



SAFETY DATA SHEET

1. Identification

Product identifier	Coban Premix
Other means of identification	
Item Code	AF1306, AF1309, AF1316, AF1318, AF1323, AF1324, MS8250, AF1321
Synonyms	Coban 45 * Coban 60 * Coban 90 * Monensin Sodium * Monensin * Coban
Recommended use	Veterinary Product
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	Acute toxicity, oral	Category 3
	Serious eye damage/eye irritation	Category 1
	Sensitization, respiratory	Category 1
	Specific target organ toxicity, repeated exposure	Category 2
	Combustible dust	
OSHA defined hazards		
Label elements		



Signal word Danger

Hazard statement

H301	May form combustible dust concentrations in air.
H318	Toxic if swallowed.
H334	Causes serious eye damage.
H373	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
	May cause damage to organs (Heart, muscles) through prolonged or repeated exposure.

Precautionary statement

Prevention

P260	Do not breathe dust/fume/gas/mist/vapors.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P264	Wash hands thoroughly after handling.
P285	In case of inadequate ventilation wear respiratory protection.

Response

P301 + P310	IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
P330	Rinse mouth.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310	Immediately call a POISON CENTER or doctor/physician.
Storage	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	%
Monensin sodium		22373-78-0	9 - 13.2
Excipient: Grain Dust		NA	84.8
Anti-Dusting Oil	MINERAL OIL	8012-95-1	2

Composition comments 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. IF exposed or concerned: Get medical advice/attention.
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.
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. Immediate rinsing may prevent permanent damage. Get medical attention immediately.
Ingestion	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.
Most important symptoms/effects, acute and delayed	Causes eye burns. May cause irritation of respiratory tract. May cause allergic respiratory reaction. May cause heart effects. May cause muscle effects.
Indication of immediate medical attention and special treatment needed	Immediate rinsing may prevent permanent damage (eyes).
General information	In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

5. Fire-fighting measures

Suitable extinguishing media	Water. Carbon dioxide (CO2). Dry chemical.
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.
General fire hazards	Dust may form explosive mixture with air.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures	Avoid contact with skin, eyes and clothing. Wear suitable protective clothing, gloves and eye/face protection. See Section 8 of the SDS for Personal Protective Equipment.
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Methods and materials for containment and 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.

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**

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

Conditions for safe storage, including any incompatibilities

Store in a cool, dry place with adequate ventilation. Keep away from incompatible materials, open flames, and high temperatures. Keep container tightly closed. Avoid contact with oxidizing agents. Do not store in open or unlabelled containers.

8. Exposure controls/personal protection**Occupational exposure limits****Lilly (LEG)****Components****Type****Value**

Monensin sodium (CAS 22373-78-0)

TWA (12hrs)

15 ug/m3

Occupational exposure limits**ACGIH****Components****Type****Value****Form**

Excipient: Grain Dust (CAS NA)

TWA

4 mg/m3

(grain dust)

US. ACGIH Threshold Limit Values**Components****Type****Value****Form**

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

TWA

5 mg/m3

Inhalable fraction.

U.S. - OSHA**Components****Type****Value****Form**

Excipient: Grain Dust (CAS NA)

TWA

10 mg/m3

(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.

US. NIOSH: Pocket Guide to Chemical Hazards**Components****Type****Value****Form**

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

STEL

10 mg/m3

Mist.

TWA

5 mg/m3

Mist.

Biological limit values

No biological exposure limits noted for the ingredient(s).

Appropriate engineering controls

Laboratory fume hood or local exhaust ventilation.

Individual protection measures, such as personal protective equipment**Eye/face protection**

Wear goggles/face shield.

Skin protection**Hand protection**

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

Other

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.
Thermal hazards	Not available.
General hygiene considerations	NOT INTENDED FOR HUMAN USE.
	Caution: Do not feed undiluted to animals. Product is for replacement chickens intended for use as cage layers only. Do not feed to laying chickens. Do not feed to chickens over 16 weeks of age. Do not allow horses, other equines, mature turkeys, or guinea fowl access to feed containing monensin sodium. Ingestion of monensin sodium by horses, mature turkeys, and guinea fowl has been fatal. Some strains of turkey coccidia may be monensin sodium tolerant or resistant. Monensin sodium may interfere with development of immunity to turkey coccidiosis. Coccidiosis risk in young turkeys not receiving anticoccidials outweighs the risk of infrequent coccidiosis outbreaks that may occur following drug withdrawal. Coccidiosis is more pathogenic to young than older turkeys, but non-immune turkeys may experience weight loss if infected after drug withdrawal. In the absence of coccidiosis in broiler chickens, the use of monensin sodium with no withdrawal period may limit feed intake resulting in reduced weight gain. 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

Appearance	Dry flowable granules.
Physical state	Solid.
Form	Solid.
Color	Dark brown to Yellow.
Odor	Detectable odor of amyl alcohol may be present.
Odor threshold	No data available.
pH	5 - 6 (50% suspension)
Melting point/freezing point	No data available.
Initial boiling point and boiling range	No data available.
Flash point	No flash up to 65.6 C (150 F)
Evaporation rate	No data available.
Flammability (solid, gas)	No test data available.
Upper/lower flammability or explosive limits	
Flammability limit - lower (%)	No data available.
Flammability limit - upper (%)	No data available.
Explosive limit - lower (%)	No ignition up to 2.0 oz/cu ft.
Explosive limit - upper (%)	No data available.
Vapor pressure	No data available.
Vapor density	No data available.
Relative density	No data available.

