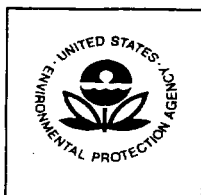


241-384

8/17/2009

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U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs  
Registration Division (7505P)  
Ariel Rios Building  
1200 Pennsylvania Ave., NW  
Washington, D.C. 20460

EPA Reg. Number:

241-384

Date of Issuance:

AUG 17 2009

NOTICE OF PESTICIDE:

Registration  
 Reregistration  
(under FIFRA, as amended)

Term of Issuance:

Name of Pesticide Product:

Lightning D Herbicide

Name and Address of Registrant (include ZIP Code):

BASF Corporation  
26 Davis Drive, P.O. Box 13528  
Research Triangle Park, NC 27709

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act. Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is reregistered in accordance with FIFRA provided that you:

1. Submit and/or cite all data required for registration/reregistration review of your product when the Agency requires all registrants of similar products to submit data.
2. Change the Hazards to Humans and Domestic Animals statements to "DANGER Corrosive. Causes irreversible eye damage. Causes skin irritation. Harmful if swallowed. Harmful if absorbed through skin. Do not get in eyes, on skin, or on clothing."

Signature of Approving Official:

Joanne Miller  
Product Manager 23  
Herbicide Branch  
Registration Division (7505P)

Date:

AUG 17 2009

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3. Per the acute toxicity review, the PPE section must be revised to read:

“Some materials that are chemical-resistant to this product are made of any waterproof material. If you want more options, follow the instructions for category A on an EPA chemical-resistance category selection chart.

Pilots must wear:

Long-sleeved shirt and long pants, and  
Shoes and socks.

Mixers, loaders and all other handlers must wear:

Coveralls over short-sleeved shirt and short pants,  
Goggles or faceshield,  
Chemical-resistant gloves,  
Chemical-resistant footwear plus socks,  
Chemical-resistant headgear for overhead exposure, and  
Chemical-resistant apron when cleaning equipment.

See engineering controls for additional requirements.”

4. On page 4, change “General Information” to “Use Information”. On page 5, change “Lightning D should be applied a minimum” to “Apply Lightning D a minimum”.

5. On page 7, delete “General” from “General Restrictions and Limitations”. Under “General Tank Mixing Information” change “should be” to “must” in “No labeled dosages should be exceeded”. On page 8, change “recommended rate” to “specified rate” under heading “Rotational Crops Guideline”. Change “recommended interval” to “specified interval”.

6. On page 8, delete “BASF recommends” from “BASF recommends that products...”. Delete “Because growing conditions, environmental conditions, and grower practices are beyond the control to BASF, All risks and consequences associated with planting seed corn inbreds into fields treated previously with lightning d shall be assumed by the user”. This is a warranty statement and must be moved to the Warranty section or deleted from the entire label.

A stamped copy of the label is enclosed for your records. You must submit one copy of the final printed label before you release the product for shipment. Products shipped after 12 months from the date of this letter or the next printing of the label whichever occurs first, must bear the new revised label. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA. Your release for shipment of the product constitutes acceptance of these conditions. This label supercedes all other previously accepted labels. If you have any questions please call Erik Kraft at 703-308-9358 or email at Kraft.Erik@epa.gov.



The Chemical Company

Stampen 2/18/09

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# Lightning® D herbicide

For use on CLEARFIELD® corn hybrids only

**Active Ingredients:**

imazethapyr: (±)-2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-ethyl-3-pyridinecarboxylic acid.....	12.0%
imazapyr: 2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-3-pyridinecarboxylic acid.....	4.0%
sodium salt of dicamba: (3,6-dichloro-o-anisic acid)*.....	58.9%

<b>Other Ingredients:</b> .....	25.1%
<b>Total:</b> .....	100.0%

\*Equivalent to 53.6% of 3,6-dichloro-o-anisic acid

This product contains 0.12 pounds acid equivalent of imazethapyr, 0.04 pounds acid equivalent of imazapyr, and 0.536 pounds acid equivalent of dicamba per pound of product.

EPA Reg. No. 241-384

EPA Est. No.

**KEEP OUT OF REACH OF CHILDREN  
DANGER/PELIGRO**

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See inside for complete **First Aid, Precautionary Statements, Directions For Use, Conditions of Sale and Warranty**, and state-specific crop and/or use site restrictions.

In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).

**Net Contents:**

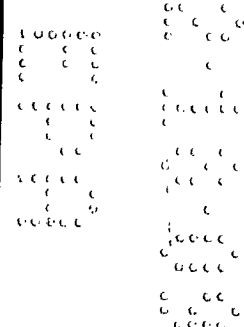
BASF Corporation  
26 Davis Drive, Research Triangle Park, NC 27709

**ACCEPTED  
with COMMENTS  
In EPA Letter Dated:**

**AUG 17 2009**

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.

