AGITA® 10 WG

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

Product Name/Identifier : AGITA® 10 WG
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 : Insecticide for use in the control of nuisance flies in and around animal housing.

Active Ingredients : · Thiamethoxam
· (Z)-9-Tricosene

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

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Registry Number</th>
<th>Concentration</th>
<th>Exposure Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Thiamethoxam</td>
<td>153719-23-4</td>
<td>10%</td>
<td>3 mg/m³ TWA See Note-4</td>
</tr>
</tbody>
</table>
Notes on Composition Information

1 Hazardous components present at or greater than 1% (0.1%).
2 ACGIH and OSHA have not established air contaminant limits for this product. Under certain conditions, this product (or its components) may be a nuisance dust. ACGIH has established an exposure value of 3 mg/m$^3$ (respirable fraction) and 10 mg/m$^3$ (inhalable fraction) for particulates not otherwise classified. OSHA has an established standard for particulates not otherwise regulated (nuisance dust) set at 5 mg/m$^3$ (respirable fraction) and 15 mg/m$^3$ (total dust).
3 Chemical Name: 4H-1,3,5-Oxadiazin-4-imine, 3-[(2-chloro-5-thiazolyl)methyl]tetrahydro-5-methyl-N-nitro-.

4 ACGIH and OSHA have not established air contaminant limits for this compound. Novartis Animal Health US’s recommended occupational exposure limit (OEL) is 3 mg/m$^3$ TWA.

3. HAZARDS IDENTIFICATION

Emergency Overview

Caution: Causes moderate eye irritation. White to beige water-soluble solid granules. Keep out of reach of children, pets, domestic animals, and wildlife. Avoid contact with skin, eyes, and clothing. Do not ingest or inhale. Wear appropriate personal protective equipment when handling the product. Wash exposed body parts and change clothing after handling, and before eating, drinking, or smoking. Do not contaminate feed, water, or food through application or disposal of product. Prevent accidental transfer of the product. Do not release this product uncontrolled to the environment. Do not discharge leftover product into ponds, streams, or sewage systems. Highly toxic to bees. Dust explosion potential – avoid dust formation and all ignition sources.

Potential Health Effects

Eyes : This product causes moderate 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 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

Medical Conditions Aggravated by Exposure : Not available.

Incompatibility : Not available.

Signs & Symptoms of Exposure : Moderate eye irritation and slight skin irritation.

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 : Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 - 20 minutes. Call a poison control center or doctor for treatment advice.

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 : Insecticide for use in the control of nuisance flies in and around animal housing. This product contains the active ingredients thiamethoxam and (Z)-9-tricosene. See 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.
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 will burn. Wear a self-contained breathing apparatus pressure demand (MSHA/NIOSH approved or equivalent) and full protective gear.
Explosion Data : Not available.
Other : The dust of this product at sufficient concentrations can form explosive mixtures with air in the presence of an ignition source.

6. ACCIDENTAL RELEASE MEASURES

Spill and Cleanup Procedures : Sweep up spilled material and place in a disposal container. Do not vacuum. Dust explosion potential – avoid dust formation and all ignition sources. 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 and eyes. Avoid breathing the dust of this product. Handle only in well ventilated locations. Avoid dust formation since the dust of this product at sufficient concentrations can form explosive mixtures with air in the presence of an ignition source. Take precautionary measures against static discharges.
Storage : Store in original, tightly closed containers and away from children, preferably in a locked storage area. Store in a cool, dry place and away from direct sunlight. Do not contaminate water, food, or feed by storage or disposal. Do not reuse or refill empty containers.
Use 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.

Other: Apply this product only as specified on the label. Failure to follow directions for use and precautions on the label may result in injury, inadequate fly control, and/or illegal residues.

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.

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 (or its dust) 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: White to beige solid granules

Odor: Odorless

pH: 6.8 - 8.8 (1% aqueous solution)

Vapor Pressure: Not available

Vapor Density: Not available

Boiling Point: Not available

Freezing/Melting Point: Not available

Specific Gravity: 0.5 - 0.7 g/cm³

Octanol/Water Partition Coefficient: Not available

Solubility in Water: Soluble

Volatility: Not available

10. STABILITY AND REACTIVITY

Stability: Stable under normal use and storage conditions.
AGITA® 10 WG

Conditions to Avoid : Avoid dust formation and all sources of ignition.

