

SAFETY DATA SHEETS

This SDS packet was issued with item:

078846949

The safety data sheets (SDS) in this packet apply to the individual products listed below. Please refer to invoice for specific item number(s).

021142571 021142572 021142573 021142574 078846907 078846915 078846923 078846931 078929064 078929066

078929067 078929068 078929210 078929211 078929212 078929213

MATERIAL SAFETY DATA SHEET

Version: 1
Revision Date: February 9, 2011

EASYSPOT™

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product Name/Identifier : EasySpot™

Supplier's Name/Address in U.S. : Novartis Animal Health US, Inc.
3200 Northline Avenue, Suite 300
Greensboro, NC 27408
(336) 387-1000

Medical Emergency Assistance (Human or Animal) : **(800) 637-0281 (24 hours / 7 days a week)**

CHEMTREC Emergency Telephone Number : **(800) 424-9300 (24 hours / 7 days a week)**
[International: (703) 527-3887 (collect)]

Preparer Information : Health, Safety & Environmental Dept.
Novartis Animal Health US, Inc.
(712) 477-2811 [8:00 am – 5:00 pm, M – F (CST)]

2. COMPOSITION/INFORMATION ON INGREDIENTS

Product Information

Product Use : This product is an insecticide intended for use on cats to kill fleas, ticks, mosquitoes, and chewing lice.

Active Ingredients : Fipronil

Other Information : It is a violation of federal law to use this product in a manner inconsistent with its labeling. Read product label and *Directions for Use* before buying or using this product.

Composition Information

<u>Component</u> ¹	<u>CAS Registry Number</u>	<u>Concentration</u>	<u>Exposure Limits</u>
Fipronil ²	120068-37-3	9.7%	<u>See Note-3</u>

Notes on Composition Information

¹ Hazardous components present at or greater than 1% (0.1%).

² Chemical name: 1H-Pyrazole-3-carbonitrile, 5-amino-1-[2,6-dichloro-4-(trifluoromethyl)phenyl]-4-[(trifluoromethyl)sulfinyl]-.

³ OSHA and ACGIH have not established air contaminant limits for this compound.

EASYSPOTM**3. HAZARDS IDENTIFICATION****Emergency Overview**

Caution. Harmful if swallowed. Causes eye irritation. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Keep out of reach of children and pets. For external use on cats only. Do not use on other animals. Wear appropriate personal protective equipment when handling the product. Toxic to environmental species. Do not release this product uncontrolled to the environment. Do not discharge product to sewage systems or waterways.

Potential Health Effects

- Eyes** : This product causes eye irritation.
- Skin Irritation/Sensitization/Absorption** : This product may cause slight skin irritation. This product is not expected to be a skin sensitizer or absorbed through the skin.
- Ingestion** : Ingestion is generally not expected to occur or present a hazard during normal conditions of use. Over ingestion of this product may be harmful and result in adverse effects.
- Inhalation** : Inhalation is generally not expected to occur or present a hazard during normal conditions of use. Inhalation to large amounts or prolonged exposure may cause adverse effects.
- Subchronic Toxicity** : There are no subchronic toxicity data on this product. Based on the data of the individual components, the subchronic toxicity of this product is expected to be moderately low.
- Reproductive Toxicity** : There are no reproductive toxicity data on this product. Based on the data of the individual components, this product is not expected to present a reproductive toxicity hazard.
- Teratogenicity (birth defects)** : There are no teratogenicity data on this product. Based on the data of the individual components, this product is not expected to present a teratogenicity hazard.
- Mutagenicity** : There are no mutagenicity data on this product. Based on the data of the individual components, this product is not expected to present a mutagenicity hazard.
- Chronic Effects/Carcinogenicity** : There are no chronic effects or carcinogenicity data on this product. Based on the data of the individual components, this product is not expected to present a chronic or carcinogenicity hazard.
- NTP: Not listed
 - IARC: Not listed
 - OSHA: Not listed

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Medical Conditions Aggravated by Exposure	:	Not available.
Incompatibility	:	Not available.
Signs & Symptoms of Exposure	:	Eye irritation and slight skin irritation. Excessive exposure may cause sweating, nausea, vomiting, headache, and dizziness.

4. FIRST AID MEASURES

Eye Contact	:	Hold eyes open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice.
Skin Contact	:	Wash with plenty of soap and water. Get medical attention if irritation persists.
Ingestion	:	Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
Inhalation	:	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration preferably by mouth-to-mouth if possible. Call a poison control center or doctor for treatment advice.
Note to Physicians	:	This product is an insecticide intended for use on cats to kill fleas, ticks, mosquitoes, and chewing lice. This product contains the active ingredient fipronil. Fipronil is a phenylpyrazole insecticide. Treat patient symptomatically. <u>See</u> Section 2 for the individual hazardous components in this product.
Other	:	Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

5. FIRE FIGHTING MEASURES

Flash Point	:	Not applicable.
Flammable Limits	:	Not available.
Autoignition Temperature	:	Not available.

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Hazardous Combustion Products	:	Thermal decomposition may generate irritating and/or toxic vapors.
Extinguishing Media	:	Use water spray, carbon dioxide, dry chemical, or alcohol foam when fighting fires involving this material.
Fire Fighting Instructions	:	This material is not flammable, however, it may burn. Wear a self-contained breathing apparatus pressure demand (NIOSH approved or equivalent) and full protective gear.
Explosion Data	:	Not available.
Other	:	None.