241-384



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12

FIRST AID	
<b>If in eyes</b>	<ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>• Remove contact lenses, if present, after first 5 minutes; then continue rinsing eye.</li> <li>• Call poison control center or doctor for treatment advice.</li> </ul>
<b>If on skin or clothing</b>	<ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul>
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• <b>DO NOT</b> induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• <b>DO NOT</b> give anything by mouth to an unconscious person.</li> </ul>
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact BASF Corporation for emergency medical treatment information: 1-800-832-HELP (4357).	
<b>Note to physician:</b> Probable mucosal damage may contraindicate the use of gastric lavage.	

### Precautionary Statements

#### Hazards to Humans and Domestic Animals

**DANGER.** Corrosive. Causes irreversible eye damage. Harmful if swallowed or absorbed through skin. **DO NOT** get in eyes or on clothing. Avoid contact with skin. Wear goggles or face shield.

#### Personal Protective Equipment (PPE)

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow instructions for **Category A** on an EPA chemical-resistant category selection chart.

#### Mixers, loaders, applicators, and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves, such as butyl rubber ≥ 14 mils, or natural rubber ≥ 14 mils, or neoprene rubber ≥ 14 mils, or nitrile rubber ≥ 14 mils
- Shoes plus socks
- Protective eye wear

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them.

#### Engineering Controls

Pilots must use an enclosed cockpit that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(6)].

#### In Case of Emergency

In case of large-scale spillage regarding this product, call:  
 CHEMTREC 1-800-424-9300  
 BASF Corporation 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- BASF Corporation 1-800-832-HELP (4357)

#### User Safety Recommendations

##### Users should:

- Wash hands with plenty of soap and water before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### Environmental Hazards

This product is toxic to plants. Drift and runoff may be hazardous to plants in water adjacent to treated areas.

**DO NOT** apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment washwater or rinsate. See **DIRECTIONS FOR USE** for additional precautions and requirements.

#### Groundwater Advisory and Proper Handling Instructions

These chemicals have properties and characteristics associated with chemicals detected in groundwater. The use of these chemicals in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. This product may not be mixed or loaded within 50 feet of any wells (including abandoned wells and drainage wells), sinkholes, perennial or intermittent streams and rivers, and natural or impounded lakes or reservoirs. This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pad or properly diked mixing/loading areas.

Operations that involve mixing, loading, rinsing, or washing of this product into or from pesticide handling or application equipment or containers within 50 feet of any well are prohibited unless conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be positioned on or moved across the pad. Such a pad shall be designed and maintained to contain any product spills or equipment leaks, container or equipment rinse or washwater, and rainwater that may fall on the pad. Surface water shall not be allowed to either flow over or from the pad, which means the pad must be self-contained. The pad shall be sloped to facilitate material removal. An unroofed pad shall be of sufficient capacity to contain at a minimum 110% of the capacity of the largest pesticide container or application equipment on the pad. A pad that is covered by a roof of sufficient size to completely exclude precipitation from contact with the pad shall have a minimum containment capacity of 100% of the capacity of the largest pesticide container or application equipment on the pad. Containment capacities as described above shall be maintained at all times. The above specific minimum containment capacities **DO NOT** apply to vehicles when delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment.

**DO NOT** apply this product through any type of irrigation system.

Product must be used in a manner which will prevent back-siphoning in wells, spills or improper disposal of excess pesticide, spray mixtures or rinsate.

### Directions For Use

It is a violation of federal law to use this product in a manner inconsistent with its labeling. **DO NOT** apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

This labeling must be in the user's possession during application.

Observe all cautions and limitations on this label and on the labels of products used in combination with **Lightning® D herbicide**. **DO NOT** use **Lightning D** other than in accordance with the instructions set forth on this label. The use of **Lightning D** not consistent with this label may result in injury to crops.

### Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

**DO NOT** enter or allow worker entry into treated areas during the restricted-entry interval (REI) of **48 hours**.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls worn over short-sleeved shirt and short pants
- Chemical-resistant footwear plus socks
- Chemical-resistant gloves made of any waterproof material
- Chemical-resistant headgear for overhead exposure
- Protective eyewear

### Storage and Disposal

**DO NOT** contaminate water, food or feed by storage or disposal.

**Pesticide Storage.** Store in secure, dry, well-ventilated area.

**Pesticide Disposal.** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

### Container Disposal

**Nonrefillable Container. DO NOT reuse or refill this container.** Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

**Triple rinse containers small enough to shake (capacity ≤ 5 gallons) as follows:** Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank, or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

**Pressure rinse as follows:** Empty the remaining contents into application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank, or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse at

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about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

### General Information

Apply **Lightning® D herbicide** only on selected field corn hybrids (**CLEARFIELD®** corn) warranted by the seed company to possess resistance/tolerance to direct application of certain imidazolinone herbicides. **DO NOT** apply **Lightning D** to corn hybrids that lack resistance/tolerance to imidazolinone herbicides. Contact your seed supplier, chemical dealer or BASF to obtain information regarding **CLEARFIELD** corn hybrids.

When applied as directed at the broadcast rate of 5.6 ounces per acre, **Lightning D** will control or reduce competition from the weeds listed in **Table 1**.

NOTE: R = Reduced Competition

The number under Maximum Leaf Stage indicates the MAXIMUM number of leaves at which weeds should be sprayed postemergence.

**DO NOT** count cotyledon leaves when determining weed stage of growth.

**Table 1. General Weed List**

Broadleaf Weeds Controlled	POSTEMERGENCE	
	Maximum Leaf Stage	Size (Inches)
Alligator weed	4	1-3
Anoda, spurred	2	1-2
Artichoke, Jerusalem	8	6-10
Buckwheat, wild	4	1-3
Buffalobur	4	1-3
Bristly starbur	2	1-2
Carpetweed	4	1-3
Cocklebur, common	8	1-8
Bindweed, field	R	3-6
Jimsonweed	4	1-3
Knotweed	4	1-3
Kochia	4	1-3
Lambsquarters, common	4	1-3
Marshelder	4	1-3
Milkweed, honeyvine	4	1-3
Morningglory		
entireleaf	2	1-2
ivyleaf	4	1-3
pitted	2	1-2
smallflower	4	1-3
tall	4	1-3
Mustard sp.	4	1-3
Nightshade		
black	4	1-3
Eastern black	4	1-3
hairy	4	1-3
Pigweed		
Palmer	4	1-3
prostrate	8	1-8
redroot	8	1-8
smooth	8	1-8
spiny	8	1-8

**Table 1. General Weed List (Continued)**

Broadleaf Weeds Controlled	POSTEMERGENCE	
	Maximum Leaf Stage	Size (Inches)
Ragweed,		
common	4	1-3
giant	4	1-3
Sage, barnyard	R	1-3
Sicklepod	4	1-3
Sida, prickly	4	1-3
Smartweed,		
ladysthumb	4	1-3
Pennsylvania	4	1-3
Spurge		
prostrate	4	1-3
spotted	4	1-3
Sunflower	4	1-3
Thistle, Canada	R	1-3
Velvetleaf	4	1-3
Waterhemp		
common	4	1-3
tall	4	1-3
Annual Grass and Sedge Weeds Controlled	POSTEMERGENCE	
	Maximum Leaf Stage	Size (Inches)
Barnyardgrass	3	1-3
Crabgrass		
large	3	1-3
smooth	3	1-3
Cupgrass, woolly	3	1-3
Foxtail		
giant	6	1-6
green	3	1-3
yellow	3	1-3
Goosegrass	3	1-3
Johnsongrass,		
seedling	6	1-8
rhizome	R	8-16
Millet, wild proso	3	1-3
Nutsedge		
purple	R	1-3
yellow	R	1-3
Panicum, fall	3	1-3
Quackgrass	R	1-3
Red rice	3	1-3
Ryegrass, Italian	3	1-6
Sandbur, field	3	1-2
Shattercane	6	1-8
Signalgrass, broadleaf	4	1-8
Sorghum alnum	6	1-3
Volunteer corn (non-CLEARFIELD corn)	8	1-12
Wild oat	6	1-8
Witchgrass	3	1-3

### Mode of Action

**Lightning® D herbicide** kills weeds by root and/or foliar uptake and rapid translocation to the growing points. Adequate soil moisture is important for optimum

**Lightning D** activity. When adequate soil moisture is present, **Lightning D** will provide residual control of susceptible germinating weeds; activity on established weeds will depend on the weed species and the location of its root system in the soil.

