

## 1. Identification

<b>Product identifier</b>	<b>Surolan</b>
<b>Other means of identification</b>	
<b>Item Code</b>	CA0813
<b>Synonyms</b>	1H-Imidazole, 1-[2-(2,4-dichlorophenyl)-2-[(2,4-dichlorophenyl)methoxy]ethyl]-, mononitrate
<b>Recommended use</b>	Veterinary Pharmaceutical
<b>Recommended restrictions</b>	None known.
<b>Manufacturer/Importer/Supplier/Distributor information</b>	
<b>Manufacturer</b>	
<b>Company Name</b>	Elanco Animal Health 2500 Innovation Way Greenfield, IN 46140 US
<b>Phone:</b>	1-877-Elanco1 (1-877-352-6261)
<b>Email:</b>	lilly_msds@lilly.com
<b>Emergency Telephone Numbers:</b>	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

<b>Physical hazards</b>	Not classified.	
<b>Health hazards</b>	Germ cell mutagenicity	Category 2
	Reproductive toxicity	Category 2
<b>OSHA defined hazards</b>	Not classified.	
<b>Label elements</b>		



<b>Signal word</b>	Warning	
<b>Hazard statement</b>		
H341	Suspected of causing genetic defects.	
H361	Suspected of damaging fertility or the unborn child.	
<b>Precautionary statement</b>		
<b>Prevention</b>		
P201	Obtain special instructions before use.	
P202	Do not handle until all safety precautions have been read and understood.	
P281	Use personal protective equipment as required.	
<b>Response</b>		
P308 + P313	IF exposed or concerned: Get medical advice/attention.	
<b>Storage</b>		
P405	Store locked up.	
<b>Disposal</b>		
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.	
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.	

**Supplemental information** None.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Miconazole nitrate	1H-Imidazole, 1-[2-(2,4-dichlorophenyl)-2-[(2,4-dichlorophenyl)methoxy]ethyl]-, mononitrate	22832-87-7	2.3
Colloidal anhydrous silica		7631-86-9	0.75
Prednisolone acetate		52-21-1	0.5
Other components below reportable levels			96.45

### 4. First-aid measures

<b>Inhalation</b>	Move to fresh air. Oxygen or artificial respiration if needed. Call a physician or poison control center immediately.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Get medical attention if irritation develops and persists.
<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 if irritation develops and persists.
<b>Ingestion</b>	Call a physician or poison control center immediately. Rinse mouth. Never give anything by mouth to a victim who is unconscious or is having convulsions.
<b>Most important symptoms/effects, acute and delayed</b>	May cause adverse reproductive effects - such as birth defects, miscarriages, or infertility based on animal data.
<b>Indication of immediate medical attention and special treatment needed</b>	Treat symptomatically.
<b>General information</b>	In the case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). IF exposed or concerned: Get medical advice/attention.

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Foam. Carbon dioxide (CO <sub>2</sub> ). Water. Sand.
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<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>Fire fighting equipment/instructions</b>	Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. For personal protection, see section 8 of the SDS.
<b>Methods and materials for containment and cleaning up</b>	Prevent further migration into the environment. Use absorbent/adsorbent material to solidify liquids. Collect in a non-combustible container for prompt disposal. Clean surface thoroughly to remove residual contamination.  Large spills due to traffic accidents, etc., should be reported immediately to CHEMTREC and Elanco Animal Health for assistance.
<b>Environmental precautions</b>	Avoid discharge into drains, water courses or onto the ground. Avoid release to the environment.

## 7. Handling and storage

**Precautions for safe handling** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash hands thoroughly after handling. Avoid breathing dust/fume/gas/mist/vapors/spray.

**Conditions for safe storage, including any incompatibilities** Do not store in open or unlabelled containers. Store locked up.

## 8. Exposure controls/personal protection

### Occupational exposure limits

#### US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value
Colloidal anhydrous silica (CAS 7631-86-9)	TWA	0.8 mg/m3
		20 mppcf

#### US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Colloidal anhydrous silica (CAS 7631-86-9)	TWA	6 mg/m3

**Biological limit values** No biological exposure limits noted for the ingredient(s).

**Exposure guidelines** Supplier: 0.75 mg/m3 TWA (Miconazole Nitrate)  
A Lilly exposure guideline has not been established. The above exposure guideline has been established by the supplier.

