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**In Case of Emergency, Call
1-800-327-8633 (FAST MED)**

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MSDS prepared by:
Department of Regulatory & Biology Assessment
Syngenta Canada Inc.

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1-87-SYNGENTA (1-877-964-3682)

SECTION – 1: PRODUCT IDENTIFICATION

Product Identifier: SUMMIT® WG Herbicide Formulation No.: A11896A
Registration Number: 26688 (Pest Control Products Act)
Chemical Classes A substituted benzoic acid and sulfonyl urea herbicide mixture.

Active Ingredient (%): Dicamba acid equivalent (present as sodium salt) (39.9%) CAS No.: 1982-69-0
Chemical Name: sodium 3,6-dichloro-2-methoxybenzoate
Chemical Class: Substituted Benzoic Acid Herbicide

Active Ingredient (%): Primisulfuron-Methyl (7.5%) CAS No.: 86209-51-0
Chemical Name: 3methyl 2-[[[[[4,6-bis(difluoromethoxy)-2-pyrimidinyl]amino]carbonyl]amino]sulfonyl]benzoate
Chemical Class: Sulfonyl Urea Herbicide

Product Use: Water dispersible granule for post-emergent control of weeds in registered crops. Please refer to product label for further details.

SECTION – 2 : COMPOSITION/INFORMATION ON INGREDIENTS

Material	OSHA PEL	ACGIH TLV	Other	NTP/IARC/OSHA Carcinogen	WHMIS†
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	Not Established
Primisulfuron-Methyl (7.5%)	Not Established	Not Established	9 mg/m ³ TWA ***	No	Not Established
Dicamba acid equivalent (present as Sodium Salt) (39.9%)	Not Established	Not Established	10 mg/m ³ TWA ***	No	Not Established

** Recommended by NIOSH

*** Syngenta Occupational Exposure Limit (OEL)

† Material listed in Ingredient Disclosure List under Hazardous Products Act.

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

SECTION – 3: HAZARDS IDENTIFICATION

Symptoms of Acute Exposure

Causes eye.

Hazardous Decomposition Products

Can decompose at high temperatures forming toxic gases.

Physical Properties

Appearance: Light brown solid.

Odour: Sweet.

Unusual Fire, Explosion and Reactivity Hazards

This product will undergo a very strong exothermic decomposition reaction at 185°C (365°F).

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

Potential Health Effects

Relevant routes of exposure: Skin, eyes, mouth, lungs.

Adverse health effects from exposure to product or ingredients of product:

Potentially irritating via ocular, dermal, inhalation and ingestion routes.

SECTION – 4: FIRST AID MEASURES

IF POISONING IS SUSPECTED, immediately contact the poison information centre, doctor or nearest hospital. Have the product container, label or Material Safety Data Sheet with you when calling Syngenta, a poison control center or doctor, or going for treatment. Tell the person contacted the complete product name, and the type and amount of exposure. Describe any symptoms and follow the advice given. Call the Syngenta Emergency Line [**1-800-327-8633 (1-800-FASTMED)**], for further information.

EYE CONTACT: Flush eyes with clean water, holding eyelids apart for a minimum of 15 - 20 minutes. Remove contact lenses, if present, after 5 minutes, then continue rinsing eye. Call Syngenta, a poison control center or doctor for treatment advice. Obtain medical attention immediately if irritation persists.

SKIN CONTACT: Immediately remove contaminated clothing and wash skin, hair and fingernails thoroughly with soap and water. Flush skin with plenty of water for 15-20 minutes. Call Syngenta, a poison control centre or doctor for treatment advice.

INHALATION: Move victim to fresh air. If not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. Call Syngenta, a poison control centre or doctor for treatment advice.

INGESTION: If swallowed, immediately contact Syngenta, a poison control centre, doctor or nearest hospital for treatment advice. Have person sip a glass of water if able to swallow. Do not give anything by mouth to an unconscious person. Do not induce vomiting unless directed by a physician or a poison control center. If spontaneous vomiting occurs, have victim lean forward with head down to avoid breathing in of vomitus, rinse mouth and administer water.

NOTES TO PHYSICIAN:

There is no specific antidote. Treat symptomatically. Dicamba may cause severe irritation to the eyes, and irritation to the skin and mucous membranes. Symptoms of exposure to dicamba may include dizziness, muscle weakness, loss of appetite, weight loss, vomiting, decreased heart rate, shortness of breath, excitement, tenseness, depression, incontinence, cyanosis, muscle spasms, exhaustion and loss of voice.

MEDICAL CONDITIONS KNOWN TO BE AGGRAVATED:

Persons with known allergy to dicamba or with a history of allergic sensitivity should use extra care in handling this product.

SECTION – 5: FIRE FIGHTING MEASURES

Flash point and method: Not applicable.

Upper and lower flammable (explosive) limits in air: Not applicable.