### Herbicide Resistance

Naturally occurring biotypes\* of some of the weeds listed on this label may not be effectively controlled by this and/or other products with the ALS/AHAS enzyme-inhibiting mode of action. Other herbicide with the ALS/AHAS enzyme inhibiting mode of action include the the sulfonyleureas (e.g. **Accent®**, **Classic®**, **Permit®**, **Steadfast®**, **Spirit®**, etc.) the sulfonamides (e.g. **Python®**, etc.), the pyrimidyl benzoates (e.g. **Staple®**, etc.), and the imidazolinones (e.g. **Pursuit®**, **Scepter®**, **Raptor®**, etc.). Herbicides with the growth regulating mode of action include the benzoic acid herbicides (e.g. **Banvel®**, **Clarity®**, **Distinct®**, etc.), the phenoxy acid herbicides (e.g. 2,4-D, 2,4-DB, etc.) and the pyridine herbicides (e.g. **Stinger®**). If naturally occurring biotypes are present in a field which are resistant to one of the herbicides in this premix and are not controlled by the other mode of action herbicide in this premix, **Lightning D** should be tank mixed or applied sequentially with an appropriate registered herbicide having a different mode of action to ensure control.

\*A weed biotype is a naturally occurring individual within a given species that has a slightly different, but distinct genetic makeup from other plants. **Lightning D** is active against many broadleaf and grass weed species. For long term weed management, **Lightning D** contains three herbicides with two different modes of action to reduce the potential for selecting tolerant weeds (resistant weeds).

### Crop Tolerance

Crops growing under stressful environmental conditions can exhibit various injury symptoms which may be more pronounced if herbicides are used. Corn plants treated with **Lightning D** may exhibit yellowing on new growth. Such effects occur infrequently and are temporary. Normal growth and appearance should resume within 1 to 2 weeks.

Use of **Lightning D** in accordance with label directions is expected to result in normal growth of rotational crops in most situations; however, various environmental and agronomic factors make it impossible to eliminate all risks associated with the use of this product and, therefore, rotational crop injury is always possible. Under some conditions (such as heavy texture soil, high organic matter, low pH or low rainfall), **Lightning D** may cause injury to subsequent planted crops. See the **ROTATIONAL CROPS GUIDE-LINE** section of this label for recommended rotation intervals to sensitive crops.

### Soil Insecticide Information

All soil insecticides, including labeled banded or infurrow applications, may be used in combination with **Pioneer®** imidazolinone-resistant (IR) corn hybrids and **Lightning D**.

BASF recommends that terbufos and phorate in banded applications may be used in combination with **Lightning D** on imidazolinone-tolerant (IT) corn hybrids. **DO NOT** use terbufos when **Lightning D** will be applied to imidazolinone-tolerant corn hybrids. BASF has not tested all hybrids in which the imidazolinone-tolerance trait is claimed and cannot be responsible for factors which are beyond its control, such as growing conditions, environmental conditions, grower practices and the specific genetics of each hybrid tolerance to herbicide and insecticide applications.

### Cultivation

For maximum weed control, cultivate 7-10 days following **Lightning D** application. This timely cultivation will enhance residual weed control, especially under dry conditions.

### Cleaning Spray Equipment

To avoid injury to sensitive crops, drain and clean application equipment thoroughly using a strong detergent or commercial sprayer cleaner according to the manufacturer's directions and then triple rinse the equipment before and after applying **Lightning D**.

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## Application Instructions

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**Lightning D** is effective in controlling annual weeds in conservation tillage as well as in conventional production systems. Apply **Lightning D** as a postemergence treatment to **CLEARFIELD®** corn when crop and weeds are actively growing. For optimal weed control apply **Lightning D** before weeds exceed labeled height.

### Lightning D Application Use Area, Rate and Timing

- Not for use in California
- In New York, not for sale or use on Long Island.
- Apply **Lightning D** at a broadcast rate of 5.6 ounces per acre.
- At 5.6 ounces per acre use rate, this container (7.0 lbs) will treat 20 acres.
- **Lightning D** can be applied postemergence (including spike stage) on **CLEARFIELD** corn hybrids.
- Apply **Lightning D** before weeds exceed a height of 4 inches and corn height is 20 inches or corn has 6 leaf collars (V6), whichever is the more restrictive.
- Delaying a **Lightning D** application for 48 hours from the time temperatures increase above 50°F, (i.e., after air temperatures have remained below 50°F for 10 or more hours) will improve weed control and reduce the potential for crop response. Unusually cool temperatures (50°F or less) reduce photosynthesis and transpiration and thus reduce the uptake and translocation (and effectiveness) of **Lightning D** in weeds.

**Lightning D** should be applied a minimum of four hours before rainfall or overhead irrigation.

### Ground Application Methods and Equipment

Uniformly apply with properly calibrated ground equipment in 10 or more gallons of water per acre. A spray pressure of 20 to 40 psi is recommended. **DO NOT** apply when wind velocity is greater than 10 mph. (See **SENSITIVE CROP PRECAUTIONS** section for application guidelines near sensitive crops.)