6. ACCIDENTAL RELEASE MEASURES

Spill and Cleanup Procedures	:	Collect spilled material and place in a disposal container. This product may be slippery if spilled.
Other Instructions	:	Do not reuse recovered material. Do not release this product uncontrolled to the environment.

7. HANDLING AND STORAGE

Handling	:	Avoid contact with skin, eyes, and clothing. Handle only in well ventilated locations.
Storage	:	Do not contaminate water, food, or feed by storage and disposal. Do not remove from the pack until ready for use. Store in a cool (below 77 °F (25 °C)) dry place inaccessible to children and pets. Do not refrigerate. Protect from direct sunlight.
Use Information	:	It is a violation of federal law to use this product in a manner inconsistent with its labeling. Read product label and <i>Directions for Use</i> before buying or using this product.
Other	:	Apply this product only as specified on the label.

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

Eye/Face Protection	:	Eye protection should be worn during use and handling operations. Face protection should be worn when there is a potential for exposure to the face.
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- Skin Protection** : Skin protection including gloves, protective clothing, and chemical-resistant footwear should be worn when there is a potential for dermal exposure to this product during use and handling operations.
- Respiratory Protection** : Respiratory protection is not expected to be necessary during use and handling operations unless the product becomes airborne above low levels.
- Engineering Controls** : Good general ventilation should be sufficient to control low airborne levels of the product. If the product is present above low levels, local exhaust or other measures may be necessary to control worker exposure.
- Exposure Guidelines** : There are no established exposure guidelines or limits for this product. See Section 2 for additional information.

9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance/Physical State** : Clear liquid
- Odor** : Odorless
- pH** : Not available
- Vapor Pressure** : Not available
- Vapor Density** : Not available
- Boiling Point** : Not available
- Freezing/Melting Point** : Not available
- Specific Gravity** : Not available
- Octanol/Water Partition Coefficient** : Not available
- Solubility in Water** : Not available
- Volatility** : Not available

10. STABILITY AND REACTIVITY

- Stability** : Stable under normal use and storage conditions.
- Conditions to Avoid** : Avoid high temperatures and direct sunlight. Do not refrigerate.
- Incompatibility/Materials to Avoid** : Not available.
- Hazardous Decomposition or Byproducts** : Not available.
- Hazardous Polymerization** : Hazardous polymerization will not occur.

EASYSPOTM**11. TOXICOLOGICAL INFORMATION****Toxicological Data on the Product**

- Acute Toxicological Data** : There are no acute toxicological data on the product. The acute toxicity of the product is expected to be moderately low.
- Eye Irritation Data** : There are no eye irritation data on this product. Based on the data of the individual components, this product is expected to cause eye irritation.
- Skin Irritation/Sensitization/Absorption Data** : There are no skin irritation data on this product. Based on the data of the individual components, this product may cause slight skin irritation. This product is not expected to be a skin sensitizer or absorbed through the skin.
- Subchronic Toxicity Data** : There are no subchronic data on this product. Based on the data of the individual components, including the active ingredient, the subchronic toxicity of this product is expected to be moderately low.
- Reproductive Toxicity Data** : There are no reproductive toxicity data on this product. Based on the data of the individual components, including the active ingredient, this product is not expected to present a reproductive toxicity hazard.
- Teratogenicity (birth defects) Data** : There are no teratogenicity data on this product. Based on the data of the individual components, including the active ingredient, this product is not expected to present a teratogenicity hazard.
- Mutagenicity Data** : There are no mutagenicity data on this product. Based on the data of the individual components, including the active ingredient, this product is not expected to present a mutagenicity hazard.
- Chronic/Carcinogenicity Data** : There are no chronic effects or carcinogenicity data on this product. Based on the data of the individual components, including the active ingredient, this product is not expected to present a chronic toxicity or carcinogenicity hazard.

Toxicological Data on Fipronil

- Acute Toxicological Data** : Acute oral LD₅₀: 97 mg/kg (rat)
Acute oral LD₅₀: 95 mg/kg (mice)
Acute dermal LD₅₀: > 2,000 mg/kg (rat)
Acute dermal LD₅₀: 354 mg/kg (rabbit)
Acute inhalation LC₅₀: 0.390 mg/l (rat) [4-hr.]
- Eye Irritation Data** : Fipronil produced mild transient eye irritation when tested in rabbits.

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- Skin Irritation/Sensitization/Absorption Data** : Fipronil produced slight skin irritation when tested in rabbits. Fipronil did not produce skin sensitization when tested in guinea pigs. Skin absorption testing indicates that fipronil is generally not well absorbed through the skin.
- Subchronic Toxicity Data** : Subchronic testing on fipronil produced over activity, irritability, neurotoxic effects, body weight effects, and liver effects. Animal deaths were also reported.
- Reproductive Toxicity Data** : Reproductive toxicity testing on fipronil in rats produced certain reproductive and fertility effects. These effects, however, were only observed at relatively high doses that also caused parental toxicity. There were no reproductive or fertility effects at the lowest observed effect level (LOEL) for parental toxicity.
- Teratogenicity (birth defects) Data** : Limited teratology testing on fipronil in rats and rabbits was not associated with significant developmental toxicity.
- Mutagenicity Data** : Testing on fipronil has produced negative results in in vitro and in vivo mutagenicity assays.
- Chronic/Carcinogenicity Data** : Fipronil has been classified by the U.S. EPA as a Group C (Possible Human) carcinogen based on an increase in thyroid follicular cell tumors in both sexes of the rat.
- A chronic feeding study on fipronil in rats produced seizures, including seizures resulting in death, decreased body weight gain, decreased food consumption, decreased hematology measures, alterations in clinical chemistry, alterations in thyroid hormones, alterations in urine chemistry, changes on gross necropsy, increase in liver and thyroid weights, and kidney effects.

