### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460



# **SEPA** United States Environmental Protection Office of Pesticide Programs Agency

Dr. Craig Kleppe Product Registration Manager BASF Corporation 26 Davis Dr. Research Triangle Park, NC 27709-3528

MAR 1 7 2010

Subject:

Amendment

Integrity<sup>TM</sup> Powered By Kixor Herbicide

EPA Reg. No.: 7969-279

Dear Dr. Kleppe,

The Agency has received your application, dated December 18, 2009, to amend the registration described above. The amended labeling, submitted under the Federal Insecticide, Fungicide, and Rodenticide Act, is acceptable, provided you make the following revisions:

1. On page 5, remove the word "General" in the heading, "General Information." The term "general" is an implied safety claim that makes all associated text unenforceable. You may substitute the word, "Product" if desired.

This labeling supersedes all previous accepted labeling for this product. Please submit one (1) copy of the final printed label, incorporating the modifications above, before the product is released for shipment. A stamped copy of the label is enclosed for your records. If you have any questions, please contact Kathryn Montague (703-305-1243 or montague.kathryn@epa.gov).

Sincerely,

Kathryn V. Montague Product Manager 23 Herbicide Branch

Registration Division (7505P)

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The Chemical Company

# NTEGR

# POWERED BY KIXOR® HERBICIDE



For use in field corn (grain, seed, silage), popcorn, sweet corn, and grain sorghum

#### Active Ingredients\*:

saflufenacil: N'-[2-chloro-4-fluoro-5-(3-methyl-2,6-dioxo-4-(trifluoromethyl)-3,	
6-dihydro-1(2H)-pyrimidinyl)benzoyl]-N-isopropyl-N-methylsulfamide	6.24%
dimethenamid-P: (S)-(2-chloro-N-[(1-methyl-2-methoxy)ethyl]-N-	
(2,4-dimethyl-thien-3-yl)-acetamide)	55.04%
Other Ingredients**:	38.72%
Total:	100.00%

\*Contains 0.57 pounds of saffufenacil and 5.0 pounds of dimethenamid-P per gallon, formulated as an emulsifiable concentrate.

\*\* Contains petroleum distillates.

EPA Reg. No. 7969-279

**EPA Est. No.** 

# KEEP OUT OF REACH OF CHILDREN WARNING/AVISO

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:

MAR 1 7 2010 Under the Federal Insuricide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No.

969-279

FIRST AID		
If in eyes	<ul> <li>Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes; then continue rinsing eyes.</li> <li>Call a poison control center for treatment advice.</li> </ul>	
If swallowed	<ul> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>DO NOT induce vomiting unless told to by a poison control center or doctor.</li> <li>DO NOT give any liquid to the person.</li> <li>DO NOT give anything by mouth to an unconscious person.</li> </ul>	
If on skin or clothing	<ul> <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>	
If inhaled	<ul> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably by mouth to mouth, if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>	
	HOTLINE NUMBER	

You may also contact BASF Corporation for emergency medical treatment information: 1-800-832-HELP (4357).

Note to Physician: Contains petroleum distillate. Vomiting may cause aspiration pneumonia.

# **Precautionary Statements**

#### **Hazards to Humans and Domestic Animals**

**WARNING.** Causes substantial but temporary eye injury. Harmful if swallowed. **DO NOT** get in eyes or on clothing. Avoid contact with skin. Remove and wash contaminated clothing before reuse. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

#### Personal Protective Equipment (PPE)

Some materials that are chemically resistant to this product are listed below. For more options, refer to **Category F** on an EPA chemical-resistance category selection chart.

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks
- Chemical-resistant gloves, such as barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils, viton ≥ 14 mils, or selection Category F
- Protective eyewear such as face shield, goggles, or safety glasses

Follow the 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 Statement**

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**IMPORTANT:** When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for **applicators and other handlers** and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

#### **USER SAFETY RECOMMENDATIONS**

#### Users should:

- Wash hands 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**

For terrestrial uses, **DO NOT** apply directly to water, areas where surface water is present, or intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment washwaters or rinsate.

