

## SOLICAM® DF Herbicide

Date: 6/1/2015  
Replaces: 8/19/2014

### 1. PRODUCT IDENTIFICATION

Product identifier on label: **SOLICAM® DF Herbicide**  
Product No.: A10146A  
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: Skin Corrosion/Irritation: Category 2  
Oral: Category 4  
Specific Target Organ Toxicity: Repeated Category 2

Signal Word (OSHA): Warning

Hazard Statements: Harmful if swallowed  
Causes skin irritation  
May cause damage to organs through prolonged or repeated exposure

Hazard Symbols:



Precautionary Statements: Do not breathe dust.  
Wash hands and face thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Wear protective gloves, protective clothing, eye protection.  
If swallowed: Immediately call a poison center, doctor or Syngenta. Rinse mouth.  
If on skin: Wash with plenty of soap and water.  
If skin irritation occurs: Get medical advice.  
See Section 4 First Aid Measures.  
Take off contaminated clothing and wash it before reuse.  
Dispose of contents and container in accordance with local regulations.

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

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**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Chemical Name	Common Name	CAS Number	Concentration
Other ingredients	Other ingredients	Trade Secret	21.4%
4-Chloro-5-(methylamino)-2-(alpha, alpha, alpha-trifluoro-m-tolyl)-3-(2H)-pyridazinone	Norflurazon	27314-13-2	78.6%

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:

Skin 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.

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### 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 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.

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.

Conditions for safe storage, including any incompatibilities:  
 Not Applicable

### 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
Other ingredients	Not Applicable	Not Applicable	Not Applicable	Not Applicable
Norflurazon	Not Established	Not Established	3 mg/m <sup>3</sup> 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 dust-proof chemical goggles.

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### 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 certified respirator with any N, R, P or HE filter.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Light brown to dark brown granules

Odor: Odorless

Odor Threshold: Not Available

pH: 7.7 (5% suspension in H<sub>2</sub>O)

Melting point/freezing point: 345 - 356 °F

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: Norflurazon 1.0 x 10<sup>(-5)</sup> mmHg @ 75°F (24°C)

Vapor Density: Not Available

Relative Density: 44 lbs/ft<sup>3</sup>

Solubility (ies): Norflurazon 33.7 ppm @ 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.

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### 11. TOXICOLOGICAL INFORMATION

#### Health effects information

Likely routes of exposure: Dermal, Inhalation

Symptoms of exposure: Skin irritation

Delayed, immediate and chronic effects of exposure: Skin irritation

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

Ingestion:	Oral (LD50 Rabbit) :	1140 mg/kg body weight
Dermal:	Dermal (LD50 Rat) :	> 2000 mg/kg body weight
Inhalation:	Inhalation (LC50 Rat) :	> 2.6 mg/l air - 4 hours
Eye Contact:	Mildly Irritating (Rabbit)	
Skin Contact:	Slightly Irritating (Rabbit)	
Skin Sensitization:	Not a Sensitizer (Guinea Pig)	

#### Reproductive/Developmental Effects

Norflurazon: Delayed ossification (rabbit); Maternal toxicity at 750 ppm (rat).

#### Chronic/Subchronic Toxicity Studies

Norflurazon: Accelerated ageing changes in rats at high dose levels (1025 ppm). Effects in pituitary, adrenals, uterus and ovaries (rats). Hepatocellular hypertrophy in high dose (male mice). Slight increase in liver weight at 200 ppm (male dogs).

#### Carcinogenicity

Norflurazon: Increase in hepatomas at highest dose level (male mice).

Chemical Name	NTP/IARC/OSHA Carcinogen
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Other ingredients	No
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4-Chloro-5-(methylamino)-2-(alpha, alpha, alpha-trifluoro-m-tolyl)-3-(2H)-pyridazinone	No
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#### Other Toxicity Information

None

#### Toxicity of Other Components

Other ingredients  
 Not Applicable

#### Target Organs

##### Active Ingredients

Norflurazon: Pituitary, adrenal, uterus, ovary, liver

##### Inert Ingredients

Other ingredients: Not Applicable

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### 12. ECOLOGICAL INFORMATION

#### Eco-Acute Toxicity

##### Norflurazon:

Fish (Rainbow Trout) 96-hour LC50 8.1 ppm

Green Algae 5-day EC50 13 ppb

Invertebrate (Water Flea) Daphnia Magna 48-hour EC50 > 15 ppm

Bird (Bobwhite Quail) 14-day LD50 > 1000 mg/kg

#### Environmental Fate

##### Norflurazon:

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

Low bioaccumulation potential. Persistent in soil. Stable in water. Moderate mobility in soil. Floats 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

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### 14. TRANSPORT INFORMATION

#### DOT Classification

Ground Transport - NAFTA  
Not regulated

#### Comments

Water Transport - International

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

Hazard Class or Division: Class 9

Identification # : UN 3077

Packing Group: PG III

Air Transport - International

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

Hazard Class or Division: Class 9

Identification # : UN 3077

Packing Group: PG III

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### 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:

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Caution: Harmful if swallowed or absorbed through the skin. Avoid contact with skin, eyes, or clothing. In case of skin or eye contact, flush with plenty of water.

EPA Registration Number(s):  
 100-849

EPCRA SARA Title III Classification:

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

Section 313 Toxic Chemicals: Norflurazon 78.6% (CAS No. 27314-13-2)

California Proposition 65:

This product does not contain chemicals 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: 1  
 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: B,S

For non-emergency questions about this product call:

1-800-334-9481

Original Issued Date: 11/1/1995  
 Revision Date: 6/1/2015 Replaces: 8/19/2014  
 Section(s) Revised: 2, 4, 11

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.