To ensure thorough coverage, a minimum of 10 gallons of water per acre is recommended when applying **Lightning® D herbicide** to minimum till or no-till **CLEARFIELD®** corn. Use higher gallonage for fields with dense vegetation or heavy crop residues. Flat-fan nozzle tips are recommended for postemergence applications. Avoid overlaps when spraying.

### Ground Boom Spray Drift Requirements

- Applicators are required to use a nozzle height below 4 feet above the ground or plant canopy and coarse or coarser droplet size (ASABE S572) or, if specifically using a spinning atomizer nozzle, applicators are required to use a volume mean diameter (VMD) of 385 microns or greater.
- Applications with wind speeds greater than 10 mph are prohibited.
- Applications into temperature inversions are prohibited.

### Aerial Application Methods and Equipment

Uniformly apply with properly calibrated aerial equipment in 5 or more gallons of water per acre. Addition of a nonionic surfactant AND fertilizer solution are required for optimum weed control. Apply a nonionic surfactant at the rate of 1 quart per 100 gallons of spray solution **OR** a crop oil concentrate at the rate of 1.25 gallons per 100 gallons of spray solution, **AND** a liquid fertilizer at the rate of 1.25 gallons per 100 gallons of spray solution (see directions under **MIXING INSTRUCTIONS**.)

To avoid injury to sensitive crops from drift, aerial applicators must adhere to the following **SPECIAL AERIAL USE DIRECTIONS AND PRECAUTIONS**.

### Aerial Spray Drift Requirements

- Applicators are required to use a coarse or coarser droplet size (ASABE S572) or, if specifically using a spinning atomizer nozzle, applicators are required to use a volume mean diameter (VMD) of 385 microns or greater for release heights below 10 feet. Applicators are required to use a very coarse or coarser droplet size or, if specifically using a spinning atomizer nozzle, applicators are required to use a VMD of 475 microns or greater for release heights above 10 feet. Applicators must consider the effects of nozzle orientation and flight speed when determining droplet size.
- Nozzles must be pointed toward the rear of the aircraft. The downward angle of the nozzle should not be greater than 20 degrees.
- Nozzle height above ground must be a maximum of 10 feet.
- To minimize wing-tip vortex roll, nozzles or spray boom must not be located any closer to end of wing or rotor

than three-fourths the distance from the center of the aircraft.

- The boom length must not exceed 90% of the rotor blade diameter to reduce spray drift.
- Use a maximum spray pressure of 40 psi.
- A buffer zone must be established between the area to be sprayed and sensitive crops.
- Applicators are required to use upwind swath displacement.
- Applications with wind speeds less than 3 mph and with wind speeds greater than 10 mph are prohibited.
- **DO NOT** spray when wind velocity is greater than 5 mph. Coarse sprays (larger droplets) are less likely to drift.
- Applications into temperature inversions are prohibited.

Applicator is responsible for any loss or damage that results from spraying **Lightning D** in a manner other than recommended in this label. In addition, applicator must follow all applicable state and local regulations and ordinances in regard to spraying. **DO NOT** use aerial equipment to apply **Lightning D** when sensitive crops and plants are growing in the vicinity of area to be treated.

### SENSITIVE CROP PRECAUTIONS

**Lightning D** may cause injury to desirable trees and plants, particularly beans, cotton, flowers, fruit trees, grapes, ornamentals, peas, potatoes, soybeans, sugar beets, sunflowers, tobacco, tomatoes and other broadleaf plants when contacting their roots, stems or foliage. These plants are most sensitive to **Lightning D** during their development or growing stage.

### FOLLOW THE PRECAUTIONS LISTED BELOW WHEN USING **Lightning D**:

- **DO NOT** treat areas where either possible downward movement into the soil or surface washing may cause contact of **Lightning D** with roots of desirable plants such as trees and shrubs.
- Avoid making applications when spray particles may be carried by air currents to areas where sensitive crops and plants are growing. **DO NOT** spray near sensitive plants if wind is gusty or in excess of 10 mph and moving in the direction of nearby sensitive crops. However, always make applications when there is some air movement to determine the direction and distance of possible spray drift. Leave an adequate buffer zone between area to be treated and sensitive plants. Coarse sprays are less likely to drift out of the target area than fine sprays.
- Use coarse sprays (volume median diameter of 400 microns or more) to avoid potential herbicide drift. Select nozzles that are designed to produce minimal amounts of fine spray particles (less than 200 microns). Examples of nozzles designed to produce coarse sprays via ground application equipment are **Delavan® Raindrop, Spraying Systems XR** (excluding 110° tips) flat fans, **Turbo Teejet®, Turbo Floodjet®**, or large capacity flood nozzles such as D10, TK10, or greater capacity tips. Keep the spray pressure at or below 20 psi and the spray volume at or above 20 gallons per acre, unless otherwise required by the manufacturer of drift-reducing nozzles. Consult your



spray nozzle supplier concerning the choice of drift-reducing nozzles.

