

## NORTHSTAR® Herbicide

Date: 6/4/2015  
 Replaces: 8/19/2014

### 1. PRODUCT IDENTIFICATION

Product identifier on label: **NORTHSTAR® Herbicide**  
 Product No.: A11896A  
 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: Specific Target Organ Toxicity: Respiratory Irritation Category 3  
 Signal Word (OSHA): Warning  
 Hazard Statements: May cause respiratory irritation

Hazard Symbols:



Precautionary Statements: Avoid breathing dust.  
 Use only outdoors or in a well-ventilated area.  
 Wear protective gloves, protective clothing, eye protection.  
 If inhaled: Remove person to fresh air and keep comfortable for breathing.  
 If in eyes: Rinse cautiously with water for several minutes.  
 Call a poison center, doctor or Syngenta if you feel unwell.  
 Store locked up.  
 Dispose of contents and container in accordance with local regulations.

Other Hazard Statements: May form combustible dust concentrations in air.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	Common Name	CAS Number	Concentration
Starch	Starch	9005-25-8	Trade Secret
Other ingredients	Other ingredients	Trade Secret	Trade Secret

## NORTHSTAR® Herbicide

Date: 6/4/2015  
Replaces: 8/19/2014

3-[4,6-bis(difluoromethoxy)-pyrimidin-2-yl]-1-(2-methoxycarbonyl-phenylsulfonyl) urea	Primisulfuron-Methyl	86209-51-0	7.5%
3,6-dichloro-o-anisic acid	Dicamba (Sodium Salt)	1982-69-0	39.9%

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 800-888-8372 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:

Respiratory irritation

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:

This material can be thermally unstable at elevated temperatures. The material is thermally stable at normal ambient temperatures. It is good practice to store the material away from sources of heat such as steam pipes, radiators or heaters.

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

See also Sec. 7.

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. Sweep

## NORTHSTAR® Herbicide

Date: 6/4/2015  
Replaces: 8/19/2014

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

**Precautions for safe handling:**

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.

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:**

Store locked up.

### 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
Starch	15 mg/m <sup>3</sup> (total) TWA; 5 mg/m <sup>3</sup> (resp) TWA	10 mg/m <sup>3</sup> TWA	10 mg/m <sup>3</sup> (total) TWA; 5 mg/m <sup>3</sup> (resp) TWA	NIOSH
Other ingredients	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Primisulfuron-Methyl	Not Established	Not Established	5 mg/m <sup>3</sup> TWA	Syngenta
Dicamba (Sodium Salt)	Not Established	Not Established	5 mg/m <sup>3</sup> TWA (Dicamba)	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 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.

## NORTHSTAR® Herbicide

Date: 6/4/2015

Replaces: 8/19/2014

### 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: Light brown solid

Odor: Sweet

Odor Threshold: Not Available

pH: 7.9

Melting point/freezing point: Not Available

Initial boiling point and boiling range: Not Applicable

Flash Point (Test Method): Not Applicable

Flammable Limits (% in Air): Not Available

Flammability: Combustible powder

Vapor Pressure: Dicamba (Sodium Salt) Not Available  
Primisulfuron-Methyl  $3.8 \times 10^{-8}$  mmHg @ 77°F (25°C)

Vapor Density: Not Available

Relative Density: 38.4 lbs/ft<sup>3</sup>

Solubility (ies): Dicamba (Sodium Salt) 360 g/l @ 77°F (25°C)  
Primisulfuron-Methyl 12 mg/l @ 77°F (25°C)

