

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:	RAVE	Product No.:	A11815B
EPA Signal Word:	Caution		
Active Ingredient(%):	Dicamba (Sodium Salt) (55.0%)	CAS No.:	1982-69-0
Chemical Name:	3,6-dichloro-o-anisic acid		
Chemical Class:	Substituted Benzoic Acid Herbicide		
Active Ingredient(%):	Triasulfuron (8.8%)	CAS No.:	82097-50-5
Chemical Name:	3-(6-methoxy-4-methyl-1,3,5-triazin-2-yl)-1-[2-(2-chloroethoxy)phenylsulfonyl]-urea		
Chemical Class:	Sulfonylurea Herbicide		
EPA Registration Number(s):	100-927	Section(s) Revised:	9, 14

2. HAZARDS IDENTIFICATION

Health and Environmental

Harmful if inhaled. Irritating to eyes.

May form flammable dust-air mixture.

Hazardous Decomposition Products

Not Available

Physical Properties

Appearance: Beige to brown granules

Odor: Phenolic

Unusual Fire, Explosion and Reactivity Hazards

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

See also Sec. 7.

3. COMPOSITION/INFORMATION ON INGREDIENTS
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Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
Amorphous Silica	80 mg/m ³ /%SiO ₂ TWA (total dust)	Not Established	Not Established	IARC Group 3
Corn Starch	15 mg/m ³ (total) TWA; 5 mg/m ³ (respirable) TWA	10 mg/m ³ TWA	10 mg/m ³ (total) TWA; 5 mg/m ³ (respirable) TWA **	No
Triasulfuron (8.8%)	Not Established	Not Established	3 mg/m ³ TWA ***	No
Dicamba (Sodium Salt) (55.0%)	Not Established	Not Established	10 mg/m ³ TWA (Dicamba) ***	No

** recommended by NIOSH

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

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 Available
- Flammable Limits (% in Air): Lower: Not Applicable Upper: Not Applicable
- Autoignition Temperature: Not Available
- Flammability: Combustible powder

Unusual Fire, Explosion and Reactivity Hazards

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

See also Sec. 7.

In Case of Fire

Use appropriate extinguishing media for combustibles in the area. 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 can become readily charged in most operations.

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. 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 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.

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: Beige to brown granules
- Odor: Phenolic
- Melting Point: Not Applicable
- Boiling Point: Not Applicable
- Specific Gravity/Density: 0.45 - 0.55 g/cm³ (bulk density)
- pH: 5 - 7 (1% in deionized H₂O; 68-77°F (20 - 25°C))

Solubility in H₂O

- Dicamba (Sodium Salt): 360 g/l @ 77°F (25°C)
- Triasulfuron: 815 mg/l @ 77°F (25°C)

Vapor Pressure

- Dicamba (Sodium Salt): Not Available
- Triasulfuron: < 1.5 x 10⁻⁸ mmHg @ 77°F (25°C)

10. STABILITY AND REACTIVITY

- Stability: Stable under normal use and storage conditions.
- Hazardous Polymerization: Will not occur.
- Conditions to Avoid: Not Available
- Materials to Avoid: Not Available

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies (Finished Product)

Ingestion:	Oral (LD50 Rat) :	4541 mg/kg body weight
Dermal:	Dermal (LD50 Rat) :	> 2000 mg/kg body weight
Inhalation:	Inhalation (LC50 Rat) :	> 2.75 mg/l air - 4 hours
Eye Contact:	Moderately Irritating (Rabbit)	
Skin Contact:	Non-Irritating (Rabbit)	
Skin Sensitization:	Not a Sensitizer (Guinea Pig)	

Reproductive/Developmental Effects

Dicamba (Sodium Salt): Did not show teratogenic effects in animal experiments.

Triasulfuron: None observed.

Chronic/Subchronic Toxicity Studies

Dicamba (Sodium Salt): None observed.

Triasulfuron: Liver, kidney, spleen and blood effects.

Carcinogenicity

Dicamba (Sodium Salt): Did not show carcinogenic or mutagenic effects in animal experiments.

Triasulfuron: None observed.

Other Toxicity Information

None

Toxicity of Other Components

Amorphous Silica

Amorphous Silica is listed as an IARC (Group 3) carcinogen not classifiable as a human carcinogen (No Data Available) with limited animal evidence. Prolonged exposure to amorphous silica may cause damage to respiratory system and irritation to skin and eyes.

Corn Starch

May cause eye and skin irritation. May cause respiratory tract irritation. Low hazard for usual industrial handling.

Target Organs

Active Ingredients

Dicamba (Sodium Salt): Not Applicable

Triasulfuron: Liver, kidney, spleen, blood

Inert Ingredients

Amorphous Silica: Respiratory tract, skin, eye

Corn Starch: None

12. ECOLOGICAL INFORMATION

Ecotoxicity Effects

Triasulfuron:

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

Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 > 100 ppm

Bird (Bobwhite Quail) 14-day LD50 > 2150 mg/kg

Green Algae 12-day EC50 35 ppb

Dicamba (Sodium Salt):

Fish (Rainbow Trout) 96-hour LC50 558 ppm

Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 38.1 ppm

Environmental Fate

Dicamba (Sodium Salt):

The information presented here is for the active ingredient, dicamba (sodium salt).

Hydrolysis: Resistant to hydrolysis Photolysis: Not Available Soil Half-life: 2 to 25 days

Triasulfuron:

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

Not persistent in soil or water. Moderate mobility in soil. Sinks 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. (Triasulfuron), 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. (Triasulfuron)

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

Fire Hazard

Section 313 Toxic Chemicals: Dicamba (Sodium Salt) (55.0%) (CAS No. 1982-69-0)

California Proposition 65

This product does not contain chemical(s) known to the State of California to cause cancer and birth defects or other reproductive harm.

CERCLA/SARA 304 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: 2
Flammability: 2
Instability: 0

HMIS Hazard Ratings

Health: 1
Flammability: 2
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: 4/1/1998

Revision Date: 11/28/2012

Replaces: 8/3/2010

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