SAFETY DATA SHEET



1. Identification

Product identifier

Larvadex 1% Premix

Other means of identification

None.

Recommended use

Insecticide

Recommended restrictions

None known.

Manufacturer/importer/Supplier/Distributor information

Manufacturer

Company Name

Novartis Animal Health

Address

3200 Northline Avenue, Suite 300

Greensboro, NC 27408

Telephone SDS E-mail 1-336-387-1000 lilly_msds@lilly.com

SDS telephone

1-877-Elanco1 (1-877-352-6261)

Emergency Telephone

Elanco Product Technical Support / Human or Animal Exposure Reporting:

Numbers

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

Combustible dust

Label elements

Hazard symbol

None.

Signal word

Warning

Hazard statement

May form combustible dust concentrations in air.

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	%
Cyromazine		66215-27-8	1
Other components below reportable levels			99

4. First-aid measures

Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Call a POISON CENTER or doctor/physician if you feel unwell.

Skin contact

Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact

Do not rub eyes. Rinse with water. Get medical attention if irritation develops and persists.

Ingestion

Call a physician or poison control center immediately. Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs.

Most important

symptoms/effects, acute and

delayed

Indication of immediate medical attention and special

treatment needed

General information

Not available.

Water.

Provide general supportive measures and treat symptomatically.

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

5. Fire-fighting measures

Suitable extinguishing media

Water fog. Foam. Dry chemical powder. Carbon dioxide (CO2).

Unsuitable extinguishing

media

During fire, gases hazardous to health may be formed.

Specific hazards arising from the chemical

Special protective equipment

and precautions for firefighters

Use water spray to cool unopened containers.

Fire fighting equipment/instructions

Specific methods

Use standard firefighting procedures and consider the hazards of other involved materials.

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

Dust may form explosive mixture with air. General fire hazards

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Avoid inhalation of dust. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up

Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.

Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Minimize dust generation and accumulation. Avoid breathing dust. Avoid contact with eyes, skin, and clothing. Do not taste or swallow. When using, do not eat, drink or smoke. Use only outdoors or in a well-ventilated area. Wear appropriate personal protective equipment. Wash hands thoroughly after handling. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities Store in original tightly closed container. Keep away from moisture. Store in a well-ventilated place. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

No exposure limits noted for ingredient(s).

Biological limit values

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

Exposure guidelines

Cyromazine: 0.14 mg/m3 8 hour TWA (Novartis)

Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection

Safety glasses with side shields recommended.

Skin protection

Hand protection

Wear appropriate chemical resistant gloves.

Other

Wear suitable protective clothing.

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Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Select appropriate respirator for physical characteristics of material. Select respirator with appropriate protection factor.

Thermal hazards

Not available.

General hygiene considerations

Keep away from food and drink. 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.

9. Physical and chemical properties

Appearance

Physical state

Solid.

Form

Solid.

Color

Yellow to Tan.

Odor

Slightly Sweet.

Odor threshold

No data available.

pН

No data available.

Melting point/freezing point

428 - 431.6 °F (220 - 222 °C)

Initial boiling point and boiling

range

No data available.

Flash point **Evaporation rate**

No data available. No data available.

Flammability (solid, gas)

Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower

No data available.

(%)

Flammability limit - upper

No data available.

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

Vapor pressure

< 0.000001 torr (20 °C)

Vapor density Relative density No data available. No data available.

Solubility(ies)

Solubility (water)

1.1 % (20 °C)

Partition coefficient (n-octanol/water)

No data available.

Auto-ignition temperature

Decomposition temperature

No data available. No data available.

Viscosity

No data available.

Other information

Density Percent volatile 20.00 - 21.00 lb/ft3 No data available.

10. Stability and reactivity

Reactivity

The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical stability

Material is stable under normal conditions.

Possibility of hazardous reactions

Hazardous polymerization does not occur.

Conditions to avoid

Exposure to moisture. Contact with incompatible materials.

Incompatible materials

Strong oxidizing agents.