Partition coefficient: n-octanol/water: Not Available

Autoignition Temperature: Not Available

Decomposition Temperature: Not Available

Viscosity: Not Available

Other: Not Available

## 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: None known.

## NORTHSTAR® Herbicide

Date: 6/4/2015  
 Replaces: 8/19/2014

### 11. TOXICOLOGICAL INFORMATION

#### Health effects information

Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Respiratory irritation

Delayed, immediate and chronic effects of exposure: Respiratory system effects

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

Ingestion:	Oral (LD50 Rabbit) :	2932 mg/kg body weight
Dermal:	Dermal (LD50 Rat) :	> 2020 mg/kg body weight
Inhalation:	Inhalation (LC50 Rat) :	> 3.6 mg/l air - 4 hours
Eye Contact:	Moderately Irritating (Rabbit)	
Skin Contact:	Slightly Irritating (Rabbit)	
Skin Sensitization:	Not a Sensitizer (Guinea Pig)	

#### Reproductive/Developmental Effects

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

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): Did not show carcinogenic or mutagenic effects in animal experiments.

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.

Chemical Name	NTP/IARC/OSHA Carcinogen
Starch	No
Other ingredients	No
3-[4,6-bis(difluoromethoxy)-pyrimidin-2-yl]-1-(2-methoxycarbonyl-phenylsulfonyl) urea	No
3,6-dichloro-o-anisic acid	No

#### Other Toxicity Information

None

#### Toxicity of Other Components

Other ingredients

Not Applicable

Starch

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

**NORTHSTAR® Herbicide**

Date: 6/4/2015  
 Replaces: 8/19/2014

Target Organs

Active Ingredients

Dicamba (Sodium Salt): Not Applicable  
 Primisulfuron-Methyl: Liver, kidney, bone, testes, thyroid, bladder, gallbladder

Inert Ingredients

Other ingredients: Not Applicable  
 Starch: Eye, skin, respiratory tract

**12. ECOLOGICAL INFORMATION**

Eco-Acute Toxicity

Primisulfuron-Methyl:

Fish (Rainbow Trout) 96-hour LC50 > 13 ppm  
 Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 > 100 ppm  
 Bird (Mallard Duck) 14-day LD50 > 2150 mg/kg  
 Green Algae 7-day EC50 24 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

Primisulfuron-Methyl:

The information presented below is for the active ingredient, primisulfuron-methyl.  
 Does not bioaccumulate. Not persistent in soil. Stable in water. Highly mobile in soil. Will leach. 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  
 < 2500 lbs Not regulated  
 > 2500 lbs  
 Proper Shipping Name: RQ Environmentally Hazardous Substance, Solid, N.O.S. (Dicamba)  
 Hazard Class: Class 9  
 Identification Number: UN 3077  
 Packing Group: PG III

## NORTHSTAR® Herbicide

Date: 6/4/2015

Replaces: 8/19/2014

### Comments

Water Transport - International  
< 2500 lbs

Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Primisulfuron), Marine Pollutant

Hazard Class: Class 9

Identification Number: UN 3077

Packing Group: PG III

> 2500 lbs

Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Primisulfuron), Marine Pollutant, RQ (Dicamba)

Hazard Class: Class 9

Identification Number: UN 3077

Packing Group: PG III

Air Transport - International

Proper Shipping Name: Environmentally Hazardous Substance, Solid, N.O.S. (Primisulfuron)

Hazard Class: Class 9

Identification Number: UN 3077

Packing Group: PG III

## 15. REGULATORY INFORMATION

### Pesticide Registration:

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.

### EPA Registration Number(s):

100-923

### EPCRA SARA Title III Classification:

Section 311/312 Hazard Classes: Acute Health Hazard  
Fire Hazard

Section 313 Toxic Chemicals: Dicamba (Sodium Salt) 39.9% (CAS No. 1982-69-0)

### CERCLA/SARA 304 Reportable Quantity (RQ):

RQ Dicamba = 1000 lbs

### RCRA Hazardous Waste Classification (40 CFR 261):

Not Applicable

### TSCA Status:

Exempt from TSCA, subject to FIFRA

## NORTHSTAR® Herbicide

Date: 6/4/2015  
Replaces: 8/19/2014

### 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
*	Chronic

Syngenta Hazard Category: C

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 3/20/1998

Revision Date: 6/4/2015

Replaces: 8/19/2014

Section(s) Revised: 2, 4, 11, 16

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.