12. ECOLOGICAL INFORMATION**Ecological Data on the Product**

- Ecotoxicological Data** : No ecotoxicological data are available on this product. This product is expected to be toxic to fish, Daphnia, algae, and other aquatic species. This product is also expected to be toxic to upland game birds.
- Environmental Fate Data** : No environmental fate data are available on this product. This product is expected to biodegrade slowly and not expected to bioaccumulate.
- Physical/Chemical Properties** : See Section 9.

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Ecological Data on Fipronil

Ecotoxicological Data	:	<p>Fish LC₅₀ [96-hour]: 0.246 mg/L (rainbow trout) Fish LC₅₀ [96-hour]: 0.083 mg/L (bluegill sunfish) Daphnia EC₅₀ [48-hour]: 0.190 mg/L Algae EC₅₀ [96-hour]: 0.14 mg/L (green algae) Algae EC₅₀ [96-hour]: >0.17 mg/L (blue-green algae) Shrimp LC₅₀ [96-hour]: 140 ng/L (mysid shrimp) Oysters EC₅₀ [96-hour]: 0.77 mg/L Avian reproduction NOEC: 1,000 ppm (mallard) Avian reproduction NOEC: 10 ppm (bobwhite quail)</p>
Environmental Fate Data	:	<p>Fipronil biodegrades slowly in the environment and is not expected to bioaccumulate.</p>
Physical/Chemical Properties	:	<p>Water solubility: 2.4 mg/L (25 °C) Log K_{ow}: 4.01 Vapor pressure: 2.8 x 10⁻⁹ mm Hg (25 °C) Density: 1.6262 g/ml (20 °C)</p>
Other Information	:	<p>The data presented here on the fipronil are for this active ingredient only and do not necessarily represent the ecological profile of the product as a whole.</p>

13. DISPOSAL CONSIDERATIONS

Waste Classification	:	<p>If discarded in its manufactured form, this product is a solid (non-hazardous) waste under RCRA. Novartis Animal Health US, however, recommends that for purposes of good product stewardship practices this product be disposed as a hazardous waste to prevent uncontrolled release to the environment.</p> <p>It is the responsibility of the user to determine at the time of disposal whether a material containing the product or derived from the product should be classified as a solid or hazardous waste.</p>
U.S. EPA Waste Number	:	<p>Not applicable.</p>
Special Instructions	:	<p>Dispose in conformance with all federal, state, and local regulations. Do not release this product uncontrolled to the environment. Do not discharge product into ponds, streams, or sewage systems. Do not contaminate water, food, or feed by storage and disposal. Do not reuse or refill the container.</p>

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UN Number : —
Hazard Class : —
Packing Group : —
Proper Shipping Name : —
Label : —
Marine Pollutant : —
Additional Information/Remarks : Not regulated as a hazardous material/dangerous goods.

IMDG

UN Number : —
Hazard Class : —
Packing Group : —
Proper Shipping Name : —
Label : —
Marine Pollutant : —
Additional Information/Remarks : Not regulated as a hazardous material/dangerous goods.

ICAO/IATA

UN Number : —
Hazard Class : —
Packing Group : —
Proper Shipping Name : —
Label : —
Marine Pollutant : —
Additional Information/Remarks : Not regulated as a hazardous material/dangerous goods.

15. REGULATORY INFORMATION

OSHA Classification : This product is considered to be hazardous under the OSHA Hazard Communication Standard.

FIFRA : This product is a pesticide regulated under the U.S. Federal Insecticide, Rodenticide, and Fungicide Act.

Waste Classification : If discarded in its manufactured form, this product is a solid (non-hazardous) waste under RCRA. Novartis Animal Health US, however, recommends that for purposes of good product stewardship practices this product be disposed as a hazardous waste to prevent uncontrolled release to the environment.

It is the responsibility of the user to determine at the time of disposal whether a material containing the product or derived from the product should be classified as a solid or hazardous waste.

See Section 13 for additional information.

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- EPCRA/SARA III** : This product contains no toxic chemicals at or above the de-minimis threshold subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372.
- International Regulations** : This product may be regulated by various countries' pesticide-regulating agencies.
- California Proposition 65** : This product is in compliance with California Proposition 65.

16. OTHER INFORMATION

- Label Text** : See product label and *Directions for Use*
- Hazard Rating System** : HMIS Label:
· Health = 1
· Flammability = 1
· Physical Hazard = 0
- Disclaimer** : The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
- Previous MSDS Version Date** : None.

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PARASTAR™

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY/UNDERTAKING

Product Name/Identifier : Parastar™

Supplier's Name/Address in U.S. : Novartis Animal Health US, Inc.
3200 Northline Avenue, Suite 300
Greensboro, NC 27408
(336) 387-1000

Medical Emergency Assistance (Human or Animal) : **(800) 637-0281 (24 hours / 7 days a week)**

CHEMTREC Emergency Telephone Number : **(800) 424-9300 (24 hours / 7 days a week)**
[International: (703) 527-3887 (collect)]

Preparer Information : Health, Safety & Environmental Dept.
Novartis Animal Health US, Inc.
(712) 477-2811 [8:00 am – 5:00 pm, M – F (CST)]

2. COMPOSITION/INFORMATION ON INGREDIENTS

Product Information

Product Use : This product is an insecticide intended for use on dogs to kill fleas, ticks, mosquitoes, and chewing lice.

