

## 1. Identification

**Product identifier** Trifexis

**Other means of identification**  
**Item Code** CA4337, CA4339, CA4341, CA4342, CA4344, CA4332, CA4333, CA4334, CA4335, CA4336

**Recommended use** Veterinary Pharmaceutical

**Recommended restrictions** None known.

**Manufacturer/Importer/Supplier/Distributor information**  
**Manufacturer**  
**Company Name** Elanco Animal Health  
 2500 Innovation Way  
 Greenfield, IN 46140  
 US

**Phone:** 1-877-Elanco1 (1-877-352-6261)  
**Email:** lilly\_msds@lilly.com

**Emergency Telephone Numbers:**  
 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

**Physical hazards** Not classified.

**Health hazards** Not classified.

**OSHA defined hazards** Not classified.

**Label elements**  
**Hazard symbol** None.  
**Signal word** None.  
**Hazard statement** The mixture does not meet the criteria for classification.  
**Precautionary statement**  
**Prevention** Not available.  
**Response** Not available.  
**Storage** Not available.  
**Disposal** Not available.

**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	%
SPINOSYN A		131929-60-7	50
SPINOSYN D		131929-63-0	9
Milbemycin A4 5-oxime		93074-04-5	0.7
Milbemycin A3 5-oxime		114177-14-9	0.2

<b>Composition comments</b>	Remaining components of this product are non-hazardous and/or are present at concentrations below reportable levels.  Spinosad is a mixture of the following components: Spinosyn A (CAS# 131929-63-0) and Spinosyn D (CAS# 131920-60-7).
<b>4. First-aid measures</b>	
<b>Inhalation</b>	If crushed and exposure to content occurs: Move to fresh air. Oxygen or artificial respiration if needed. Consult a physician for specific advice.
<b>Skin contact</b>	Immediately flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical attention if irritation develops and persists. Wash contaminated clothing before reuse.
<b>Eye contact</b>	If crushed and exposure to content occurs: Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.
<b>Ingestion</b>	Give several glasses of water. Never give anything by mouth to a victim who is unconscious or is having convulsions. Call a physician or poison control center immediately.
<b>Most important symptoms/effects, acute and delayed</b>	May cause temporary irritation on skin or eye contact.
<b>5. Fire-fighting measures</b>	
<b>Suitable extinguishing media</b>	Water. Carbon dioxide (CO <sub>2</sub> ). Dry chemical.
<b>Unsuitable extinguishing media</b>	None known.
<b>Specific hazards arising from the chemical</b>	Fire or excessive heat may produce hazardous decomposition products.
<b>Special protective equipment and precautions for firefighters</b>	Wear self-contained breathing apparatus and protective clothing.
<b>General fire hazards</b>	Dust may form explosive mixture with air.
<b>6. Accidental release measures</b>	
<b>Personal precautions, protective equipment and emergency procedures</b>	Wear suitable protective clothing, gloves and eye/face protection. Avoid inhalation of dust. See Section 8 of the SDS for Personal Protective Equipment.
<b>Methods and materials for containment and cleaning up</b>	The following are recommended for manufacturing or other situations where exposure to contents may occur. Vacuum material with appropriate dust collection filter in place. If vacuum is not available, lightly mist/wet material and remove by mopping or wet wiping. Be aware of potential for dust explosion when using electrical equipment. Large spills due to traffic accidents, etc., should be reported immediately to CHEMTREC and Elanco Animal Health for assistance.
<b>Environmental precautions</b>	Prevent further leakage or spillage if safe to do so. Prevent spilled material from flowing onto adjacent land or into streams, ponds, or lakes.
<b>7. Handling and storage</b>	
<b>Precautions for safe handling</b>	NOT INTENDED FOR HUMAN USE. Avoid contact with eyes, skin, and clothing. Use only with adequate ventilation. Wear personal protective equipment. Wash hands thoroughly after handling.
<b>Conditions for safe storage, including any incompatibilities</b>	Storage temperature: between 20 and 25 C (68 to 77 F). Excursions permitted from 15 to 30 C (59 to 86 F).
<b>8. Exposure controls/personal protection</b>	
<b>Exposure guidelines</b>	Supplier: TWA 0.3 mg/m <sup>3</sup> (Spinosad)
<b>Occupational exposure limits</b>	No exposure limits noted for ingredient(s).
<b>Biological limit values</b>	No biological exposure limits noted for the ingredient(s).
<b>Appropriate engineering controls</b>	Laboratory fume hood or local exhaust ventilation.  The following are recommended for manufacturing or other situations where exposure to contents may occur.
<b>Individual protection measures, such as personal protective equipment</b>	
<b>Eye/face protection</b>	Wear goggles/face shield.

<b>Skin protection</b>	
<b>Hand protection</b>	Chemical-resistant gloves and impermeable body covering to minimize skin contact.
<b>Other</b>	Chemical-resistant gloves and impermeable body covering to minimize skin contact.
<b>Respiratory protection</b>	Use an approved respirator. Select appropriate respirator for physical characteristics of material. Select respirator with appropriate protection factor.
<b>Thermal hazards</b>	Not available.
<b>General hygiene considerations</b>	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.

## 9. Physical and chemical properties

### Appearance

<b>Physical state</b>	Solid.
<b>Form</b>	Tablet.
<b>Color</b>	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.

### Upper/lower flammability or explosive limits

<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.

**Vapor pressure** No data available.

**Vapor density** No data available.

**Relative density** No data available.

### Solubility(ies)

**Solubility (water)** No data available.

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

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

**Decomposition temperature** No data available.

**Viscosity** No data available.

### Other information

**Density** No data available.

**Explosive properties** Not explosive

**Oxidizing properties** The substance or mixture is not classified as oxidizing.

**Potential for dust explosion** No data 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>	Hazardous polymerization does not occur.
<b>Conditions to avoid</b>	None known.
<b>Incompatible materials</b>	Strong oxidizing agents.
<b>Hazardous decomposition products</b>	Fire or excessive heat may produce hazardous decomposition products.