Hazardous decomposition

No hazardous decomposition products are known.

products

11. Toxicological information

Information on toxicological effects

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Acute toxicity			
Product	Species		Test Results
Larvadex 1% Premix			
<u>Acute</u>			
Dermal			
Dust	_		
LD50	Rat		> 4000 mg/kg
Inhalation			
Dust			5000
LC50	Rat		> 5000 mg/m³, 4 hours
Oral			
Dust			5000 malla
LD50	Rat		> 5000 mg/kg
Components	Species		Test Results
Cyromazine (CAS 66215-27-8)			
Acute			
Dermal	D-4		> 3100 mg/kg
LD50	Rat		> 3100 Hig/kg
Inhalation			2720 mailw2 4 Harra 500/ - arradored
LC50	Rat		> 2720 mg/m3, 4 Hours 50% powdered formulation
Oral			
LD50	Rabbit		1467 mg/kg
	Rat		3387 mg/kg
Skin corrosion/irritation	Based on available data, the o	classification criteria are	e not met.
Corrosivity			
Cyromazine		Result: Slight irritant Species: Rabbit	
Sarious aug demografique	Based on available data, the o	•	e not met
Serious eye damage/eye irritation	Dased off available data, the C	Signature of the later	o not mot.
Eye Contact		Decult: Clight imitant	
Cyromazine		Result: Slight irritant Species: Rabbit	
Respiratory or skin sensitization	1	•	
Respiratory sensitization	Not a respiratory sensitizer.		
Skin sensitization	This product is not expected to	o cause skin sensitizati	ion.
Sensitization			
Cyromazine		Result: Not a contact Species: Guinea pig	t sensitizer
Germ cell mutagenicity	No data available to indicate pmutagenic or genotoxic.	*	ents present at greater than 0.1% are
Mutagenicity			
Cyromazine		Result: No evidence	-
Carcinogenicity	Animal testing did not show any carcinogenic effects. (Cyromazine)		

Carcinogenicity Animal testing did not show any carcinogenic effects. (Cyromazine)

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity This product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity -

single exposure

Not classified.

Specific target organ toxicity -

repeated exposure

Not classified.

Aspiration hazard

Not an aspiration hazard.

12. Ecological information

Ecotoxicity

Components		Species	Test Results
Cyromazine (CAS 66215-27	-8)		
Aquatic			
Crustacea	LC50	Daphnia magna	> 97.8, 48 hours
Fish LC5	LC50	Bluegill (Lepomis macrochirus)	> 89.7 ppm, 96 hours
		Channel catfish (Ictalurus punctatus)	> 91.6, 96 hours
		Rainbow Trout	> 87.9 ppm, 96 hours
sistence and degradability	No data is av	railable on the dogradability of this and the	

Persistence and degradability

No data is available on the degradability of this product.

Bioaccumulative potential

Partition coefficient n-octanol / water (log Kow)

Cyromazine

0.96

Mobility in soil

No data available.

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.

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

Not applicable.

Annex II of MARPOL 73/78 and

the IBC Code

15. Regulatory information

US federal regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication

Standard, 29 CFR 1910.1200.

One or more components are not listed on TSCA.

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

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

SARA 304 Emergency release notification

Not regulated.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

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.

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Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)

Not regulated.

Safe Drinking Water Act

Not regulated.

(SDWA)

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

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

Not listed.

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

On inventory (yes/no)* Country(s) or region Inventory name Domestic Substances List (DSL) Canada

No Non-Domestic Substances List (NDSL) Canada

United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory

*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 05-28-2015

Version # 01

Lilly Lab Code Health: 1

Fire: 1 Reactivity: 0

List of abbreviations

PEL: Permissible Exposure Limit TLV: Threshold Limit Value. TWA: Time Weighted Average

As of the date of issuance, we are providing available information relevant to the handling of this Disclaimer

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 0011+1-877-352-6261 0011+1-800-428-4441

Material name: Larvadex 1% Premix

No

No