**Appropriate engineering controls** Open handling is not recommended. Use appropriate control measures such as fume hood, ventilated enclosure, local exhaust ventilation, or down-draft booth.

### Individual protection measures, such as personal protective equipment

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

#### Skin protection

**Hand protection** Wear appropriate chemical resistant gloves.

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

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment. Respirator with a full face mask.  
ABEK  
P3

**Thermal hazards** Not applicable.

## 9. Physical and chemical properties

### Appearance

**Physical state** Liquid.

**Form** Liquid. Suspension.

**Color** White

**Odor** Odorless

**Odor threshold** No data available.

**pH** No data available.

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

**Initial boiling point and boiling range** No data available.

**Flash point** No data available.

**Evaporation rate** No data available.

**Flammability (solid, gas)** Not applicable.

### Upper/lower flammability or explosive limits

**Flammability limit - lower (%)** 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.
<b>Vapor pressure</b>	No data available.
<b>Vapor density</b>	No data available.
<b>Relative density</b>	No data available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	No data available.
<b>Partition coefficient (n-octanol/water)</b>	No data available.
<b>Auto-ignition temperature</b>	No data available.
<b>Decomposition temperature</b>	No data available.
<b>Viscosity</b>	No data available.
<b>Other information</b>	
<b>Density</b>	No data available.
<b>Dissociation constant</b>	No data available.
<b>Drop point</b>	No data available.
<b>Explosive limit</b>	No data available.
<b>Explosive properties</b>	Not explosive
<b>Explosivity</b>	No data available.
<b>Flame extension</b>	No data available.
<b>Flame projection</b>	No data available.
<b>Flammability</b>	No data available.
<b>Flammability (flash back)</b>	No data available.
<b>Oxidizing properties</b>	The substance or mixture is not classified as oxidizing.
<b>Potential for dust explosion</b>	No data available.
<b>VOC (Weight %)</b>	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>	No dangerous reaction known under conditions of normal use.
<b>Conditions to avoid</b>	Contact with incompatible materials.
<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>
Colloidal anhydrous silica (CAS 7631-86-9)		
<b>Acute</b>		
<b>Dermal</b>		
LD50	Rabbit	> 5000 mg/kg

Components	Species	Test Results
<b>Inhalation</b>		
<i>Dust</i>		
LC50	Rat	> 58.8 mg/l, 4 hours
<b>Oral</b>		
LD50	Rat	> 5000 mg/kg
Miconazole nitrate (CAS 22832-87-7)		
<b>Acute</b>		
<b>Oral</b>		
LD	Rat	> 640 mg/kg
LD50	Dog	> 160 mg/kg
	Guinea pig	> 275.9 mg/kg
	Mouse	> 578.1 mg/kg
	Rat	920 mg/kg
		550 mg/kg
<b>Skin corrosion/irritation</b>	Due to partial or complete lack of data the classification is not possible.	
<b>Serious eye damage/eye irritation</b>	Due to partial or complete lack of data the classification is not possible.	
<b>Respiratory or skin sensitization</b>		
<b>Respiratory sensitization</b>	Due to partial or complete lack of data the classification is not possible.	
<b>Skin sensitization</b>	Due to partial or complete lack of data the classification is not possible.	
<b>Germ cell mutagenicity</b>	Suspected of causing genetic defects. Induced chromosome aberrations in vivo. (Miconazole Nitrate)	
<b>Carcinogenicity</b>	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.	
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>		
Colloidal anhydrous silica (CAS 7631-86-9)	3 Not classifiable as to carcinogenicity to humans.	
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)</b>		
Not listed.		
<b>Reproductive toxicity</b>	Oral studies in rats and rabbits given up to 100 mg/kg during gestation did not produce teratogenic effects in offspring. Significant prolonged gestation was observed in rats orally given more than 30 mg/kg/day. Increased fetal resorption observed in rabbits given 100 mg//kg/day along with decreased maternal body weight.	
<b>Specific target organ toxicity - single exposure</b>	Due to partial or complete lack of data the classification is not possible.	
<b>Specific target organ toxicity - repeated exposure</b>	Due to partial or complete lack of data the classification is not possible.	
<b>Aspiration hazard</b>	No aspiration toxicity classification	