Active Ingredients : Fipronil

Other Information : It is a violation of federal law to use this product in a manner inconsistent with its labeling. Read product label and *Directions for Use* before buying or using this product.

Composition Information

<u>Component</u> ¹	<u>CAS Registry Number</u>	<u>Concentration</u>	<u>Exposure Limits</u>
Fipronil ²	120068-37-3	9.7%	<u>See Note-3</u>

Notes on Composition Information

¹ Hazardous components present at or greater than 1% (0.1%).

² Chemical name: 1H-Pyrazole-3-carbonitrile, 5-amino-1-[2,6-dichloro-4-(trifluoromethyl)phenyl]-4-[(trifluoromethyl)sulfinyl]-.

³ OSHA and ACGIH have not established air contaminant limits for this compound.

PARASTAR™**3. HAZARDS IDENTIFICATION****Emergency Overview**

Caution. Harmful if swallowed. Causes eye irritation. Avoid contact with skin, eyes, and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Keep out of reach of children and pets. For external use on dogs only. Do not use on other animals. Wear appropriate personal protective equipment when handling the product. Toxic to environmental species. Do not release this product uncontrolled to the environment. Do not discharge product to sewage systems or waterways.

Potential Health Effects

- Eyes** : This product causes eye irritation.
- Skin Irritation/Sensitization/Absorption** : This product may cause slight skin irritation. This product is not expected to be a skin sensitizer or absorbed through the skin.
- Ingestion** : Ingestion is generally not expected to occur or present a hazard during normal conditions of use. Over ingestion of this product may be harmful and result in adverse effects.
- Inhalation** : Inhalation is generally not expected to occur or present a hazard during normal conditions of use. Inhalation to large amounts or prolonged exposure may cause adverse effects.
- Subchronic Toxicity** : There are no subchronic toxicity data on this product. Based on the data of the individual components, the subchronic toxicity of this product is expected to be moderately low.
- Reproductive Toxicity** : There are no reproductive toxicity data on this product. Based on the data of the individual components, this product is not expected to present a reproductive toxicity hazard.
- Teratogenicity (birth defects)** : There are no teratogenicity data on this product. Based on the data of the individual components, this product is not expected to present a teratogenicity hazard.
- Mutagenicity** : There are no mutagenicity data on this product. Based on the data of the individual components, this product is not expected to present a mutagenicity hazard.
- Chronic Effects/Carcinogenicity** : There are no chronic effects or carcinogenicity data on this product. Based on the data of the individual components, this product is not expected to present a chronic or carcinogenicity hazard.
- NTP: Not listed
 - IARC: Not listed
 - OSHA: Not listed

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Medical Conditions Aggravated by Exposure	:	Not available.
Incompatibility	:	Not available.
Signs & Symptoms of Exposure	:	Eye irritation and slight skin irritation. Excessive exposure may cause sweating, nausea, vomiting, headache, and dizziness.

4. FIRST AID MEASURES

Eye Contact	:	Hold eyes open and rinse slowly and gently with water for 15 - 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center or doctor for treatment advice.
Skin Contact	:	Wash with plenty of soap and water. Get medical attention if irritation persists.
Ingestion	:	Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
Inhalation	:	Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration preferably by mouth-to-mouth if possible. Call a poison control center or doctor for treatment advice.
Note to Physicians	:	This product is an insecticide intended for use on dogs to kill fleas, ticks, mosquitoes, and chewing lice. This product contains the active ingredient fipronil. Fipronil is a phenylpyrazole insecticide. Treat patient symptomatically. <u>See</u> Section 2 for the individual hazardous components in this product.
Other	:	Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

5. FIRE FIGHTING MEASURES

Flash Point	:	Not applicable.
Flammable Limits	:	Not available.
Autoignition Temperature	:	Not available.

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Hazardous Combustion Products	:	Thermal decomposition may generate irritating and/or toxic vapors.
Extinguishing Media	:	Use water spray, carbon dioxide, dry chemical, or alcohol foam when fighting fires involving this material.
Fire Fighting Instructions	:	This material is not flammable, however, it may burn. Wear a self-contained breathing apparatus pressure demand (NIOSH approved or equivalent) and full protective gear.
Explosion Data	:	Not available.
Other	:	None.

6. ACCIDENTAL RELEASE MEASURES

Spill and Cleanup Procedures	:	Collect spilled material and place in a disposal container. This product may be slippery if spilled.
Other Instructions	:	Do not reuse recovered material. Do not release this product uncontrolled to the environment.

7. HANDLING AND STORAGE

Handling	:	Avoid contact with skin, eyes, and clothing. Handle only in well ventilated locations.
Storage	:	Do not contaminate water, food, or feed by storage and disposal. Do not remove from the pack until ready for use. Store in a cool (below 77 °F (25 °C)) dry place inaccessible to children and pets. Do not refrigerate. Protect from direct sunlight.
Use Information	:	It is a violation of federal law to use this product in a manner inconsistent with its labeling. Read product label and <i>Directions for Use</i> before buying or using this product.
Other	:	Apply this product only as specified on the label.

