

TAVIUM® PLUS VAPORGRIP® TECHNOLOGY

Date: 5/2/2019
Replaces: 4/5/2019

1. PRODUCT IDENTIFICATION

Product identifier on label: **TAVIUM® PLUS VAPORGRIP® TECHNOLOGY**

Product No.: A21472E

Use: Restricted Use Herbicide

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

Manufacturer Phone: 1-800-334-9481

Emergency Phone: 1-800-888-8372

2. HAZARDS IDENTIFICATION

Classifications: Not Applicable

Signal Word (OSHA): Not Applicable

Hazard Statements: Not Applicable

Hazard Symbols:

Precautionary Statements: Not Applicable

Other Hazard Statements: None

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Common Name	CAS Number	Concentration
Acetamide, 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl)-(S)	S-Metolachlor	87392-12-9	24.0%
3,6-Dichloro-2-methoxybenzoic acid	Dicamba	1918-00-9	12.0%

Ingredients not precisely identified are proprietary or non-hazardous. Values are not product specifications.

4. FIRST AID MEASURES

Have the product container, label or 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. Do not give any liquid to the person. Do not induce vomiting unless told to do so after calling 800-888-

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- 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.

Most important symptoms/effects:

Not Applicable

Indication of immediate medical attention and special treatment needed:

There is no specific antidote if this product is ingested.

Treat symptomatically.

5. FIRE FIGHTING MEASURES

Suitable (and unsuitable) extinguishing media:

Use dry chemical, foam or CO2 extinguishing media. If water is used to fight fire, dike and collect runoff.

Specific Hazards:

None known.

Special protective equipment and precautions for firefighters:

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.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment, and emergency procedures:

Follow exposure controls/personal protection outlined in Section 8.

Methods and materials for containment and cleaning up:

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. Cover entire spill with absorbing material and place into 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

Precautions for safe handling:

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.

Conditions for safe storage, including any incompatibilities:

Not Applicable

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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.

Occupational Exposure Limits:

Chemical Name	OSHA PEL	ACGIH TLV	Other	Source
S-Metolachlor	Not Established	Not Established	5 mg/m ³ TWA	Syngenta
Dicamba	Not Established	Not Established	10 mg/m ³ TWA	Syngenta

Appropriate engineering controls:

Use effective engineering controls to comply with occupational exposure limits (if applicable).

Individual protection measures:

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 splash-proof chemical goggles. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

Skin Contact:

Where contact is likely, wear chemical-resistant (such as nitrile or butyl) gloves, coveralls, socks and chemical-resistant footwear.

Inhalation:

A combination particulate/organic vapor respirator should be used until effective engineering controls are installed to comply with occupational exposure limits, or until exposure limits are established. Use a NIOSH approved respirator with an organic vapor (OV) cartridge or canister with any R, P or HE filter.

Use a self-contained breathing apparatus in cases of emergency spills, when exposure levels are unknown, or under any circumstances where air-purifying respirators may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Light brown liquid

Odor: Aromatic

Odor Threshold: Not Applicable

pH: 5-8

Melting point/freezing point: Not Available

Initial boiling point and boiling range: Not Applicable

Flash Point (Test Method): >106°C (Pensky-Martens CC)

Flammable Limits (% in Air): Not Available

Flammability: Not classified as a flammable liquid

Vapor Pressure: Dicamba 1 x 10⁻⁶ mmHg 77°F (25°C)
S-Metolachlor 2.8 x 10⁻⁵ mmHg @ 77°F (25°C)

Vapor Density: Not Available

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Relative Density: 1.13 g/ml
 Solubility (ies): Dicamba 6.6 g/l @ 77°F (25°C)
 S-Metolachlor 0.48 g/l @ 77°F (25°C)
 Partition coefficient: n-octanol/water: Not Available
 Autoignition Temperature: =495@ 77°F (25°C)
 Decomposition Temperature: Not Available
 Viscosity: 433mPa @ 68°F (20°C)
 Other: None

10. STABILITY AND REACTIVITY

Reactivity: Not reactive.
 Chemical stability: Stable under normal use and storage conditions.
 Possibility of hazardous reactions: Will not occur.
 Conditions to Avoid: None known.
 Incompatible materials: None known.
 Hazardous Decomposition Products: Not Available