**Groundwater Advisory.** Saflufenacil has properties and characteristics associated with chemicals detected in groundwater. This chemical may leach into groundwater if used in areas where soils are permeable, particularly where

the water table is shallow. Dimethenamid-P has properties that may result in groundwater contamination. Application in areas where soils are permeable or coarse and groundwater is near the surface could result in groundwater contamination.

**Surface Water Advisory.** This product may impact surface water due to runoff of rainwater. This is especially true for poorly draining soils and soils with shallow groundwater. This product is classified as having high potential for reaching surface water via runoff for several weeks after application. A level, well-maintained buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of this chemical from runoff water and sediment. Runoff of this product will be reduced by avoiding application when rainfall is forecast to occur within 48 hours.

**Point-source Contamination.** To prevent point-source contamination, **DO NOT** mix or load this or any other pesticide product within 50 feet of wells (including abandoned wells and drainage wells), sinkholes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs. This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pad or dike mixing/loading areas described as follows.

Mixing, loading, rinsing, or washing operations performed within 50 feet of a well are allowed only when conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be on or move across the pad. The pad must be self-contained to prevent surface water flow over or from the pad. The pad capacity must be maintained at 110% that of the largest pesticide container or application equipment used on the pad and have sufficient capacity to contain all product spills, equipment or container leaks, equipment washwaters, and rainwater that may fall on the pad. The containment capacity does not apply to vehicles delivering pesticide shipments to the mixing and/or loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment.

Care must be taken when using this product to prevent:

- Back-siphoning into wells
- Spills
- Improper disposal of excess pesticide, spray mixes, or rinsates

Check valves or anti-siphoning devices must be used on all mixing equipment.

Movement Dissolved in Runoff or Through Soil.

DO NOT apply under conditions that favor runoff.

DO NOT apply to impervious substrates such as paved or highly compacted surfaces or frozen soils. Groundwater contamination may occur in areas where soils are permeable or coarse and groundwater is near the surface. To minimize the possibility of groundwater contamination, carefully follow application rate recommendations as

affected by soil type in the **Application Instructions** section of this label. **DO NOT** apply if all 3 criteria exist:

- 1. Coarse soils classified as sand (does not include loamy sand or sandy loam)
- Less than 3% organic matter (as determined by soil tests, if not known)
- 3. Where depth to groundwater is 30 feet or less

Movement by Water Erosion of Treated Soil. DO NOT apply or incorporate this product by flood or furrow irrigation. Ensure treated areas have received at least 1/2 inch of rainfall before using tailwater for subsequent irrigation of other fields.

# **Endangered Species Protection Requirements**

This product may have effects on federally listed threatened or endangered plant species or their critical habitat. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the county or parish in which you are applying the pesticide. To determine whether your county or parish has a Bulletin, and to obtain that Bulletin, consult http://www.epa.gov/espp/, or call 1-800-447-3813 no more than 6 months before using this product. Applicators must use Bulletins that are in effect in the month in which the pesticide will be applied. New Bulletins will generally be available from the above sources 6 months prior to their effective dates.

# **Directions For Use**

It is a violation of federal law to use this product in a manner inconsistent with its labeling. This label must be in the possession of the user at time of herbicide application.

**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.

Observe all precautions and limitations in this label and the labels of products used in combination with **Integrity™ herbicide**. The use of **Integrity** not consistent with this label can result in injury to crops, animals or persons. Keep containers closed to avoid spills and contamination.

Unless otherwise directed in supplemental labeling, all applicable directions, restrictions, precautions and **Conditions of Sale and Warranty** are to be followed.

BASF Corporation does not recommend or authorize the use of this product in manufacturing, processing or preparing custom blends with other products for application in 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 **12 hours**.

**EXCEPTION:** If the product is soil injected or soil incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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
- Chemical-resistant gloves, such as barrier laminate, butyl rubber ≥ 14 mils, nitrile rubber ≥ 14 mils, neoprene rubber ≥ 14 mils or viton ≥ 14 mils
- Shoes plus socks
- Protective eyewear

#### STORAGE AND DISPOSAL

**DO NOT** contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

#### **Pesticide Storage**

**DO NOT** use or store near heat or open flame. Store in original container in a well ventilated area separately from fertilizer, feed, or foodstuffs and away from other pesticides. Avoid cross-contamination with other pesticides. Groundwater contamination may be reduced by diking and flooring of permanent liquid bulk storage sites with an impermeable material.