8. EXPOSURE CONTROL AND PERSONAL PROTECTION

Eye/Face Protection	:	Eye protection should be worn during use and handling operations. Face protection should be worn when there is a potential for exposure to the face.
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- Skin Protection** : Skin protection including gloves, protective clothing, and chemical-resistant footwear should be worn when there is a potential for dermal exposure to this product during use and handling operations.
- Respiratory Protection** : Respiratory protection is not expected to be necessary during use and handling operations unless the product becomes airborne above low levels.
- Engineering Controls** : Good general ventilation should be sufficient to control low airborne levels of the product. If the product is present above low levels, local exhaust or other measures may be necessary to control worker exposure.
- Exposure Guidelines** : There are no established exposure guidelines or limits for this product. See Section 2 for additional information.
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9. PHYSICAL AND CHEMICAL PROPERTIES

- Appearance/Physical State** : Clear liquid
- Odor** : Odorless
- pH** : Not available
- Vapor Pressure** : Not available
- Vapor Density** : Not available
- Boiling Point** : Not available
- Freezing/Melting Point** : Not available
- Specific Gravity** : Not available
- Octanol/Water Partition Coefficient** : Not available
- Solubility in Water** : Not available
- Volatility** : Not available
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10. STABILITY AND REACTIVITY

- Stability** : Stable under normal use and storage conditions.
- Conditions to Avoid** : Avoid high temperatures and direct sunlight. Do not refrigerate.
- Incompatibility/Materials to Avoid** : Not available.
- Hazardous Decomposition or Byproducts** : Not available.
- Hazardous Polymerization** : Hazardous polymerization will not occur.
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MATERIAL SAFETY DATA SHEETVersion: 1
Revision Date: February 9, 2011**PARASTAR™****11. TOXICOLOGICAL INFORMATION****Toxicological Data on the Product**

- Acute Toxicological Data** : There are no acute toxicological data on the product. The acute toxicity of the product is expected to be moderately low.
- Eye Irritation Data** : There are no eye irritation data on this product. Based on the data of the individual components, this product is expected to cause eye irritation.
- Skin Irritation/Sensitization/Absorption Data** : There are no skin irritation data on this product. Based on the data of the individual components, this product may cause slight skin irritation. This product is not expected to be a skin sensitizer or absorbed through the skin.
- Subchronic Toxicity Data** : There are no subchronic data on this product. Based on the data of the individual components, including the active ingredient, the subchronic toxicity of this product is expected to be moderately low.
- Reproductive Toxicity Data** : There are no reproductive toxicity data on this product. Based on the data of the individual components, including the active ingredient, this product is not expected to present a reproductive toxicity hazard.
- Teratogenicity (birth defects) Data** : There are no teratogenicity data on this product. Based on the data of the individual components, including the active ingredient, this product is not expected to present a teratogenicity hazard.
- Mutagenicity Data** : There are no mutagenicity data on this product. Based on the data of the individual components, including the active ingredient, this product is not expected to present a mutagenicity hazard.
- Chronic/Carcinogenicity Data** : There are no chronic effects or carcinogenicity data on this product. Based on the data of the individual components, including the active ingredient, this product is not expected to present a chronic toxicity or carcinogenicity hazard.

Toxicological Data on Fipronil

- Acute Toxicological Data** : Acute oral LD₅₀: 97 mg/kg (rat)
Acute oral LD₅₀: 95 mg/kg (mice)
Acute dermal LD₅₀: > 2,000 mg/kg (rat)
Acute dermal LD₅₀: 354 mg/kg (rabbit)
Acute inhalation LC₅₀: 0.390 mg/l (rat) [4-hr.]
- Eye Irritation Data** : Fipronil produced mild transient eye irritation when tested in rabbits.

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- Skin Irritation/Sensitization/Absorption Data** : Fipronil produced slight skin irritation when tested in rabbits. Fipronil did not produce skin sensitization when tested in guinea pigs. Skin absorption testing indicates that fipronil is generally not well absorbed through the skin.
- Subchronic Toxicity Data** : Subchronic testing on fipronil produced over activity, irritability, neurotoxic effects, body weight, and liver effects. Animal deaths were also reported.
- Reproductive Toxicity Data** : Reproductive toxicity testing on fipronil in rats produced certain reproductive and fertility effects. These effects, however, were only observed at relatively high doses that also caused parental toxicity. There were no reproductive or fertility effects at the lowest observed effect level (LOEL) for parental toxicity.
- Teratogenicity (birth defects) Data** : Limited teratology testing on fipronil in rats and rabbits was not associated with significant developmental toxicity.
- Mutagenicity Data** : Testing on fipronil has produced negative results in in vitro and in vivo mutagenicity assays.
- Chronic/Carcinogenicity Data** : Fipronil has been classified by the U.S. EPA as a Group C (Possible Human) carcinogen based on an increase in thyroid follicular cell tumors in both sexes of the rat.
- A chronic feeding study on fipronil in rats produced seizures, including seizures resulting in death, decreased body weight gain, decreased food consumption, decreased hematology measures, alterations in clinical chemistry, alterations in thyroid hormones, alterations in urine chemistry, changes on gross necropsy, increase in liver and thyroid weights, and kidney effects.

12. ECOLOGICAL INFORMATION

Ecological Data on the Product

- Ecotoxicological Data** : No ecotoxicological data are available on this product. This product is expected to be toxic to fish, Daphnia, algae, and other aquatic species. This product is also expected to be toxic to upland game birds.
- Environmental Fate Data** : No environmental fate data are available on this product. This product is expected to biodegrade slowly and not expected to bioaccumulate.
- Physical/Chemical Properties** : See Section 9.

