

Syngenta Crop Protection, Inc.
Post Office Box 18300
Greensboro, NC 27419

In Case of Emergency, Call
1-800-888-8372

1. PRODUCT IDENTIFICATION

Product Name: **FLAGSHIP 0.22G** Product No.: A11859D
 EPA Signal Word: Caution
 Active Ingredient(%): Thiamethoxam (0.22%) CAS No.: 153719-23-4
 Chemical Name: 4H-1,3,5-Oxadiazin-4-imine,3-[(2-chloro-5-thiazolyl) methyl]tetrahydro-5-methyl-N-nitro-
 Chemical Class: Neonicotinoid Insecticide
 EPA Registration Number(s): 100-960 **Section(s) Revised: 2, 3, 8, 11, 12, 16**

2. HAZARDS IDENTIFICATION
Health and Environmental

Causes mild eye and skin irritation. May cause respiratory tract irritation.

Hazardous Decomposition Products

May decompose at high temperatures forming toxic gases.

Physical Properties

Appearance: Brown granules

Odor: Not determined

Unusual Fire, Explosion and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
Clay Granules	15 mg/m ³ TWA (total); 5 mg/m ³ TWA (respirable)	10 mg/m ³ TWA (total); 3 mg/m ³ TWA (respirable)	Not Established	No
n-Methylpyrrolidone (<= 4.5%)	Not Established	Not Established	10 ppm TWA ****	No
Thiamethoxam (0.22%)	Not Established	Not Established	3 mg/m ³ TWA ***	No

*** Syngenta Occupational Exposure Limit (OEL)

**** Recommended by AIHA (American Industrial Hygiene Association)

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.
 Syngenta Hazard Category: B

4. FIRST AID MEASURES

Have the product container, label or Material Safety Data Sheet with you when calling Syngenta (800-888-8372), a poison control center or doctor, or going for treatment.

- Ingestion: If swallowed: Call Syngenta (800-888-8372), a poison control center or doctor immediately for treatment advice. Have the person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so after calling 800-888-8372 or by a poison control center or doctor. Do not give anything by mouth to an unconscious person.
- Eye Contact: If in eyes: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.
- Skin Contact: If on skin or clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call Syngenta (800-888-8372), a poison control center or doctor for treatment advice.
- Inhalation: If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. Call Syngenta (800-888-8372), a poison control center or doctor for further treatment advice.

Notes to Physician

There is no specific antidote if this product is ingested.

Treat symptomatically.

Medical Condition Likely to be Aggravated by Exposure

None known.

5. FIRE FIGHTING MEASURES

Fire and Explosion

- Flash Point (Test Method): Not Applicable
- Flammable Limits (% in Air): Lower: Not Applicable Upper: Not Applicable
- Autoignition Temperature: Not Available
- Flammability: Not Applicable

Unusual Fire, Explosion and Reactivity Hazards

During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

In Case of Fire

Use dry chemical, foam or CO2 extinguishing media. Wear full protective clothing and self-contained breathing apparatus. Evacuate nonessential personnel from the area to prevent human exposure to fire, smoke, fumes or products of combustion. Prevent use of contaminated buildings, area, and equipment until decontaminated. Water runoff can cause environmental damage. If water is used to fight fire, dike and collect runoff.

6. ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak

Control the spill at its source. Contain the spill to prevent from spreading or contaminating soil or from entering sewage and drainage systems or any body of water. Clean up spills immediately, observing precautions outlined in Section 8. Sweep up material and place in a compatible disposal container. Scrub area with hard water detergent (e.g. commercial products such as Tide, Joy, Spic and Span). Pick up wash liquid with additional absorbent and place into compatible disposal container. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposition.

7. HANDLING AND STORAGE

Store the material in a well-ventilated, secure area out of reach of children and domestic animals. Do not store food, beverages or tobacco products in the storage area. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

THE FOLLOWING RECOMMENDATIONS FOR EXPOSURE CONTROLS/PERSONAL PROTECTION ARE INTENDED FOR THE MANUFACTURE, FORMULATION, PACKAGING AND USE OF THIS PRODUCT.

FOR COMMERCIAL APPLICATIONS AND/OR ON-FARM APPLICATIONS CONSULT THE PRODUCT LABEL.

Ingestion:	Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is a potential for exposure to the material. Wash thoroughly with soap and water after handling.
Eye Contact:	Where eye contact is likely, use chemical splash goggles.
Skin Contact:	Where contact is likely, wear chemical-resistant gloves (such as barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride [PVC] or Viton), coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.
Inhalation:	A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits.