# Pesticide Disposal

Wastes resulting from this product may be disposed of on-site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions, contact the state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

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

(continued)

#### STORAGE AND DISPOSAL (continued)

### Container Disposal (continued)

Refillable Container. Refill this container with pesticide only. DO NOT reuse this container for any other purpose. Triple rinsing the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

Triple rinse as follows: To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

When this container is empty, replace the cap and seal all openings that have been opened during use; return the container to the point of purchase or to a designated location. This container must only be refilled with a pesticide product. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn out threads and closure devices. Check for leaks after refilling and before transport. **DO NOT** transport if this container is damaged or leaking. If the container is damaged, or leaking, or obsolete and not returned to the point of purchase or to a designated location, triple rinse emptied container and offer for recycling, if available, or dispose of container in compliance with state and local regulations.

# 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)

### Steps to be taken in case material is released or spilled:

- Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

#### **General Information**

Integrity™ herbicide is a selective residual preemergence herbicide for controlling most annual grasses, broadleaf weeds, and sedges in field corn, popcorn, sweet corn, and grain sorghum (refer to Table 1 for a list of weeds controlled preemergence). Residual preemergence applications of Integrity must be activated by at least 1/2 inch of rainfall or sprinkler irrigation prior to weed seedling emergence. When **Integrity** is not activated, a labeled postemergence herbicide or cultivation may be needed to control weed escapes.

Integrity also provides contact burndown of many broadleaf weeds (refer to Table 2 for a list of weeds controlled by a burndown application). An adjuvant (refer to Additives section for details) is required with Integrity for optimum broadleaf burndown activity. Burndown applications of Integrity should be made when broadleaf weeds are small and actively growing. Burndown activity may be slowed or reduced under cloudy and/or foggy or cooler weather conditions, or when weeds are growing under drought or other stress conditions. When targeting dense weed populations and/or larger broadleaf weeds, use a higher application rate within an application rate range and/or higher spray volumes. Angling nozzles forward (to 45 degrees) may improve penetration of denser weed canopies.

Table 1. Weeds Controlled by a Residual Preemergence Application of Integrity™ herbicide

Common Name	Scientific Name	C = Control S = Suppression¹
Annual Broadleaf Weeds		
Amaranth, Palmer	Amaranthus palmeri	С
Amaranth, Powell	Amaranthus powellii	С
Beggarweed, Florida	Desmodium tortuosum	С
Buckwheat, wild	Polygonum convolvulus	С
Buffalobur	Solanum rostratum	С
Burcucumber	Sicyos angulatus	S
Carpetweed	Mollugo verticillata	С
Chamomile, mayweed	Anthemis cotula	С
Chickweed, common	Stellaria media	С
Cocklebur, common	Xanthium strumarium	С
Copperleaf, Virginia	Acalypha virginica	С
Devil's-claw	Proboscidea louisiana	S
Eclipta	Eclipta prostrata	S
Fleabane, hairy	Conyza bonariensis	С
Galinsoga, smallflower	Galinsoga parviflora	С
Groundcherry, cutleaf	Physalis angulata	С
Horseweed (marestail)	Conyza canadensis	С
Jimsonweed	Datura stramonium	С
Kochia	Kochia scoparia	С
Ladysthumb	Polygonum persicaria	С
Lambsquarters, common	Chenopodium album	С
Mallow, Venice	Hibiscus trionum	С
Marestail (horseweed)	Conyza canadensis	С
Morningglory, entireleaf	lpomoea hederacea var. integriuscula	С
Morningglory, ivyleaf	lpomoea hederacea	С
Morningglory, palmleaf	lpomoea wrightii	С
Morningglory, pitted	lpomoea lacunosa	С
Morningglory, tall	lpomoea purpurea	С
Mustard, wild	Sinapis arvensis	С
Nightshade, black	Solanum nigrum	С
Nightshade, cutleaf	Solanum triflorum	С
Nightshade, Eastern black	Solanum ptycanthum	С
Nightshade, hairy	Solanum sarrachoides	С
Pennycress, field	Thlaspi arvense	С
Pigweed, prostrate	Amaranthus blitoides	С
Pigweed, redroot	Amaranthus retroflexus	С
Pigweed, smooth	Amaranthus hybridus	С
Pigweed, tumble	Amaranthus albus	С
Puncturevine	Tribulus terrestris	S
Purslane, common	Portulaca oleracea	С
Pusley, Florida	Richardia scabra	С
Ragweed, common	Ambrosia artemisiifolia	С
Ragweed, giant	- Ambrosia trifida	С
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Table 1. Weeds Controlled by a Residual Preemergence Application of Integrity™ herbicide (continued)