MATERIAL SAFETY DATA SHEETVersion: 1
Revision Date: February 9, 2011**PARASTAR™****Ecological Data on Fipronil**

Ecotoxicological Data	:	Fish LC ₅₀ [96-hour]: 0.246 mg/L (rainbow trout) Fish LC ₅₀ [96-hour]: 0.083 mg/L (bluegill sunfish) Daphnia EC ₅₀ [48-hour]: 0.190 mg/L Algae EC ₅₀ [96-hour]: 0.14 mg/L (green algae) Algae EC ₅₀ [96-hour]: >0.17 mg/L (blue-green algae) Shrimp LC ₅₀ [96-hour]: 140 ng/L (mysid shrimp) Oysters EC ₅₀ [96-hour]: 0.77 mg/L Avian reproduction NOEC: 1,000 ppm (mallard) Avian reproduction NOEC: 10 ppm (bobwhite quail)
Environmental Fate Data	:	Fipronil biodegrades slowly in the environment and is not expected to bioaccumulate.
Physical/Chemical Properties	:	Water solubility: 2.4 mg/L (25 °C) Log K _{ow} : 4.01 Vapor pressure: 2.8 x 10 ⁻⁹ mm Hg (25 °C) Density: 1.6262 g/ml (20 °C)
Other Information	:	The data presented here on the fipronil are for this active ingredient only and do not necessarily represent the ecological profile of the product as a whole.

13. DISPOSAL CONSIDERATIONS

Waste Classification	:	If discarded in its manufactured form, this product is a solid (non-hazardous) waste under RCRA. Novartis Animal Health US, however, recommends that for purposes of good product stewardship practices this product be disposed as a hazardous waste to prevent uncontrolled release to the environment. It is the responsibility of the user to determine at the time of disposal whether a material containing the product or derived from the product should be classified as a solid or hazardous waste.
U.S. EPA Waste Number	:	Not applicable.
Special Instructions	:	Dispose in conformance with all federal, state, and local regulations. Do not release this product uncontrolled to the environment. Do not discharge product into ponds, streams, or sewage systems. Do not contaminate water, food, or feed by storage and disposal. Do not reuse or refill the container.

MATERIAL SAFETY DATA SHEET

Version: 1
Revision Date: February 9, 2011

PARASTAR™

14. TRANSPORT INFORMATION

U.S. DOT

UN Number : —
 Hazard Class : —
 Packing Group : —
 Proper Shipping Name : —
 Label : —
 Marine Pollutant : —
 Additional Information/Remarks : Not regulated as a hazardous material/dangerous goods.

IMDG

UN Number : —
 Hazard Class : —
 Packing Group : —
 Proper Shipping Name : —
 Label : —
 Marine Pollutant : —
 Additional Information/Remarks : Not regulated as a hazardous material/dangerous goods.

ICAO/IATA

UN Number : —
 Hazard Class : —
 Packing Group : —
 Proper Shipping Name : —
 Label : —
 Marine Pollutant : —
 Additional Information/Remarks : Not regulated as a hazardous material/dangerous goods.

15. REGULATORY INFORMATION

OSHA Classification : This product is considered to be hazardous under the OSHA Hazard Communication Standard.

FIFRA : This product is a pesticide regulated under the U.S. Federal Insecticide, Rodenticide, and Fungicide Act.

Waste Classification : If discarded in its manufactured form, this product is a solid (non-hazardous) waste under RCRA. Novartis Animal Health US, however, recommends that for purposes of good product stewardship practices this product be disposed as a hazardous waste to prevent uncontrolled release to the environment.

It is the responsibility of the user to determine at the time of disposal whether a material containing the product or derived from the product should be classified as a solid or hazardous waste.

See Section 13 for additional information.

MATERIAL SAFETY DATA SHEETVersion: 1
Revision Date: February 9, 2011**PARASTAR™**

- EPCRA/SARA III** : This product contains no toxic chemicals at or above the de-minimis threshold subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 and 40 CFR 372.
- International Regulations** : This product may be regulated by various countries' pesticide-regulating agencies.
- California Proposition 65** : This product is in compliance with California Proposition 65.

16. OTHER INFORMATION

- Label Text** : See product label and *Directions for Use*
- Hazard Rating System** : HMIS Label:
· Health = 1
· Flammability = 1
· Physical Hazard = 0
- Disclaimer** : The information provided in this Material Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.
- Previous MSDS Version Date** : None.

1. Identification

Product identifier PARASTAR

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 1-336-387-1000

SDS E-mail lilly_msds@lilly.com

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

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 4
Acute toxicity, inhalation	Category 4
Serious eye damage/eye irritation	Category 2
Specific target organ toxicity, repeated exposure	Category 1

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement

H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.

Precautionary statement

Prevention

P260	Do not breathe mist or vapor.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Response

P301 + P312	If swallowed: Call a poison center/doctor if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304 + P340	If inhaled: Remove person to fresh air and keep comfortable for breathing.
P312	Call a poison center/doctor if you feel unwell.