- Agriculturally approved drift-reducing additives may be used.
- To avoid injury to desirable plants, equipment used to apply **Lightning® D herbicide** should be thoroughly cleaned (see **CLEANING SPRAY EQUIPMENT**) before reusing to apply any other chemicals.

### Additives

Ground, postemergence applications of **Lightning D** require the addition of an ADJUVANT AND a NITROGEN FERTILIZER SOURCE.

#### ADJUVANTS

**Surfactants - cleared for application to growing crops.** Use a nonionic surfactant containing at least 80% active ingredient. Apply the surfactant at the rate of 1 quart per 100 gallons. An organo-silicone surfactant may be used in place of a nonionic surfactant.

OR

**Crop Oil Concentrate.** The use of a petroleum-based or vegetable seed-based oil concentrate or methylated seed oil with **Lightning D** is permitted and may be beneficial under the following conditions:

1. Hot arid environmental conditions exist, when weeds may be under stress and less susceptible to herbicide applications.

However, when periods of cold and wet weather OR hot and humid weather exist, the use of a nonionic surfactant instead of crop oil concentrate is recommended.

Apply crop oil concentrates at the rate of 1 gallon per 100 gallons of spray solution (1% vol./vol.).

AND

#### NITROGEN FERTILIZER SOURCE

Recommended nitrogen based fertilizers include liquid fertilizers (such as 28%N, 32%N or 10-34-0) at the rate of 1-2 quarts per acre. Use the higher rate when weeds are under moisture or temperature stress. Instead of a liquid fertilizer, spray grade ammonium sulfate may be used at the rate of 2.5 pounds per acre.

**Alternatively,** the use of proprietary products that contain both a nonionic surfactant and a nitrogen source that provide equivalent spray additive activity to those additives mentioned above, may be used with **Lightning D**. Other premixes containing a surfactant and a nitrogen source may be used as long as performance and rate guidelines for surfactant and nitrogen amounts are met.

### Mixing Order

**DO NOT** use liquid fertilizer as a carrier (use water only) for postemergence applications of **Lightning D**.

#### WATER

1. Fill the spray tank 1/2 to 3/4 full with clean water.

2. Add the required amount of **Lightning D** to the spray tank while agitating.
3. After the **Lightning D** has visibly dispersed, add spray additives and fill the remainder of the tank with water. An antifoam agent may be added if needed.

#### SLURRY PREPARATION

**Lightning D** may be slurried prior to addition to the spray tank.

1. Add 1 to 2 pounds of product per gallon of water.
2. Agitate slurry for 10-15 minutes or until product is completely in solution.
3. Transfer slurry to spray tank (begin spray tank agitation) filled 1/2 to 3/4 full with clean water.

#### TANK MIX PREPARATION

When tank mixing **Lightning D** with recommended herbicides, add the other herbicides and other components in the following order, while agitating:

1. Fill spray tank 1/2 to 3/4 full with clean water.
2. Add **Lightning D** and thoroughly mix.
3. Add other aqueous solution products.
4. Add other soluble packet products and thoroughly mix.
5. Add WP (wetttable powder), DG (dispersible granule), DF (dry flowable), or LF (liquid flowable) formulations.
6. Add EC (emulsifiable concentrate) products.
7. Add surfactant to the spray tank.
8. Add liquid fertilizer.
9. While agitating, fill the remainder of the tank with water.

### General Tank Mixing Information

When **Lightning D** is used in combination with another herbicide, refer to the respective label for rates, spray additives, methods of application, proper timing, weeds controlled, restrictions and precautions. Always use in accordance with the more restrictive label restrictions and precautions. **Lightning D** cannot be mixed with any product containing a label prohibiting such mixtures. No labeled dosages should be exceeded.

### General Restrictions and Limitations

- Only one application of **Lightning D** may be made during the growing season.
- **If replanting** is necessary in a field previously treated with **Lightning D**, the field may be replanted only to **CLEARFIELD®** corn. Rework the soil no deeper than the treated zone. **DO NOT** apply a second treatment of **Lightning D**. In the event of a crop loss due to weather, **CLEARFIELD** corn seed hybrids can be replanted following an application of **Lightning D**. If **Lightning D** was tank mixed with other herbicides, the label restrictions for these herbicides must also be followed.
- **DO NOT** apply **Lightning D** within 45 days of corn harvest (silage, fodder, or grain).
- **DO NOT** graze or feed treated corn forage, silage, fodder, or grain for at least 45 days after an application of **Lightning D**.

