# MATERIAL SAFETY DATA SHEET

**Syngenta Crop Protection, LLC**
**Post Office Box 18300**
**Greensboro, NC 27419**

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

## 1. PRODUCT IDENTIFICATION

Product Name: **CARAVAN G** Product No.: A18445A

EPA Signal Word: Caution

Active Ingredient(%): Azoxystrobin (0.31%) CAS No.: 131860-33-8

Chemical Name: Methyl (E)-2-{2-[6-(2-cyanophenoxy)pyrimidin-4-yloxy]phenyl}-3-methoxyacrylate

Chemical Class: A Beta-Methyoxyacrylate Fungicide

Active Ingredient(%): Thiamethoxam (0.22%) CAS No.: 153719-23-4

Chemical Name: 3-(2-chloro-1,3-thiazol-5-ylmethyl)-5-methyl-1,3,5-oxadiazinan-4-ylidene(nitro)amine

Chemical Class: Neonicotinoid Insecticide

EPA Registration Number(s): 100-1415 **Section(s) Revised: 1**

## 2. HAZARDS IDENTIFICATION

Health and Environmental

Causes mild eye and skin irritation.

May form flammable dust-air mixture.

Hazardous Decomposition Products

None known.

Physical Properties

Appearance: Dark brown solid

Odor: Woody

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 |
|---|---|---|---|---|
| Crystalline Silica, Quartz and Cristobalite | 10 mg/m³/(%SiO2+2) (respirable dust) | 0.025 mg/m³ (respirable silica) | 0.05 mg/m³ (respirable dust) ** | IARC 1; ACGIH A2 |
| Starch | 15 mg/m³ (total) TWA; 5 mg/m³ (resp) TWA | 10 mg/m³ TWA | 10 mg/m³ (total) TWA; 5 mg/m³ (resp) TWA ** | No |
| Limestone (Calcium Carbonate) | 15 mg/m³ (total); 5 mg/m³ (respirable) TWA | 10 mg/m³ (inhalable) TWA; 3 mg/m³ (respirable) | None | No |
| Wood Dust | Not Applicable | 1 mg/m³ TWA | 1 mg/m³ TWA ** | IARC Group 1 |
| Azoxystrobin (0.31%) | Not Established | Not Established | 2 mg/m³ TWA *** | No |

| | | | | |
|---|---|---|---|---|
| Thiamethoxam (0.22%) | Not Established | Not Established | 3 mg/m³ TWA *** | No |

** recommended by NIOSH

*** Syngenta Occupational Exposure Limit (OEL)

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 contol 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 Available | |
| Flammable Limits (% in Air): | Lower: Not Applicable | Upper: Not Applicable |
| Autoignition Temperature: | Not Available | |
| Flammability: | Not Available | |

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

Avoid dust formation.

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

This material is capable of forming flammable dust clouds in air, which, if ignited, can produce a dust cloud explosion. Flames, hot surfaces, mechanical sparks and electrostatic discharges can serve as ignition sources for this material. Electrical equipment should be compatible with the flammability characteristics of this material. The flammability characteristics will be made worse if the material contains traces of flammable solvents or is handled in the presence of flammable solvents.

This material could become charged under certain conditions such as pneumatic conveying.

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 AND PACKAGING 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 dust-proof chemical 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. |
| Inhalation: | A respirator is not normally required when handling this substance. Use effective engineering controls to comply with occupational exposure limits.<br><br>In case of emergency spills, use a NIOSH certified respirator with any N, R, P or HE filter. |

## 9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---|
| Appearance: | Dark brown solid |
| Odor: | Woody |
| Melting Point: | Not Available |
| Boiling Point: | Not Applicable |
| Specific Gravity/Density: | 0.723 - 0.749 g/ml |
| pH: | 6.7 (1% solution in deionized H2O @ 77°F [25°C]) |

Solubility in H2O

| | |
|---|---|
| Azoxystrobin : | 6 mg/l in water @ 68°F (20°C) |
| Thiamethoxam: | 4.1 g/l @ 77°F (25°C) |

Vapor Pressure

| | |
|---|---|
| Azoxystrobin : | 8.25 x 10(-13) mmHg @ 68°F (20°C) |
| 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: None known.

## 11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies (Finished Product)

| | | |
|---|---|---|
| Ingestion: | | |
| | Oral (LD50 Female Rat) : | > 5000 mg/kg body weight |
| Dermal: | | |
| | Dermal (LD50 Rat) : | > 5000 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

Azoxystrobin : Shows weak chromosomal damage in mammalian cells at cytotoxic levels. Negative in whole animal assays for chromosomal and DNA damage at high dosages (> or = 2000 mg/kg).
In rabbits, no effect was observed up to the highest dose level (500 mg/kg/day). In rats, developmental effects were seen only at maternally toxic doses (100 mg/kg/day).