Auto-ignition temperature: Not available.

Flammability: Not flammable.

Hazardous combustion products: Thermal decomposition products may include, but are not limited to, HCl, organochlorine products, and carbon monoxide. This product will undergo a very strong exothermic decomposition reaction at 185°C (365°F).

Conditions under which flammability could occur: None known

Extinguishing media: Use foam, carbon dioxide, dry powder, halon extinguishant or water fog or mist, (avoid use of water jet). 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. Contain run-off water with, for example, temporary earth barriers.

Sensitivity to explosion by mechanical impact: None.

Sensitivity to explosion by static discharge: None.

SECTION – 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Make sure all personnel involved in the spill cleanup follow good industrial hygiene practices. A small spill can be handled routinely. Use adequate ventilation and wear equipment and clothing as described in Section 8 and/or the product label.

Procedures for dealing with release or spill: 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 Sections 7 and 8. Scoop or sweep up material, keeping dust to a minimum, and place into a disposable container. Wash area with detergent and water. Pick up wash liquid with additional absorbent and place into compatible disposal container. On soils, small amounts will naturally decompose. For large amounts, skim off the upper contaminated layer and collect for disposal. Once all material is cleaned up and placed in a disposal container, seal container and arrange for disposal. Spillages or uncontrolled discharges into watercourses must be reported to the appropriate regulatory authority.

SECTION – 7: HANDLING AND STORAGE

Handling practices: KEEP OUT OF REACH OF CHILDREN. Prevent eating, drinking, tobacco use, and cosmetic application in areas where there is a potential for exposure to the material. Avoid breathing vapours or spray mist. Wear full protective clothing and equipment (see Section 8). After work, rinse gloves and remove protective equipment, and wash hands thoroughly with soap and water after handling, and before eating, tobacco use, drinking, applying cosmetics or using the toilet. Wash contaminated clothing before re-use and separate from household laundry. Keep containers closed when not in use. Protect product, wash or rinse water, and contaminated materials from uncontrolled release into the environment, or from access by animals, birds or unauthorized people. This product is not considered electrically conductive at low relative humidity.

Appropriate storage practices/requirements: Store in original container only in a well-ventilated, cool, dry, secure area. Protect from heat, sparks and flame. Do not expose sealed containers to temperatures above 40 °C. Keep separate from other products to prevent cross contamination. Rotate stock. Clean up spilled material immediately.

National Fire Code classification: Not required.

SECTION – 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Applicable control measures, including engineering controls: Ensure work areas have ventilation, containment, and procedures sufficient to maintain airborne levels below the TLV. Warehouses, production area, parking lots and waste holding facilities must have adequate containment to prevent environmental contamination. Provide separate shower and eating facilities.

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

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

Personal protective equipment for each exposure route:

General: Avoid breathing dust, vapours or aerosols. Avoid contact with eye, skin and clothing. Wash thoroughly with soap and water after handling and before eating, drinking, applying cosmetics or using tobacco.

INGESTION: Do not eat, drink, handle tobacco, or apply cosmetics in areas where there is a potential for exposure to this material. Always wash thoroughly after handling.

EYES: Where eye contact is likely, wear chemical goggles or a full-face shield. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

SKIN: Where contact is likely, wear chemical-resistant (such as nitrile or butyl) gloves, coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear.

INHALATION: A respirator is not normally required when handling this substance. A combination gas/vapour/particulate 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 certified respirator with a combination acid gas/organic vapour cartridge or canister and any N, P or R prefilter. 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.

SECTION – 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Light brown solid.

Formulation Type: Solid, water dispersible granule.

Odour: Sweet

pH: 7.9 (1% aqueous suspension).

Vapour pressure and reference temperature:

Dicamba (Sodium salt):	Not available
Primisulfuron-methyl:	3.8 x 10 ⁻⁸ mmHg @ 25 °C

Vapour density: Not available.

Boiling point: Not applicable.

Melting point: Not available.

Freezing point: Not applicable.

Specific gravity or density: 0.62 g/mL @ 25 °C.

Evaporation Rate: Not available.

Water/oil partition coefficient: Not available.

Odour threshold: Not applicable.

Viscosity: Not applicable.

Solubility in Water:

Dicamba (Sodium salt):	360 g/L @ 25°C
Primisulfuron-methyl:	390 mg/L @ pH7

SECTION – 10: STABILITY AND REACTIVITY

Chemical stability: Stable under normal use and storage conditions.

Conditions to avoid: None known.

Incompatibility with other materials: None known.

Hazardous decomposition products: This product will undergo a very strong exothermic decomposition reaction at 185 °C (365 °F).

Hazardous polymerization: Will not occur.