- More restrictive crop growth stage limitations of tank mix partners must be followed.

**ROTATIONAL CROPS GUIDELINE**

Use of **Lightning® D herbicide** in accordance with label directions is expected to result in normal growth of rotational crops in most situations; however, various environmental and agronomic factors make it impossible to eliminate all risks associated with the use of this product and, therefore, rotational crop injury is always possible. The following rotational crops may be planted after applying **Lightning D** at the recommended rate in corn. Planting earlier than the recommended interval may result in crop injury.

Time after Lightning D Application	Crop(s) to be Grown
Anytime	<b>CLEARFIELD®</b> corn hybrids
Four months	Rye, Wheat
Eight and one-half months	Field Corn, Field corn grown for seed <sup>1</sup>
Nine months	Soybeans
Nine and one-half months	Alfalfa, Barley*, Edible beans and peas, Peanuts, Tobacco
Eighteen months	Cotton, Lettuce, Oats, Popcorn, Safflower, Sorghum, Sunflowers, and Sweet corn
Twenty-six months	Potatoes
Forty months**	All crops not listed elsewhere in <b>ROTATIONAL CROPS GUIDELINE</b>

<sup>1</sup>Rotational interval for barley is 18 months in the following states: ID, MT, OR (county of Malheur), and WY (counties of Bighorn, Cambell, Crook, Fremont, Hot Springs, Johnson, Park, Sheridan, Teton, Washakie, Weston)

\*\*Following forty months after a **Lightning D** application, and before any crop not listed in the **ROTATIONAL CROPS GUIDELINE**, a successful field bioassay must be completed. The field bioassay consists of a test strip of the intended rotational crop planted across the previously treated field and grown to maturity. The test strip should include low areas and knolls, and include variations in soil such as type and pH. If no crop injury is evident in the test strip rotational crop may be planted the following year.

Only rotational crops harvested at maturity may be used for feed or food.

BASF recommends that products containing imazethapyr (**Pursuit®, Pursuit® Plus EC**) should NOT be applied to **CLEARFIELD** corn the same year as **Lightning D** or injury to follow crops may occur.

If the field is limed to adjust pH prior to planting rotational crops not listed in the **ROTATIONAL CROPS GUIDELINE**, apply the lime at least 12 months prior to planting the rotational crop.

**EXCEPTIONS TO ROTATIONAL CROPS GUIDELINE**

- If corn is furrow irrigated, till the soil prior to planting winter wheat or barley. The beds should be broken up and the soil mixed with tillage equipment set to cut 4-6 inches deep.

- **Corn inbred lines:** Corn inbred seed lines may be planted the year following an application of **Lightning D**. Due to the proprietary nature of seed production, BASF has not been given access to the inbred data. Growers are directed to contact the seed company for information and recommendations regarding the planting of corn grown for seed in fields treated with **Lightning D** the previous year. Because growing conditions, environmental conditions, and grower practices are beyond the control of BASF, **ALL RISKS AND CONSEQUENCES ASSOCIATED WITH PLANTING SEED CORN INBREDS INTO FIELDS TREATED PREVIOUSLY WITH Lightning D SHALL BE ASSUMED BY THE USER.**

**Crop-specific Information**

**CLEARFIELD Corn**

**Lightning D** can be applied postemergence (including spike stage) on **CLEARFIELD** corn hybrids.

**Sequential Herbicide Combinations with Lightning D**

**Lightning D** controls many grass and broadleaf weed species. However, **Lightning D** is best utilized in multiple-pass weed control programs when **Lightning D** is applied sequentially after a soil surface-applied herbicide (i.e. preplant, preplant incorporated or preemergence) or after an early postemergence-applied herbicide.

**Recommended herbicides to be followed by sequential postemergence application of Lightning D**

- Balance®**
- Bicep Lite II Magnum®**
- Dual II Magnum®**
- Guardman®**
- Guardman® Max**
- Harness®**
- Harness® Xtra**
- Marksman®**
- Outlook®**
- Prowl®**
- Surpass®**
- Topnotch®**

**Lightning D** may also be used in sequential programs with registered burndown herbicides.

For enhanced weed control of certain species, the suggested tank mix combinations with **Lightning D** are, but not restricted to; atrazine, **Buctril®**, and **Callisto®**.

