



MATERIAL SAFETY DATA SHEET

1. Product and Company Identification

Material name	Tylan Premix
Version #	01
Issue date	02-01-2013
CAS #	Mixture
Substance ID	AF0010, AF0020, AF0024, AF0026, AF0040, AF0042, AF0050, AF0055, AF0080, AF0090, AF0091, AF0099, AF0105, AH0042, MS8272, MS8274, MS8275, UC5318
Synonym(s)	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
Manufacturer information	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

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

Composition comments	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

First aid procedures	
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. Get medical attention immediately.
Skin contact	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.
Inhalation	Move to fresh air. Oxygen or artificial respiration if needed. Call a physician or poison control center immediately.
Ingestion	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.
Notes to physician	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 (CO₂). 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

Excipient: Grain Dust (CAS NA)

Type

TWA

Value

4 mg/m³

Form

(grain dust)

US. ACGIH Threshold Limit Values

Components

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

Type

TWA

Value

5 mg/m³

Form

Inhalable fraction.

U.S. - OSHA

Components

Excipient: Grain Dust (CAS NA)

Type

TWA

Value

10 mg/m³

Form

(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.

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

10. Chemical Stability & Reactivity Information

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

11. Toxicological Information

Toxicological data

Components	Species	Test Results
Tylosin Base (CAS 1401-69-0)		
Acute		
Dermal		
LD50	Rabbit	> 2000 mg/kg
Inhalation		
LC50	Rat	> 2060 mg/m3, 1 h
Oral		
LD50	Rat	> 5000 mg/kg
Other		
LD50	Mouse	321 mg/kg
	Rat	600 mg/kg
Tylosin Phosphate (CAS 1405-53-4)		
Acute		
Oral		
LD	Rat	6200 mg/kg
Sensitization	Guinea pig: Causes sensitization. (Tylosin Base)	
Routes of exposure	Inhalation. Ingestion. Skin contact. Eye contact.	
Local effects	Rabbit: Irritating to eyes. (22% Tylosin phosphate mixture)	
Carcinogenicity	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.	
ACGIH Carcinogens		
Anti-dusting oil (CAS 8012-95-1)	A4 Not classifiable as a human carcinogen.	
IARC Monographs. Overall Evaluation of Carcinogenicity		
Anti-dusting oil (CAS 8012-95-1)	3 Not classifiable as to carcinogenicity to humans.	
Skin corrosion/irritation	Rabbit: No irritation (22% Tylosin phosphate mixture)	
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) Based on available data, the classification criteria are not met.	
Reproductive effects	No effects identified in animal studies. (Tylosin Base) Based on available data, the classification criteria are not met.	
Further information	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)			
Acute			
	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)
Aquatic			
Acute			
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

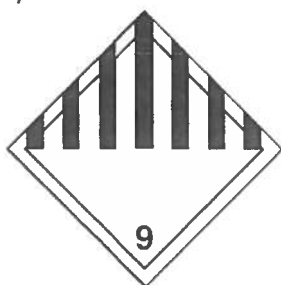
UN number	UN3077
UN proper shipping name	Environmentally hazardous substance, solid, n.o.s. (Tylosin Phosphate)
Transport hazard class(es)	9
Packing group	III
ERG code	9L
Special precautions for user	This material does not need to be transported as an Environmentally Hazardous Substance until January 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)

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

SARA 302 Extremely hazardous substance No

SARA 311/312 Hazardous chemical 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**Lilly Lab Code**

Health: 2
Fire: 1
Reactivity: 0
Special 1: A

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:

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