In case of emergency spills, use a NIOSH approved respirator with any N, R, or P or HE filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Brown granules
Odor:	Not determined
Melting Point:	Not Available
Boiling Point:	Not Applicable
Specific Gravity/Density:	33.20 lbs/ft ³ (typical)
pH:	6 - 8 (1% solution in H ₂ O @ 77°F (25°C))

Solubility in H₂O

Thiamethoxam: 4.1g/l @ 77°F (25°C)

Vapor Pressure

Thiamethoxam: 2 x 10⁽⁻¹¹⁾ mmHg @ 68°F (20°C)

10. STABILITY AND REACTIVITY

Stability:	Stable under normal use and storage conditions.
Hazardous Polymerization:	Will not occur.
Conditions to Avoid:	None known.
Materials to Avoid:	None known.
Hazardous Decomposition Products:	May decompose at high temperatures forming toxic gases.

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies (Finished Product)

Ingestion:	Oral (LD50 Female Rat) :	> 5000 mg/kg body weight
Dermal:	Dermal (LD50 Rat) :	> 5050 mg/kg body weight
Inhalation:	Inhalation (LC50 Rat) :	Not Available
Eye Contact:	Minimally Irritating (Rabbit)	
Skin Contact:	Slightly Irritating (Rabbit)	
Skin Sensitization:	Not a Sensitizer (Guinea Pig)	

Reproductive/Developmental Effects

Thiamethoxam: Developmental: Not teratogenic. Developmental delays at maternally toxic doses.

Reproductive: No biologically important reproductive effects. Minor testis effects at high doses with no effect on reproduction.

Chronic/Subchronic Toxicity Studies

Thiamethoxam: Subchronic: Predominantly liver and kidney effects at high doses. Not neurotoxic.

Chronic: Predominantly liver and kidney effects at high doses.
Acute: Transient clinical signs at high doses. No changes to nervous tissue.

Carcinogenicity

Thiamethoxam: Liver tumors at high doses noted in mice that are not relevant to humans. No treatment-related tumors in rats.

Other Toxicity Information

None

Toxicity of Other Components

Clay Granules

Prolonged inhalation of excessive concentrations of dust may lead to lung injury.

n-Methylpyrrolidone (<= 4.5%)

May cause respiratory tract irritation. Repeated or prolonged exposure may cause drying and cracking of the skin.

Target Organs

Active Ingredients

Thiamethoxam: Liver, kidney

Inert Ingredients

Clay Granules: Respiratory tract

n-Methylpyrrolidone: Eye, skin

12. ECOLOGICAL INFORMATION

Summary of Effects

Thiamethoxam:

Harmful to aquatic life with long lasting effects.

Eco-Acute Toxicity

Thiamethoxam:

Fish (Rainbow Trout) 96-hour LC50 > 100 ppm

Fish (Bluegill Sunfish) 96-hour LC50 > 114 ppm

Bird (Mallard Duck) LD50 Oral 576 mg/kg

Invertebrate (Daphnia Magna) 48-hour EC50 > 106 ppm

Bird (Bobwhite Quail) 8-day dietary LC50 > 5200 ppm

Bee (Contact) LD50 0.024 ug/bee

Bird (Mallard Duck) 8-day dietary LC50 > 5200 ppm

Green Algae 4-day EC50 > 97 ppm

Eco-Chronic Toxicity

Thiamethoxam:

Invertebrate (Water Flea) 21-day LOEC 101 ppm

Fish (Fathead Minnow) LOEC 900 ppm

Environmental Fate

Thiamethoxam:

The information presented here is for the active ingredient, thiamethoxam.

Not persistent in soil. Stable in water. Moderate mobility in soil. Floats in water (after 24 h).

13. DISPOSAL CONSIDERATIONS

Disposal

Do not reuse product containers. Dispose of product containers, waste containers, and residues according to local, state, and federal health and environmental regulations.

Characteristic Waste: Not Applicable

Listed Waste: Not Applicable

14. TRANSPORT INFORMATION

DOT Classification

Ground Transport - NAFTA
Not regulated.

B/L Freight Classification

Insecticides, NOI, O/T Poison

Comments

None.

15. REGULATORY INFORMATION

EPCRA SARA Title III Classification

Section 311/312 Hazard Classes: Acute Health Hazard

Section 313 Toxic Chemicals: n-Methylpyrrolidone (<= 4.5%) (CAS No. 872-50-4)

California Proposition 65

Not Applicable

CERCLA/SARA 302 Reportable Quantity (RQ)

None

RCRA Hazardous Waste Classification (40 CFR 261)

Not Applicable

TSCA Status

Exempt from TSCA, subject to FIFRA

16. OTHER INFORMATION

NFPA Hazard Ratings

Health: 1
Flammability: 1
Instability: 0

HMIS Hazard Ratings

Health: 1
Flammability: 1
Reactivity: 0

0	Minimal
1	Slight
2	Moderate
3	Serious
4	Extreme

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 9/20/2000

Revision Date: 12/10/2007

Replaces: 4/1/2005

The information and recommendations contained herein are based upon data believed to be correct. However, no guarantee or warranty of any kind, expressed or implied, is made with respect to the information contained herein.

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