



MATERIAL SAFETY DATA SHEET

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

In Case of Emergency, Call

1-800-888-8372

1. CHEMICAL IDENTIFICATION

Product Name:	RAVE	Product No.:	A-11815 A
EPA Signal Word:	Caution		
Active Ingredient(%):	Dicamba (Sodium Salt) (50.0%)	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		

2. COMPOSITION/INFORMATION ON INGREDIENTS

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen
Dispersing Agent	Not Established	Not Established	15 mg/m ³ (Total Dust)*	No
Sodium Sulfite	Not Established	Not Established	Not Established	IARC, 3
Solid Diluent	Not Established	Not Established	Not Established	No
Nuisance Dusts (Particulates N.O.C.)	15 mg/m ³ (Total Dust)	10 mg/m ³ (Total Dust)	Not Established	No
Carrier	15 mg/m ³ (Total Dust); 5 mg/m ³ (Respirable)	10 mg/m ³	Not Established	No
Solid Diluent	80 mg.m ³ /%SiO ₂	10 (Inhalable);3 mg/m ³ (Respirable)	Not Established	IARC, 2A
Triasulfuron (8.8%)	Not Established	Not Established	Not Established	No
Dicamba (Sodium Salt) (50.0%)	Not Established	Not Established	Not Established	No

* recommended by manufacturer

3. HAZARDS IDENTIFICATION

Symptoms of Acute Exposure

Exposure may result in eye irritation.

Hazardous Decomposition Products

None Known

Physical Properties

Appearance: Light Brown Granules

Odor: Phenolic

Unusual Fire, Explosion and Reactivity Hazards

Thermal decomposition products may include, but are not limited to, HCl, Organochlorine products, and Carbon Monoxide.

4. FIRST AID MEASURES

If poisoning is suspected, immediately contact a physician, the nearest hospital, or the nearest Poison Control Center. Tell the person contacted the complete product name, and the type and amount of exposure. Describe any symptoms and follow the advice given.

- Ingestion: If victim is fully conscious, give a large quantity of water to drink and induce vomiting. Never give anything by mouth to an unconscious person.
- Eye Contact: Immediately rinse eyes with a large amount of running water. Hold eye lids apart to rinse the entire surface of the eyes and lids. Do not apply any medicating agents except on the advice of a physician.
- Skin Contact: Wash with plenty of soap and water, including hair and under fingernails. Do not apply any medicating agents except on the advice of a physician. Remove contaminated clothing and decontaminate prior to use.
- Inhalation: Move victim from contaminated area to fresh air. Apply artificial respiration if necessary.

Notes to Physician

There is no specific antidote if this product is ingested.

If a large amount has been ingested and emesis is inadequate, lavage stomach.

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: %; Upper: % Not Applicable
- Autoignition Temperature: Not Available
- Flammability: Not Flammable

Unusual Fire, Explosion and Reactivity Hazards

Thermal decomposition products may include, but are not limited to, HCl, Organochlorine products, and Carbon Monoxide.

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.

6. ACCIDENTAL RELEASE MEASURES

In Case of Spill or Leak

Wear chemical safety glasses with side shields or chemical goggles, rubber gloves, rubber boots, long-sleeved shirt, long pants, head covering, and use a particulate filter, NIOSH approved per 42 CFR Part 84. Select N or R or P type as appropriate for the oil characteristics of any other air contaminants present. Filter efficiency may range from 95 - 99.97% as appropriate for the size distribution of dusts present. For small spills, sweep up, keeping dust to a minimum and place in an approved chemical container. Wash the spill area with water containing a strong detergent, absorb with pet litter or other absorbent material, sweep up and place in a chemical container. Seal the container and handle in an approved manner. Flush the area with water to remove any residue. Do not allow wash water to contaminate water supplies.

7. HANDLING AND STORAGE

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

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

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

FOR COMMERCIAL APPLICATIONS AND 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. Always wash thoroughly after handling.
Eye Contact:	To avoid eye contact, wear safety glasses with side shields or chemical goggles.
Skin Contact:	To avoid skin contact, wear rubber gloves, rubber boots, long-sleeved shirt, long pants and a head covering.
Inhalation:	To avoid breathing dust, use a particulate filter, NIOSH approved per 42 CFR Part 84. Select N or R or P type as appropriate for the oil characteristics of any other air contaminants present. Filter efficiency may range from 95 - 99.97% as appropriate for the size distribution of dusts present.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Light Brown Granules
Odor:	Phenolic
Melting Point:	Not Available
Boiling Point:	Not Applicable
Specific Gravity/Density:	0.66 g/cm ³
pH:	6.2(1% suspension in water)

Solubility in H₂O

Dicamba (Sodium Salt)	: 360.000 g/L @ 25°C
Triasulfuron	: 32.000 mg/L @ 25°C

Vapor Pressure

Dicamba (Sodium Salt)	: Not Available
Triasulfuron	: 2.00E-03 mPA @ 25°C

10. STABILITY AND REACTIVITY

Reactivity

Stability:	Stable
Hazardous Polymerization:	Will Not Occur
Conditions to Avoid:	None Known