Solubility(ies)**Solubility (water)**

Insoluble.

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

No data available.

Auto-ignition temperature365 °F (185 °C) (Coban 45)
374 °F (190 °C) (Coban 60)**Decomposition temperature**

No data available.

Viscosity

No data available.

Other information

MIT of dust layer: 190 degrees C (374 degrees F)

Density

No data available.

Explosive properties

Not explosive

Oxidizing properties

The substance or mixture is not classified as oxidizing.

Percent volatile

No data available.

9.2. Other information**Minimum Ignition
Temperature**

374 °F (190 °C) MIT of Dust Layer

10. Stability and reactivity**Reactivity**

Not available.

Chemical stability

Material is stable under normal conditions.

**Possibility of hazardous
reactions**

Hazardous polymerization does not occur.

Conditions to avoid

None known.

Incompatible materials

Strong oxidizing agents.

**Hazardous decomposition
products**

Fire or excessive heat may produce hazardous decomposition products.

11. Toxicological information**Information on toxicological effects****Acute toxicity**

Product	Species	Test Results
Coban Premix (CAS Mixture)		
Acute		
<i>Dermal</i>		
LD	Rabbit	> 2000 mg/kg (Coban 45: mortality)
LD50	Rabbit	2000 mg/kg (Coban 60: no deaths or toxicity)
<i>Inhalation</i>		
LC50	Rat	4950 mg/m3, 1 hr (mortality)
Components	Species	Test Results
Monensin sodium (CAS 22373-78-0)		
Acute		
<i>Dermal</i>		
LD	Rabbit	> 500 mg/kg (24% monensin sodium mixture)
<i>Inhalation</i>		
LC50	Rat	> 370 mg/m3, 1 h (24% monensin sodium mixture)
<i>Oral</i>		
LD	Rat	> 300 (55% monensin sodium mixture)
LD50	Rat	34 mg/kg
Skin corrosion/irritation	Rabbit: Slight irritation. Based on available data, the classification criteria are not met.	

Serious eye damage/eye irritation

Rabbit: Corrosive. Immediate rinsing may prevent permanent damage.

Respiratory or skin sensitization**Respiratory sensitization**

Allergic reactions in a manufacturing setting have been reported. (Monensin Sodium)
Grain dusts may cause sensitization by inhalation.

Skin sensitization

Did not cause sensitization on laboratory animals. (Monensin Sodium) Based on available data, the classification criteria are not met.

Germ cell mutagenicity

In vitro and in vivo tests did not show mutagenic effects. (Monensin Sodium)
Based on available data, the classification criteria are not met.

Carcinogenicity

Animal testing did not show any carcinogenic effects. (Monensin Sodium)
This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.
Based on available data, the classification criteria are not met.

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. (Monensin Sodium) Based on available data, the classification criteria are not met.

Specific target organ toxicity - single exposure

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

Specific target organ toxicity - repeated exposure

Heart effects (degenerative and reparative tissue changes, electrocardiogram changes, congestive heart failure), muscle effects (skeletal muscle changes, elevated blood enzymes of muscle origin). (Monensin Sodium)

Aspiration hazard

No aspiration toxicity classification.

12. Ecological information**Ecotoxicity**

Components		Species	Test Results
Monensin sodium (CAS 22373-78-0)			
Other	LC50	Quail	85.7 mg/kg, 14 d
<i>Acute</i>			
Other	EC50	Selenastrum capricornutum (new name Pseudokirchnerella subca	4.33 mg/l, 72 h (average specific growth rate)
<i>Chronic</i>			
Other	NOEC	Selenastrum capricornutum (new name Pseudokirchnerella subca	0.055 mg/l (biomass)
Aquatic			
<i>Acute</i>			
Crustacea	EC50	Daphnia magna	10.7 mg/l, 48 h
Fish	LC50	Bluegill (Lepomis macrochirus)	16.6 mg/l, 96 h
		Rainbow Trout	9 mg/l, 96 h

Persistence and degradability

Photolysis half-life (days): 43.9
Photolysis rate constant (1/day): 0.0158
Hydrolysis: none measured (pH 5, 7, 9)
Soil degradation half-life (days): 7.5
Greater than 50% loss in sandy, silt, and clay loam soils in less than 14 days. (Monensin Sodium)
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)

Monensin sodium
2.75, (pH 7)
3.79, (pH 9)
4.24, (pH 5)

Mobility in soil

Adsorption

Soil/sediment sorption - log K_{oc}

Monensin sodium

> 5.63

Result: (pH 4.5 and 6)

Other adverse effects

Not available.

Ecotoxicological Properties

Drinking Water

Components

Test Results

Monensin sodium

75 µg/l, (Lilly Aquatic Exposure Guideline)

Chronic Exposure of Aquatic Organisms

Components

Test Results

Monensin sodium

55 µg/l, (Lilly Aquatic Exposure Guideline)

Acute Exposure of Aquatic Organisms

Components

Test Results

Monensin sodium

562 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.

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 This substance/mixture is not intended to be transported in bulk.

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 - Yes
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

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** 10-20-2014**Version #** 01**Lilly Lab Code** Health: 3
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 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**Revision Information** Product and Company Identification: Synonyms
Composition / Information on Ingredients: Ingredients
Physical & Chemical Properties: Multiple Properties
Toxicological Information: Toxicological Data
Ecological Information: Ecotox Property Data
Transport Information: Material Transportation Information
Regulatory Information: Risk Phrases - Class.
GHS: Classification