SECTION – 11: TOXICOLOGICAL INFORMATION

Acute toxicity/Irritation Studies (Finished Product):

Ingestion:	<u>Low Acute Toxicity</u>	
	Oral (LD50 Rat):	2,932 mg/kg body weight

Dermal:	<u>Low Acute Toxicity</u>	
	Dermal (LD50 Rabbit):	> 2,020 mg/kg body weight
Inhalation:	<u>Low Acute Toxicity</u>	
	Inhalation (LC50 Rat):	> 3.6 mg/L air – 4 hours.
Eye Contact:	<u>Moderately Irritating (Rabbit)</u>	
Skin Contact:	<u>Slightly Irritating (Rabbit)</u>	
Skin Sensitization:	<u>Not a Sensitizer</u>	

Reproductive/Developmental Effects

Dicamba (Sodium Salt):	None observed.
Primisulfuron-Methyl:	None observed.

Chronic/Subchronic Toxicity Studies

Dicamba (Sodium Salt):	None observed.
Primisulfuron-Methyl:	Effects on liver, kidneys, teeth, bone and testes (rats and mice), bladder (mice), gallbladder and thyroid (dogs) at extremely high doses.

Carcinogenicity

Dicamba (Sodium Salt):	None observed.
Primisulfuron-Methyl:	Does not present a human carcinogenic hazard. Liver tumors occur only at high doses that caused toxicity and mortality in the test animals.

Other Toxicity Information:

None.

Toxicity of Other Components:

The acute toxicity test results reported in Section 11, above, for the finished product take into account any acute hazards related to the “other components” in the formulation.

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

Other materials that show synergistic toxic effects together with the product: None known.

Target Organs

Active Ingredients

Dicamba (Sodium Salt):	Eye, skin.
Primisulfuron-Methyl:	Liver, kidney, bone, testes, thyroid, bladder, gallbladder.

Inert Ingredients

Starch: Respiratory tract, eye and skin.

SECTION – 12: ECOLOGICAL INFORMATION

Summary of Effects

The active ingredient, dicamba, is slightly toxic to fish and aquatic invertebrates . The second active ingredient, primisulfuron-methyl, is very toxic to aquatic life

Ecotoxicity Effects:

Dicamba (Sodium Salt):

Green Algae 5-Day EC ₅₀	> 3.7 ppm
Invertebrate (Water Flea) 48-hour EC ₅₀	1,600 ppm
Fish (Rainbow Trout) 96-hour LC ₅₀	>1,000 ppm
Bird (Mallard Duck) 8-day Dietary LC ₅₀	> 10,000 ppm

Primisulfuron-methyl Technical:

Green Algae 7-day EC ₅₀	24 ppb
Invertebrate (Water Flea) 48-hour EC ₅₀	>100 ppm
Fish (Rainbow Trout) 96-hour LC ₅₀	>13 ppm
Bird (Mallard Duck) 14-day LD ₅₀	> 2,150 ppm

Environmental Fate

The active ingredient, dicamba, is resistant to hydrolysis and has a soil half-life of 2 to 25 days. Primisulfuron-methyl does not bioaccumulate, is stable in water, but is not persistent in soil.

SECTION – 13: DISPOSAL CONSIDERATIONS

Waste disposal information: Do not reuse empty containers unless they are specifically designed to be re-filled. Empty container retains product residue. Dispose of empty containers in accordance with local regulations. Consult provincial environment ministry for advice on waste disposal. Industrial/commercial waste may be handled at licensed facilities only. Waste shipments must be securely packaged and properly labelled. Only licensed carriers may be used, and proper documents must accompany the shipment.

SECTION – 14 : TRANSPORT INFORMATION

Shipping information such as shipping classification:

TRANSPORTATION OF DANGEROUS GOODS CLASSIFICATION - ROAD/RAIL

Not Regulated.

SECTION – 15: REGULATORY INFORMATION

WHMIS classification for product: Exempt

A statement that the MSDS has been prepared to meet WHMIS requirements, except for use of the 16 headings.

This MSDS has been prepared in accordance with WHMIS requirements, but the data are presented under 16 headings.

Pest Control Products (PCP) Act Registration No.: 26688

SECTION – 16: OTHER INFORMATION

The information contained herein is offered only as a guide to the handling of this specific material and has been prepared in good faith by technically knowledgeable personnel. It is not intended to be all-inclusive and the manner and conditions of use and handling may involve other and additional considerations. No warranty of any kind is given or implied and Syngenta will not be liable for any damages, losses, injuries or consequential damages which may result from the use of or reliance on any information contained herein. This Material Safety Data Sheet is valid for three years. This product is under the jurisdiction of the Pest Control Products Act and is exempt from the requirements for a WHMIS compliant MSDS. Hazardous properties of all ingredients have been considered in the preparation of this MSDS. Read the entire MSDS for the complete hazard evaluation of this product.

Prepared by: Syngenta Canada Inc.
1-87-SYNGENTA (1-877-964-3682)

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