Annual Broadles (Webs) Sida spinosa Sida spinosa Sida spinosa Smartweed, Pennsylvania Polygonum pensylvanicum C Sowthistle, annual Sonchus arvensis C Spurge, nodding Chamaesyce nutans C Spurge, spotted Chamaesyce nutans C Spurge, spotted Chamaesyce nutans C Starbur, bristly Acanthospermum hispidum C Sunflower, common Helianthus annuus C Thistle, Russian Salsola kaii C Velvetleaf Abullon theophrasti C Velvetleaf Abullon theophrasti C Sunflading Barryardgrass Echinochia crus-galii C Bluegrass, roughstalk Poa arivialis C Bluegrass, roughstalk Poa arivialis C Brome, California Bromus carinatus C Brome, California Bromus carinatus C Crabgrass, large Digitaria senguinalis C Crabgrass, large Digitaria senguinalis C Cupgrass, wootly Eriochia villosa Sesue, rattali Vulpia myuros C Cotagrass, genotly Eroxtali, glant Setaria faberi C Cotagrass Eleusine indica C Cotagrass Paricum (c C Cotagrass C C Cotagrass Eleusine indica C C C Cotagrass Eleusine indica C C C Cotagrass Eleusine indica C C C Cotagrass Eleusine ind	Common Name	Scientific Name	C = Control S = Suppression¹
Sida, prickly         Sida spinosa         C           Smartweed, Pennsylvania         Polygorum pensylvanicum         C           Sowthistle, annual         Sonchus arvensis         C           Spurge, podding         Chamaesyce nutans         C           Spurge, spotted         Chamaesyce maculata         C           Starbur, bristly         Acanthospermum hispidum         C           Sunflower, common         Helianthus annuus         C           Thistle, Russian         Salsola kali         C           Velvetleaf         Abutilon theophrasti         C           Waterhemp         Amaranthus tuberculatus         C           Waterhemp         Amaranthus tuberculatus         C           Annual Gresse         Barnyardgrass         Echinochloa crus-galil         C           Bluegrass, annual         Poa annua         C           Bluegrass, roughstalik         Poa annua         C           Brome, California         Bromus carinatus         C           Brome, California         Bromus carinatus         C           Brome, downy         Bromus tectorum         C           Crabgrass, grage         Digitaria sanguinalis         C           Crabgrass, southwestern         Ericohioa gracilis			0 - ouppression
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Sunflower, common         Helianthus annuus         C           Thistle, Russian         Salsola kali         C           Velvetleaf         Abulilon theophrasti         C           Waterhemp         Amaranthus tuberculatus         C           Amraul (Grasses)         Salsola kali         C           Barnyardgrass         Echinochloa crus-galli         C           Bluegrass, annual         Poa annua         C           Bluegrass, roughstallk         Poa trivialis         C           Brome, California         Bromus carinatus         C           Brome, Colomy         Bromus tectorum         C           Crabgrass, large         Digitaria sanguinalis         C           Crabgrass, smooth         Digitaria sanguinalis         C           Cupgrass, Southwestern         Eriochloa gracilis         C           Cupgrass, woolly         Eriochloa villosa         S           Fescue, rattali         Vulpia myuros         C           Fescue, rattali         Vulpia myuros         C           Foxtali, gene         Setaria faberi         C           Foxtali, green         Setaria purnila         C           Goosegrass         Eleusine indica         C           Johnsongrass (seedling)			
Thistle, Russian         Salsola kali         C           Velvetleaf         Abutilon theophrasti         C           Waterhemp         Amaranthus tuberculatus         C           Annual Grasses         Sarnyardgrass         Echinochloa crus-galli         C           Bluegrass, annual         Poa annua         C           Bluegrass, roughstalk         Poa trivialis         C           Brome, California         Bromus carinatus         C           Brome, downy         Bromus tectorum         C           Crabgrass, large         Digitaria sanguinalis         C           Crabgrass, smooth         Digitaria schaemum         C           Cupgrass, Southwestern         Eriochloa gracilis         C           Cupgrass, woolly         Eriochloa villosa         S           Fescue, rattail         Vulpia myuros         C           Foxtail, giant         Setaria faberi         C           Foxtail, green         Setaria viridis         C           Foxtail, green         Setaria purnila         C           Goosegrass         Eleusine indica         C           Johnsongrass (seedling)         Sorghum halepense         S           Millet, wild proso         Panicum miliaceum         S			