P330	Rinse mouth.
P337 + P313	If eye irritation persists: Get medical advice/attention.
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	%
Fipronil		120068-37-3	9.7
Other components below reportable levels			90.3

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	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.
Most important symptoms/effects, acute and delayed	Harmful if swallowed. Harmful if inhaled. Eye irritation. Dizziness. Nausea, vomiting. Headache. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	NOT FOR HUMAN USE! If you feel unwell, seek medical advice (show the label where possible). 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	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

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. Do not breathe mist or vapor. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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Methods and materials for containment and cleaning up	In case of spills, beware of slippery floors and surfaces. Should not be released into the environment. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). 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	Do not breathe mist or vapor. 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 a cool, dry place out of direct sunlight. Store in original tightly closed container. Do not refrigerate. 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).
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	Wear safety glasses with side shields (or goggles).
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. 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	Liquid.
Form	Liquid.
Color	Clear.
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)	This product is a nonflammable aqueous solution.
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	0.000000003 mm Hg (25 °C)
Vapor density	No data available.
Relative density	No data available.
Solubility(ies)	
Solubility (water)	2.4 mg/l (25 °C) (Fipronil)
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	1.63 g/ml (20 °C) (Fipronil)
Explosive properties	Not explosive
Oxidizing properties	No oxidizing properties.
Percent volatile	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	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid exposure to high temperatures or direct sunlight. Do not refrigerate. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on toxicological effects

Acute toxicity Harmful if inhaled. Harmful if swallowed.

Components	Species	Test Results
Fipronil (CAS 120068-37-3)		
Acute		
Dermal		
LD50	New Zealand white rabbit	354 mg/kg
	Rat	> 2000 mg/kg
Inhalation		
LC50	Albino Sprague-Dawley rat	< 0.42 mg/l, 4 Hours
Oral		
LD50	Mouse	98 mg/kg
	Rat	92 mg/kg
Skin corrosion/irritation	Rabbit: Slight irritation. (Fipronil) Based on available data, the classification criteria are not met.	
Serious eye damage/eye irritation	Causes eye irritation.	
Respiratory or skin sensitization		
Respiratory sensitization	Due to partial or complete lack of data the classification is not possible.	
Skin sensitization	Not a skin sensitizer. Did not cause sensitization on laboratory animals. (Fipronil)	

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Result in genetic toxicity assays (in vitro and in vivo): Negative (Fipronil)

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. (Fipronil)
Based on available data, the classification criteria are not met.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Causes damage to organs through prolonged or repeated exposure.

A chronic feeding study on fipronil in rats produced seizures, including seizures resulting in death, decreased body weight gain, decreased food consumption, decreased hematology measures, alterations in clinical chemistry, alterations in thyroid hormones, alterations in urine chemistry, changes on gross necropsy, increase in liver and thyroid weights, and kidney effects.

Aspiration hazard Not an aspiration hazard.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Components		Species	Test Results
Fipronil (CAS 120068-37-3)			
Other	NOEC	Duck	1000 ppm (Avian reproduction)
		Quail	10 ppm (Avian reproduction)
Aquatic			
Algae	EC50	Blue-green algae (<i>Spirulina platensis</i>)	> 0.17 mg/l, 96 hours
		Green algae (<i>Chlamydomonas variabilis</i>)	0.14 mg/l, 96 hours
Crustacea	EC50	Daphnia	0.19 mg/l, 48 hours
		Oyster (<i>Crassostrea cucullata</i>)	0.77 mg/l, 96 hours
	LC50	Shrimp (<i>Mysidopsis bigelowi</i>)	0.14 µg/l, 96 hours
Fish	LC50	Bluegill (<i>Lepomis macrochirus</i>)	0.083 mg/l, 96 hours
		Rainbow Trout	0.246 mg/l, 96 hours

Persistence and degradability Fipronil biodegrades slowly in the environment and is not expected to bioaccumulate.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

PARASTAR	4.01
Fipronil	4

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.

Waste codes The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

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. (Fipronil)

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

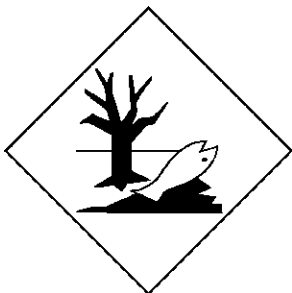
UN number UN3082
UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FIPRONIL)
Transport hazard class(es)

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.
 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)

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

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

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)	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 05-29-2015

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

Revision Information Product and Company Identification: Alternate Trade Names
GHS: Classification

1. Identification

Product identifier EASYSPOT

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 1-336-387-1000

SDS E-mail lilly_msds@lilly.com

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

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 4
Acute toxicity, inhalation	Category 4
Serious eye damage/eye irritation	Category 2
Specific target organ toxicity, repeated exposure	Category 1

OSHA defined hazards Not classified.

Label elements



Signal word Danger

Hazard statement

H302	Harmful if swallowed.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H372	Causes damage to organs through prolonged or repeated exposure.

Precautionary statement

Prevention

P260	Do not breathe mist or vapor.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

Response

P301 + P312	If swallowed: Call a poison center/doctor if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304 + P340	If inhaled: Remove person to fresh air and keep comfortable for breathing.
P312	Call a poison center/doctor if you feel unwell.