Hazardous Decomposition Products

None Known

11. TOXICOLOGICAL INFORMATION

Acute Toxicity/Irritation Studies

Ingestion:	<u>Slightly Toxic</u>
	Oral LD50 (Rat) : 4,541 mg/kg body weight
Dermal:	<u>Slightly Toxic</u>
	Dermal LD50 (Rabbit) : > 2,000 mg/kg body weight
Inhalation:	<u>Slightly Toxic</u>
	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)

Mutagenic Potential

Dicamba (Sodium Salt):	DNA Repair (in vitro) was positive. Ames Test and Chromosomal aberration were both negative.
Triasulfuron:	None observed

Reproductive Hazard Potential

Dicamba (Sodium Salt): None Observed
Triasulfuron: None observed

Chronic/Subchronic Toxicity Studies

Dicamba (Sodium Salt): None Observed
Triasulfuron: Liver, kidney, spleen and blood effects

Carcinogenic Potential

Dicamba (Sodium Salt): None Observed
Triasulfuron: None observed

Other Toxicity Information

Not Available

Toxicity of Other Components

Carrier

Exposure may result in irritation to eyes, skin or upper respiratory tract. Prolonged contact can cause chemical pneumonitis.

Dispersing Agent

Exposure can result in eye, skin and respiratory tract irritation.

Solid Diluent

Not Available

Solid Diluent

OSHA requires the hazards of the components of mixtures be shown on a Material Safety Data Sheet. The carrier in this product is naturally occurring diatomaceous earth. Natural diatomaceous earth contains up to 7% of naturally occurring crystalline silica, which is considered a probable human carcinogen. 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.

Target Organs

Active Ingredients

Dicamba (Sodium Salt) : Eyes and Skin
Triasulfuron : Liver, Kidney, Spleen and Blood

Inert Ingredients

Carrier : Respiratory Tract
Dispersing Agent : Eyes, Skin and Respiratory Tract
Solid Diluent : Not Available
Solid Diluent : Respiratory Tract

12. ECOLOGICAL INFORMATION

Summary of Effects

Dicamba (Sodium Salt):
Not Available

Triasulfuron:
Practically nontoxic to birds, fish and invertebrates

Eco-Acute Toxicity

Triasulfuron: Rainbow Trout 96-hour LC50 >100 ppm
Bluegill Sunfish 96-hour LC50 >100 ppm
Daphnia magna 48-hour LC50 >100 ppm
Bobwhite Oral LD50 >2,150 mg/kg

Mallard Oral LD50 >2,150 mg/kg
Bobwhite 8-day Dietary LC50 >5,000 ppm
Mallard 8-day Dietary LC50 >5,000 ppm
Dicamba (Sodium Salt): Rainbow Trout 96-hour LC50 >1,000 mg/L
Bluegill Sunfish 96-hour LC50 >1,000 mg/L
Daphnia magna 48-hour LC50 1,600 mg/L

Eco-Chronic Toxicity

Triasulfuron: Fish (Fathead minnow) Early Life Stage MATC 36.6 ppm
Invertebrate (Daphnia Magna) Life Cycle MATC 104.7 ppm
Mallard Reproduction NOEC 1,000 ppm
Bobwhite Reproduction NOEC 1,000 ppm
Dicamba (Sodium Salt): Not Available

Environmental Fate

Dicamba (Sodium Salt):

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

Triasulfuron:

No data available for the formulation. The information presented here is for the active ingredient, triasulfuron. A thorough review of environmental information is not possible in this document. For additional information call the toll free number listed in Section 16.

ENVIRONMENTAL PERSISTENCE/MOBILITY:

Degrades in water, in the dark more rapidly at pH 5 (t1/2 = 30 d) than at pH 7 and 9 (t1/2 ~ > 1 yr), but more rapidly at pH 9 in the light (t1/2 ~ 2 to 3 mo) than in the dark. Degrades in soil, under aerobic conditions, similarly in the dark and light (t1/2 ~ 67-139 d). Degrades more slowly under anaerobic conditions (t1/2 = 284 d). High to medium mobility in various soils (Koc = 51.6 to 190.6).

13. DISPOSAL CONSIDERATION

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:

Bulk: RQ, Environmentally Hazardous Substance, solid, N.O.S. (Dicamba), 9, UN3077, PGIII

Non-Bulk: Not Applicable; No Label or Placard Required (Based On Available Data)

B/L Freight Classification

Compound; Weed Killing (Herbicide), N.O.S.

International Transportation

Bulk: RQ, Environmentally Hazardous Substance, solid, N.O.S. (Dicamba), Class 9, UN3077, PGIII

Non-Bulk: Not Applicable; No Label or Placard Required (Based On Available Data)

15. REGULATORY INFORMATION

SARA Title III Classification

Section 311/312: Acute Health Hazard
Chronic Health Hazard

Section 313 chemical(s): Dicamba (Sodium Salt) (50.0%) (CAS No. 1982-69-0)

Proposition 65

Not Applicable

CERCLA Reportable Quantity (RQ)

None

RCRA Classification

Not Applicable

TSCA Status

Exempt from TSCA

16. OTHER INFORMATION

NFPA Hazard Ratings

Health: 1
Flammability: 0
Reactivity: 0

0	Least
1	Slight
2	Moderate
3	High
4	Severe

Questions concerning the safe handling of the product should be referred to:

1-800-334-9481

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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.

RSVP# : Not Available