## 12. Ecological information

**Ecotoxicity** Toxic to aquatic life with long lasting effects.

Components	Species	Test Results
Colloidal anhydrous silica (CAS 7631-86-9)		
<b>Aquatic</b>		
<i>Acute</i>		
Crustacea	EC50	Water flea (Daphnia magna)
		> 10000 mg/l, 24 hours
Fish	LCL0	Zebra danio (Danio rerio)
		10000 mg/l, 96 hours
Miconazole nitrate (CAS 22832-87-7)		
Other	EC50	Activated sludge of a predominantly domestic sewage
		> 1 mg/l, 3 h
<i>Chronic</i>		
Other	NOEC	Activated sludge of a predominantly domestic sewage
		>= 1 mg/l, 3 h

Components		Species	Test Results
<b>Aquatic</b>			
Crustacea	NOEC	Daphnia	0.045 mg/l
<i>Acute</i>			
Algae	EC50	Freshwater algae	0.03 mg/l Growth inhibition. 0.019 mg/l Cell multiplication. 0.01 mg/l Growth inhibition. (Scenedesmus capricornutum)
Crustacea	EC50	Daphnia	0.119 mg/l
Fish	EC50	Zebra danio (Danio rerio)	0.144 mg/l
<i>Chronic</i>			
Algae	NOEC	Freshwater algae	0.01 mg/l 0.001 mg/l
Fish	LOEC	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.44 mg/l, 28 d
		Zebra danio (Danio rerio)	0.036 mg/l, 21 d
	NOEC	Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.02 mg/l, 28 d
		Zebra danio (Danio rerio)	0.028 mg/l 0.012 mg/l, 21 d

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

**Bioaccumulative potential** No data available on bioaccumulation.

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

Miconazole nitrate

3.4 Test method not available.

**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

**General information** Effective January 1, 2015 by Special Provision, UN3077 and UN3082 when packaged in inner packages of 5L / 5 KG or less are not subject to the dangerous goods regulations.

**DOT**

Not regulated as dangerous goods.

**IATA**

**UN number** UN3082  
**UN proper shipping name** Environmentally hazardous substance, liquid, n.o.s. (Miconazole nitrate)  
**Transport hazard class(es)**  
**Class** 9  
**Subsidiary risk** -  
**Packing group** III  
**Environmental hazards** Yes  
**ERG Code** 9L  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.  
**Other information**  
**Passenger and cargo aircraft** Allowed.  
**Cargo aircraft only** Allowed.

**IMDG**

**UN number** UN3082

**UN proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Miconazole nitrate)  
**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** Read safety instructions, SDS and emergency procedures before handling.

**Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code** Not established.

**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.

**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 - 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**

Colloidal anhydrous silica (CAS 7631-86-9)

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

Colloidal anhydrous silica (CAS 7631-86-9)

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

Colloidal anhydrous silica (CAS 7631-86-9)

**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**

Country(s) or region	Inventory name	On inventory (yes/no)*
Canada	Domestic Substances List (DSL)	Yes
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** 03-31-2015**Version #** 01**Lilly Lab Code** Health: 1  
Fire: 1  
Reactivity: 0**List of abbreviations**

TWA: Time Weighted Average

**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  
0011+1-877-352-6261  
0011+1-800-428-4441**Revision Information**Product and Company Identification: Product Codes  
Composition / Information on Ingredients: Ingredients  
Physical & Chemical Properties: Multiple Properties  
Toxicological Information: Toxicological Data  
Ecological Information: Ecotoxicity  
Transport Information: Proper Shipping Name/Packing Group  
Regulatory Information: Risk Phrases - Labeling  
GHS: Classification