## 11. Toxicological information

### Information on toxicological effects

**Acute toxicity** Based on available data, the classification criteria are not met.

<b>Components</b>	<b>Species</b>	<b>Test Results</b>
Spinosad (CAS 168316-95-8)		
<b>Acute</b>		
<i>Dermal</i>		
LD	Rabbit	> 5000 mg/kg
<i>Inhalation</i>		
LC50	Rat	> 5180 mg/m <sup>3</sup> , 4 hours
<i>Oral</i>		
LD	Rat	> 5000 mg/kg (female)
LD50	Rat	4444 mg/kg (male)
SPINOSYN A (CAS 131929-60-7)		
<b>Acute</b>		
<i>Inhalation</i>		
LC50	Rat	> 5 mg/l
<b>Skin corrosion/irritation</b>	Rabbit: No irritation (Spinosad) Based on available data, the classification criteria are not met.	
<b>Serious eye damage/eye irritation</b>	Rabbit: Slight irritation. (Spinosad) Based on available data, the classification criteria are not met.	
<b>Respiratory or skin sensitization</b>		
<b>Respiratory sensitization</b>	Due to lack of data the classification is not possible.	
<b>Skin sensitization</b>	Guinea pig: Not a skin sensitizer. Based on available data, the classification criteria are not met.	
<b>Germ cell mutagenicity</b>	Result in genetic toxicity assays (in vitro and in vivo): Negative (Spinosad) Based on available data, the classification criteria are not met.	
<b>Carcinogenicity</b>	Animal testing did not show any carcinogenic effects. (Spinosad) Based on available data, the classification criteria are not met.	
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>		
Not listed.		
<b>Reproductive toxicity</b>	In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. (Spinosad) Based on available data, the classification criteria are not met.	
<b>Specific target organ toxicity - single exposure</b>	Due to lack of data the classification is not possible.	
<b>Specific target organ toxicity - repeated exposure</b>	In animals, has been shown to cause vacuolation of cells in liver, kidney, and bone tissues and changes in blood and serum biochemistry. Dose levels producing these effects were many times higher than any dose levels expected from exposure due to use. (Spinosad) Based on available data, the classification criteria are not met.	
<b>Aspiration hazard</b>	No aspiration toxicity classification (spinosad)	

## 12. Ecological information

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

Components		Species	Test Results
Spinosad (CAS 168316-95-8)			
<b>Aquatic</b>			
Algae	EC50	Algae	0.107 mg/l Navicula sp.
		Green algae (Selenastrum capricornutum)	105.5 ppm (currently known as Pseudokirchneriella subcapitata)
Crustacea	EC50	Daphnia	92.7 mg/l, 48 h
Fish	LC50	Rainbow trout, donaldson trout (Oncorhynchus mykiss)	30 mg/l, 96 h
		Sunfish (Lepomis)	5.94 mg/l, 96 h

**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)**

SPINOSYN A 2.8, at pH 5

**Mobility in soil** No data available.

**Other adverse effects** Not available.

## 13. Disposal considerations

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

## 14. Transport information

**General information** Sealed packets and articles containing less than 10 ml or 10 g of an environmentally hazardous substance may be transported as non-regulated under Special Provisions, IATA (SP A158), IMDG (SP 335), ADR (SP 335) and the U.N. Model Regulations (SP 335).

### DOT

Not regulated as dangerous goods.

### IATA

**UN number** UN3077  
**UN proper shipping name** Environmentally hazardous substance, solid, n.o.s. (Spinosad, Milbemycin Oxime)  
**Transport hazard class(es)**  
**Class** 9  
**Subsidiary risk** -  
**Packing group** III  
**Environmental hazards** Yes  
**ERG Code** 9L  
**Special precautions for user** Not available.  
**Other information**  
**Passenger and cargo aircraft** Allowed.  
**Cargo aircraft only** Allowed.

### IMDG

**UN number** UN3077  
**UN proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (SPINOSAD, MILBEMYCINE OXIME)  
**Transport hazard class(es)**  
**Class** 9  
**Subsidiary risk** -  
**Packing group** III  
**Environmental hazards**  
**Marine pollutant** Yes  
**EmS** F-A, S-F

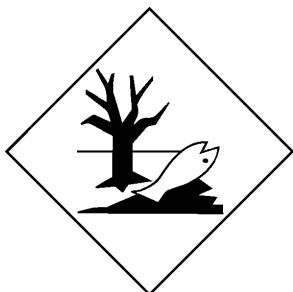
**Special precautions for user** Not available.

**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 not known to be 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 - No  
Delayed Hazard - No  
Fire Hazard - No  
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**

Not regulated.

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

Not listed.

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

Not listed.

**US. Rhode Island RTK**

Not regulated.

**US. California Proposition 65**

Not Listed.

**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** 09-17-2014**Version #** 01**Lilly Lab Code** Health: 1  
Fire: 1  
Reactivity: 0**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:

Elanco Animal Health  
00+1+877-352-6261  
00+1-800-428-4441**Revision Information**

Product and Company Identification: Product Codes  
 Composition / Information on Ingredients: Undisclosed Ingredient Statement  
 Exposure Controls / Personal Protection: OELs  
 Physical & Chemical Properties: Multiple Properties  
 Ecological Information: Ecotoxicity  
 Transport Information: Material Transportation Information  
 Regulatory Information: United States  
 GHS: Classification