**DO NOT** use **Lightning D** in combination with products containing flumetsulam, thifensulfuron or rimsulfuron (i.e. **Accent®, Basis®, Basis® Gold, Hornet®, Python®, Steadfast®**).

**Table 2. Pests Listed in this Label**

Common Name	Scientific Name
Alligatorweed	<i>Alternanthera philoxeroides</i>
Anoda, spurred	<i>Anoda cristata</i>
Artichoke, Jerusalem	<i>Helianthus tuberosus</i>
Barnyardgrass	<i>Echinochloa crus-galli</i>
Buckwheat, wild	<i>Polygonum convolvulus</i>
Buffalobur	<i>Solanum rostratum</i>
Bristly starbur	<i>Acanthospermum hispidum</i>
Carpetweed	<i>Mollugo verticillata</i>
Crabgrass, large	<i>Digitaria longiflorai</i>
Crabgrass, smooth	<i>Digitaria ischaemum</i>
Cocklebur, common	<i>Xanthium pennsylvanicum</i>
Cupgrass, woolly	<i>Eriochloa villosa</i>
Bindweed, field	<i>Convolvulus arvensis</i>
Foxtail, giant	<i>Setaria faberi</i>
Foxtail, green	<i>Setaria viridis</i>
Foxtail, yellow	<i>Setaria lutescens</i>
Goosegrass	<i>Eleusine indica</i>
Jimsonweed	<i>Datura stramonium</i>
Johnsongrass, (seedling, rhizome)	<i>Sorghum halepense</i>
Knotweed, prostrate	<i>Polygonum aviculare</i>
Kochia	<i>Kochia scoparia</i>
Lambsquarters, common	<i>Chenopodium album</i>
Mallow, Venice	<i>Hibiscus trionum</i>
Marshelder	<i>Iva xanthifolia</i>
Milkweed, honeyvine	<i>Ampelamum albidus</i>
Millet, wild proso	<i>Panicum milaceum</i>
Morningglory, Entireleaf	<i>Ipomoea hederacea</i> var, <i>integruscula</i>
Morningglory, ivyleaf	<i>Ipomoea hederifolia</i>
Morningglory, smallflower	<i>Jacquemontia tamnifolia</i>
Morningglory, small white (pitted)	<i>Ipomoea lacunosa</i>
Morningglory, tall (common)	<i>Ipomoea purpurea</i>
Mustard	<i>Brassica</i> sp.
Nightshade, Eastern black	<i>Solanum ptycanthum</i>
Nightshade, black	<i>Solanum nigrum</i>
Nightshade, hairy	<i>Solanum sarrachoides</i>
Nutsedge, purple	<i>Cyperus rotundus</i>
Nutsedge, yellow	<i>Cyperus esculentus</i>
Panicum, fall	<i>Panicum dichotomiflorum</i>
Pigweed, palmer	<i>Amaranthus palmer</i>
Pigweed, prostrate	<i>Amaranthus blitoides</i>
Pigweed, redroot	<i>Amaranthus retroflexus</i>
Pigweed, smooth	<i>Amaranthus hybridus</i>
Pigweed, spiny	<i>Amaranthus albus</i>
Quackgrass	<i>Agropyron repens</i>
Ragweed, common	<i>Ambrosia artemisifolia</i>
Ragweed, giant	<i>Ambrosia trifida</i>
Red rice	<i>Oryza sativa</i>
Ryegrass, Italian	<i>Lolium multiflorum</i>
Sage, barnyard	<i>Saliva</i> , sp.
Sandbur, field	<i>Cenchrus incertus</i>
Shattercane	<i>Sorghum bicolor</i>
Sicklepod	<i>Cassia obtusifolia</i>
Sida, prickly	<i>Sida spinosa</i>
Signalgrass, broadleaf	<i>Bracharia platyphylla</i>

**Table 2. Pests Listed in this Label (continued)**

Common Name	Scientific Name
Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>
Smartweed, ladysthumb	<i>Polygonum persicaria</i>
Sorghum alnum	<i>Sorghum alnum</i>
Spurge, prostrate	<i>Chamaesyce humistrata</i>
Spurge, spotted	<i>Euphorbia maculata</i>
Sunflower, volunteer	<i>Helianthus</i> sp.
Sunflower, wild (common)	<i>Helianthus annuus</i>
Thistle, Canada	<i>Cirsium arvense</i>
Velvetleaf	<i>Abutilon theophrasti</i>
Wild oats	<i>Avena fatua</i>
Witchgrass	<i>Panicum capillare</i>

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The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF CORPORATION ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions For Use**, subject to the inherent risks, referred to above.

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