P330	Rinse mouth.
P337 + P313	If eye irritation persists: Get medical advice/attention.
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	%
Fipronil		120068-37-3	9.7
Other components below reportable levels			90.3

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	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if irritation develops and persists.
Ingestion	Rinse mouth. If vomiting occurs, keep head low so that stomach content doesn't get into the lungs. Get medical advice/attention if you feel unwell.
Most important symptoms/effects, acute and delayed	Harmful if swallowed. Harmful if inhaled. Eye irritation. Dizziness. Nausea, vomiting. Headache. Prolonged exposure may cause chronic effects.
Indication of immediate medical attention and special treatment needed	Treat symptomatically.
General information	NOT FOR HUMAN USE! If you feel unwell, seek medical advice (show the label where possible). 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	Do not use water jet as an extinguisher, as this will spread the fire.
Specific hazards arising from the chemical	During fire, gases hazardous to health may be formed.
Special protective equipment and precautions for firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Fire fighting equipment/instructions	Move containers from fire area if you can do so without risk.
Specific methods	Use standard firefighting procedures and consider the hazards of other involved materials.

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. Do not breathe mist or vapor. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.
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Methods and materials for containment and cleaning up	In case of spills, beware of slippery floors and surfaces. Should not be released into the environment. Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water. Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). 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	Do not breathe mist or vapor. 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 a cool, dry place out of direct sunlight. Store in original tightly closed container. Do not refrigerate. 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).
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	Wear safety glasses with side shields (or goggles).
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. 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	Liquid.
Form	Liquid.
Color	Clear.
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)	This product is a nonflammable aqueous solution.
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	0.000000003 mm Hg (25 °C)
Vapor density	No data available.
Relative density	No data available.
Solubility(ies)	
Solubility (water)	2.4 mg/l (25 °C) (Fipronil)
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	1.63 g/ml (20 °C) (Fipronil)
Explosive properties	Not explosive
Oxidizing properties	No oxidizing properties.
Percent volatile	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	No dangerous reaction known under conditions of normal use.
Conditions to avoid	Avoid exposure to high temperatures or direct sunlight. Do not refrigerate. Contact with incompatible materials.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

11. Toxicological information

Information on toxicological effects

Acute toxicity Harmful if inhaled. Harmful if swallowed.

Components	Species	Test Results
Fipronil (CAS 120068-37-3)		
Acute		
Dermal		
LD50	New Zealand white rabbit	354 mg/kg
	Rat	> 2000 mg/kg
Inhalation		
LC50	Albino Sprague-Dawley rat	< 0.42 mg/l, 4 Hours
Oral		
LD50	Mouse	98 mg/kg
	Rat	92 mg/kg
Skin corrosion/irritation	Rabbit: Slight irritation. (Fipronil) Based on available data, the classification criteria are not met.	
Serious eye damage/eye irritation	Causes eye irritation.	
Respiratory or skin sensitization		
Respiratory sensitization	Due to partial or complete lack of data the classification is not possible.	
Skin sensitization	Not a skin sensitizer. Did not cause sensitization on laboratory animals. (Fipronil)	

Germ cell mutagenicity No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Result in genetic toxicity assays (in vitro and in vivo): Negative (Fipronil)

Carcinogenicity This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicity In laboratory animal studies, effects on reproduction have been seen only at doses that produced significant toxicity to the parent animals. (Fipronil)
Based on available data, the classification criteria are not met.

Specific target organ toxicity - single exposure Not classified.

Specific target organ toxicity - repeated exposure Causes damage to organs through prolonged or repeated exposure.

A chronic feeding study on fipronil in rats produced seizures, including seizures resulting in death, decreased body weight gain, decreased food consumption, decreased hematology measures, alterations in clinical chemistry, alterations in thyroid hormones, alterations in urine chemistry, changes on gross necropsy, increase in liver and thyroid weights, and kidney effects.

Aspiration hazard Not an aspiration hazard.

12. Ecological information

Ecotoxicity Very toxic to aquatic life with long lasting effects.

Components		Species	Test Results
Fipronil (CAS 120068-37-3)			
Other	NOEC	Duck	1000 ppm (Avian reproduction)
		Quail	10 ppm (Avian reproduction)
Aquatic			
Algae	EC50	Blue-green algae (<i>Spirulina platensis</i>)	> 0.17 mg/l, 96 hours
		Green algae (<i>Chlamydomonas variabilis</i>)	0.14 mg/l, 96 hours
Crustacea	EC50	Daphnia	0.19 mg/l, 48 hours
		Oyster (<i>Crassostrea cucullata</i>)	0.77 mg/l, 96 hours
	LC50	Shrimp (<i>Mysidopsis bigelowi</i>)	0.14 µg/l, 96 hours
Fish	LC50	Bluegill (<i>Lepomis macrochirus</i>)	0.083 mg/l, 96 hours
		Rainbow Trout	0.246 mg/l, 96 hours

Persistence and degradability Fipronil biodegrades slowly in the environment and is not expected to bioaccumulate.

Bioaccumulative potential No data available.

Partition coefficient n-octanol / water (log Kow)

EASYSPOT	4.01
Fipronil	4

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.

Waste codes The waste code should be assigned in discussion between the user, the producer and the waste disposal company.

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. (Fipronil)

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

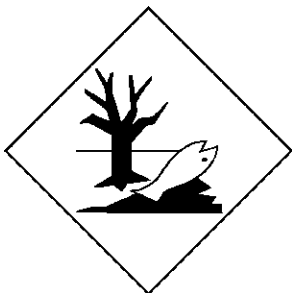
UN number UN3082
UN proper shipping name ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (FIPRONIL)
Transport hazard class(es)

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.
 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)

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

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

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)	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 05-25-2015

Revision date 05-29-2015

Version # 02

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 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.

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Revision Information

Product and Company Identification: Alternate Trade Names
GHS: Classification