11. TOXICOLOGICAL INFORMATION

Health effects information

Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Not Applicable

Delayed, immediate and chronic effects of exposure: Not Applicable

Numerical measures of toxicity (acute toxicity/irritation studies (finished product))

Ingestion:	Oral (LD50 Rat) :	> 2000 mg/kg (based on results from similar product[s])
Dermal:	Dermal (LD50 Rat) :	> 2000 mg/kg (based on results from similar product[s])
Inhalation:	Inhalation (LC50 Rat) :	> 2.54 mg/l - 4 hours (calculated based on similar formulations)
Eye Contact:	Non-Irritating (Rabbit)	
Skin Contact:	Non-Irritating (Rabbit)	
Skin Sensitization:	Not a skin sensitizer in animal tests. (Mouse)	

Reproductive/Developmental Effects

Dicamba: None observed.

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S-Metolachlor: Did not show reproductive effects in animal experiments.

Chronic/Subchronic Toxicity Studies

Dicamba: None observed.

S-Metolachlor: No adverse effect has been observed in chronic toxicity tests.

Carcinogenicity

Dicamba: None observed.

S-Metolachlor: Did not show carcinogenic effects in animal experiments.

Chemical Name	NTP/IARC/OSHA Carcinogen
Acetamide, 2-chloro-N-(2-ethyl-6-methylphenyl)-N-(2-methoxy-1-methylethyl)-, (S)	No
3,6-Dichloro-2-methoxybenzoic acid	No

Other Toxicity Information

Not Available

Toxicity of Other Components

Target Organs

Active Ingredients

Dicamba: Eye, skin

S-Metolachlor: Liver

Inert Ingredients

12. ECOLOGICAL INFORMATION

Eco-Acute Toxicity

S-Metolachlor:

Fish (Rainbow Trout) 96-hour LC50 1.23 mg/l

Green Algae 96-hour ErC50 0.077 mg/l

Invertebrate (Water Flea) 48-hour EC50 11.24 mg/l

Dicamba:

Fish (Rainbow Trout) 96-hour LC50 0.19 ppb

Bird (Mallard Duck) LD50 Oral > 3950 mg/kg

Invertebrate (Water Flea) 48-hour EC50 0.04 ppb

Environmental Fate

Dicamba:

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

Low bioaccumulation potential. Not persistent in soil. Stable in water. Highly mobile in soil. Not readily biodegradable.

Sinks in water (after 24 h).

S-Metolachlor:

The information presented here is for the active ingredient, S-Metolachlor.

Low bioaccumulation potential. Not persistent in soil. Stable in water. Sinks in water (after 24 h).

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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

Proper Shipping Name: RQ, Environmentally Hazardous Substance, Liquid, N.O.S. (DICAMBA, S-METOLACHLOR)

Hazard Class: Class 9

Identification Number: UN 3082

Packing Group: PG III

Comments

Water Transport - International

Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Dicamba, S-Metolachlor) Marine Pollutant

Hazard Class: Class 9

ID #: UN3082

Packing Group: III

Air Transport

Shipping Name: Environmentally Hazardous Substance, Liquid, N.O.S. (Dicamba, S-Metolachlor)

Hazard Class: Class 9

ID #: UN3082

Packing Group: III

15. REGULATORY INFORMATION

Pesticide Registration:

Tavium Plus VaporGrip Technology is a Restricted Use Pesticide. For use by certified applicators only. VaporGrip® is a registered trademark of, and used under license from, Monsanto Technology, LLC. This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

Caution: Harmful if swallowed or absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove and wash contaminated clothing before reuse.

EPA Registration Number(s):

100-1623

EPCRA SARA Title III Classification:

Section 311/312 Hazard Classes: See Section 2 Hazards

Section 313 Toxic Chemicals: Dicamba 12.0% (CAS No. 1918-00-9)

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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

Health: 0
Flammability: 1
Instability: 0

HMIS Hazard Ratings

Health: 0
Flammability: 1
Reactivity: 0

0	Minimal
1	Slight
2	Moderate
3	Serious
4	Extreme
*	Chronic

Syngenta Hazard Category: A

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 1/7/2019
Revision Date: 5/2/2019 Replaces: 4/5/2019
Section(s) Revised: 14

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.