Thiamethoxam: Developmental: Not teratogenic in rats or rabbits.
Reproductive: No effects on reproduction. Minor increase in a common testis effect in rats at high doses, which did not affect reproduction. When used in accordance with label directions and recommendations in this MSDS, no effects would be expected in humans.

Chronic/Subchronic Toxicity Studies

Azoxystrobin : In a rat 90-day feeding study, liver toxicity was observed at 2000 ppm. This was manifest as gross distension of the bile duct, increased numbers of lining cells and inflammation of the duct. No toxicologically significant effects were seen in repeat dose dog studies.
Data reviews do not indicate any potential for endocrine disruption.
There is no evidence of neurotoxicity in any of the studies conducted with azoxystrobin.

Thiamethoxam: Subchronic: Liver effects occurred in rodents only at high dose levels. Not neurotoxic after high acute and subchronic exposure in rats.

Carcinogenicity

Azoxystrobin : No carcinogenic effects observed in rats or mice at doses up to the maximum tolerated dose.

Thiamethoxam: Classified as "not likely to be carcinogenic in humans" based on lifetime studies in mice and rats.

Other Toxicity Information

None

Toxicity of Other Components

Crystalline Silica, Quartz and Cristobalite

Chronic inhalation exposure to crystalline silica is known to cause silicosis and pulmonary fibrosis in humans. Experimental animals exposed to crystalline silica developed respiratory tract cancers.

Limestone (Calcium Carbonate)

Excessive contact with powder can cause drying of mucous membranes of nose, eyes, and throat due to absorption of moisture and oils. Continued long-term contact may affect respiratory function.

Starch

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

Wood Dust

Wood dust may cause mechanical irritation to the eye. Wood dust of certain species can elicit allergic contact dermatitis in sensitized individuals. Inhalation of wood dust may cause obstruction in nasal passages. May cause respiratory tract irritation.

Target Organs

Active Ingredients

Azoxystrobin : Liver

Thiamethoxam: Liver

Inert Ingredients

Crystalline Silica, Quartz and Cristobalite: Respiratory tract

Limestone (Calcium Carbonate): Respiratory tract

Starch: Eye, skin, respiratory tract

Wood Dust : Eye, skin, nasal passages, respiratory tract

## 12. ECOLOGICAL INFORMATION

Ecotoxicity Effects

Azoxystrobin :

Fish (Rainbow Trout) 96-hour LC50 470 ppb

Green Algae 5-day EC50 106 ppb

Invertebrate (Water Flea) 48-hour EC50 259 ppb

Bird (Mallard Duck) 14-day LD50 > 250 mg/kg

Thiamethoxam:

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

Bird (Mallard Duck) LD50 Oral 576 mg/kg

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

Green Algae 4-day EC50 > 97 ppm

Environmental Fate

Azoxystrobin :

The information presented here is for the active ingredient, azoxystrobin.
Low bioaccumulation potential. Not persistent in soil. Stable in water. Moderate mobility in soil. Sinks in water (after 24 h).

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.

Comments

Water Transport - International
Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Azoxystrobin), Marine Pollutant
Hazard Class: Class 9
Identification Number: UN 3077
Packing Group: PG III

Air Transport
Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Azoxystrobin)
Hazard Class: Class 9
Identification Number: UN 3077
Packing Group: PG III

## 15. REGULATORY INFORMATION

EPCRA SARA Title III Classification

Section 311/312 Hazard Classes: Acute Health Hazard

Section 313 Toxic Chemicals: Not Applicable

California Proposition 65

This product contains trace amounts of chemical(s) known to the State of California to cause cancer as unintended impurities resulting from other entities manufacturing or processing operations which Syngenta cannot control.

CERCLA/SARA 304 Reportable Quantity (RQ)

Not Applicable

RCRA Hazardous Waste Classification (40 CFR 261)

Not Applicable

TSCA Status

Exempt from TSCA, subject to FIFRA

## 16. OTHER INFORMATION

| NFPA Hazard Ratings | | HMIS Hazard Ratings | |
|---|---|---|---|
| Health: | 1 | Health: | 1 |
| Flammability: | 1 | Flammability: | 1 |
| Instability: | 0 | 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: 1/31/2012
Revision Date: 3/20/2012 Replaces:

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.

End of MSDS