (Anas platyrhynchos, Mallard)
			Pseudokirchnerella subcapitata	0.22 mg/l, 72 hours, (average specific growth rate)
			Quail	> 5000 mg/kg, 5 days, (Bobwhite) > 2000 mg/kg, 14 days, (Bobwhite)
	<b>Aquatic</b> <i>Acute</i>			
	Fish	LC50	Bluegill (Lepomis macrochirus)	> 300 mg/l, 96 hours
			Rainbow trout, donaldson trout (Oncorhynchus mykiss)	> 300 mg/l, 96 hours

**Ecotoxicity** Very toxic to aquatic life with long lasting effects.

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

### Bioaccumulation / Accumulation

#### Bioaccumulative potential

#### Octanol/water partition coefficient log Kow

Tylosin Base 1.63

#### Partition coefficient

Tylosin Base 1.63

### Ecotoxicological Properties

#### Drinking Water

##### Product

##### Test Results

Tylan Premix 36 µg/l, (Tylosin Base)

#### Chronic Exposure of Aquatic Organisms

##### Product

##### Test Results

Tylan Premix 99 µg/l, (Tylosin Base)

#### Acute Exposure of Aquatic Organisms

##### Product

##### Test Results

Tylan Premix 220 µg/l, (Tylosin Base)

## 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. Confirm disposal procedures with environmental engineer and local regulations.

### Waste from residues / unused products

Dispose of any cleanup materials and waste residue according to all applicable laws and regulations, e.g., secure chemical landfill disposal.

### Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

## 14. Transport Information

### 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)** 9  
**Packing group** III  
**ERG code** 9L  
**Special precautions for user** This material does not need to be transported as an Environmentally Hazardous Substance until January 1, 2014.

### IMDG

**UN number** UN3077  
**UN proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Tylosin Phosphate), MARINE POLLUTANT  
**Transport hazard class(es)** 9  
**Packing group** III  
**Environmental hazards**  
**Marine pollutant** Yes  
**EmS** F-A, S-F  
This material does not need to be transported as an Environmentally Hazardous Substance until January 1, 2014.

### 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.

**Drug Enforcement Administration (DEA). List 2, Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2) and Chemical Code Number**

Not listed.

**Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))**

Not regulated.

**DEA Exempt Chemical Mixtures Code Number**

Not regulated.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA (Superfund) reportable quantity**

None

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

<b>Hazard categories</b>	Immediate Hazard - Yes Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No
<b>SARA 302 Extremely hazardous substance</b>	No
<b>SARA 311/312 Hazardous chemical</b>	No

## Inventory status

Country(s) or region	Inventory name	On inventory (yes/no)*
Australia	Australian Inventory of Chemical Substances (AICS)	No
Canada	Domestic Substances List (DSL)	No
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IECSC)	No
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	No
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	No
Korea	Existing Chemicals List (ECL)	No
New Zealand	New Zealand Inventory	No
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	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)

## State regulations

### US - New Jersey RTK - Substances: Listed substance

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

### US. Massachusetts RTK - Substance List

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

### US. Pennsylvania RTK - Hazardous Substances

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

### US. Rhode Island RTK

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

## 16. Other Information

<b>Lilly Lab Code</b>	Health: 2 Fire: 1 Reactivity: 0 Special 1: A
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**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 MERCHANT ABILITY 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:

Elanco Animal Health  
00+1+317-276-2000  
00+1-800-428-4441