Incompatibility/Materials to Avoid : Not available.

Hazardous Decomposition or Byproducts : Not available.

Hazardous Polymerization : Will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicological Data on the Product

Acute Toxicological Data : Acute oral LD₅₀: > 5,000 mg/kg (rat)
Acute dermal LD₅₀: > 2,000 mg/kg (rat)
Acute inhalation LC₅₀: > 20,000 mg/m³ (rat) [4-hr.]

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 moderate 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 ingredients, the subchronic toxicity of this product is expected to be low.

Reproductive Toxicity Data : There are no reproductive toxicity data on this product. Based on the data of the individual components, including the active ingredients, 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 ingredients, 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 ingredients, 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 ingredients, this product is not expected to present a chronic toxicity or carcinogenicity hazard.
Toxicological Data on Thiamethoxam

Acute Toxicological Data: Acute oral LD<sub>50</sub>: > 1,563 mg/kg (rat)
Acute dermal LD<sub>50</sub>: > 2,000 mg/kg (rat)
Acute inhalation LC<sub>50</sub>: > 3,720 mg/m<sup>3</sup> (rat) [4-hr.]

Eye Irritation Data: Thiamethoxam did not produce eye irritation when tested in rabbits.

Skin Irritation/Sensitization/Absorption Data: Thiamethoxam did not produce skin irritation when tested in rabbits. Thiamethoxam did not produce skin sensitization when tested in guinea pigs. There are no skin absorption data.

Subchronic Toxicity Data: Subchronic testing on thiamethoxam showed liver and kidney effects, but only at high doses. No neurotoxic effects were observed.

Reproductive Toxicity Data: Reproductive toxicity testing on thiamethoxam generally did not produce reproductive or fertility effects. Minor effects on the testes were reported at high dose levels, but with no effect on reproductive performance.

Teratogenicity (birth defects) Data: Teratology testing on thiamethoxam did not produce teratogenic effects. Developmental delays were reported at maternally toxic doses.

Mutagenicity Data: Thiamethoxam has generally produced negative results in in vitro and in vivo mutagenicity assays.

Chronic/Carcinogenicity Data: In long term testing, thiamethoxam produced a dose-related trend in the incidence of liver tumors when tested in mice. No treatment related liver tumors were observed when the same testing was conducted in rats. These studies indicate that the metabolism of thiamethoxam in mice is likely not relevant to rats or humans.

12. ECOLOGICAL INFORMATION

Ecological Data on the Product

Ecotoxicological Data: No ecotoxicological data are available on this product. This product is not expected to be toxic to fish, Daphnia, algae, or birds. This product is highly toxic to bees.

Environmental Fate Data: No environmental fate data are available on this product.

Physical/Chemical Properties: See Section 9.
Ecological Data on Thiamethoxam

Ecotoxicological Data:
- Fish LC$_{50}$ [96-hour]: >100 mg/L (rainbow trout)
- Fish LC$_{50}$ [96-hour]: >114 mg/L (bluegill sunfish)
- Daphnia EC$_{50}$ [48-hour]: >106 mg/L
- Algae EC$_{50}$ [96-hour]: >100 mg/L
- Bird LD$_{50}$ [8-day dietary]: >5,200 ppm (bobwhite quail)
- Duck LD$_{50}$: 576 mg/kg (mallard)
- Duck LD$_{50}$ [8-day dietary]: >5,200 ppm (mallard)
- Fish LOEC [chronic]: 900 mg/L (fathead minnow)
- Daphnia LOEC [21-day]: 101 mg/L
- Bee LC$_{50}$: 0.024 µg/bee

Environmental Fate Data:
- Thiamethoxam is not expected to be biodegradable in the environment and not expected to bioaccumulate. Thiamethoxam floats in water after 24 hours.

Physical/Chemical Properties:
- Water solubility: 4,100 mg/L (25 °C)
- Log K$_{ow}$: Not available
- Vapor pressure: 2 x 10$^{-11}$ mm Hg (25 °C)

Other Information:
- The data presented here on the thiamethoxam 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 leftover product into ponds, streams, or sewage systems. Do not contaminate water, food, or feed by storage and disposal. Do not reuse empty container. Follow instructions for any required cleaning of the container prior to its disposal. Do not reuse or refill the container. Offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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 may 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.

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 = 2
  · 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.