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Barnyardgrass	Waterhemp	<del></del>	· · · · · · · · · · · · · · · · · · ·
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Bluegrass, annual         Poa annua         C           Bluegrass, roughstalk         Poa trivialis         C           Brome, California         Bromus carinatus         C           Brome, downy         Bromus tectorum         C           Crabgrass, large         Digitaria sanguinalis         C           Crabgrass, smooth         Digitaria ischaernum         C           Cupgrass, Southwestern         Eriochloa gracilis         C           Cupgrass, woolly         Eriochloa villosa         S           Fescue, rattail         Vulpia myuros         C           Foxtail, giant         Setaria faberi         C           Foxtail, green         Setaria viridis         C           Foxtail, yellow         Setaria pumila         C           Goosegrass         Eleusine indica         C           Johnsongrass (seedling)         Sorghum halepense         S           Millet, wild proso         Panicum miliaceum         S           Panicum, fall         Panicum dichotomiflorum         C           Panicum, Texas         Panicum texanum         S           Rice, red         Oryza sativa         C           Cyras sitva         C           Sandbur         Cenchrus spp.         S	Edward Barton	A terminal control of the last of the control of th	C
Bluegrass, roughstalk         Poa trivialis         C           Brome, California         Bromus carinatus         C           Brome, downy         Bromus tectorum         C           Crabgrass, large         Digitaria sanguinalis         C           Crabgrass, smooth         Digitaria ischaemum         C           Cupgrass, Southwestern         Eriochloa gracilis         C           Cupgrass, woolly         Eriochloa viillosa         S           Fescue, rattail         Vulpia myuros         C           Foxtail, giant         Setaria faberi         C           Foxtail, green         Setaria viridis         C           Foxtail, yellow         Setaria pumila         C           Goosegrass         Eleusine indica         C           Johnsongrass (seedling)         Sorghum halepense         S           Millet, wild proso         Panicum miliaceum         S           Panicum, fall         Panicum dichotomiflorum         C           Panicum, Texas         Panicum texanum         S           Rice, red         Oryza sativa         C           Ryegrass, Italian         Lolium multiflorum         C           Sandbur         Cenchrus spp.         S           Shattercane	Bluegrass, annual	Poa annua	С
Brome, downy         Bromus tectorum         C           Crabgrass, large         Digitaria sanguinalis         C           Crabgrass, smooth         Digitaria ischaemum         C           Cupgrass, Southwestern         Eriochloa gracilis         C           Cupgrass, woolly         Eriochloa villosa         S           Fescue, rattail         Vulpia myuros         C           Foxtail, glant         Setaria faberi         C           Foxtail, green         Setaria viridis         C           Foxtail, yellow         Setaria pumila         C           Goosegrass         Eleusine indica         C           Johnsongrass (seedling)         Sorghum halepense         S           Millet, wild proso         Panicum miliaceum         S           Panicum, fall         Panicum miliaceum         S           Panicum, fall         Panicum dichotomiflorum         C           Panicum, Texas         Panicum texanum         S           Rice, red         Oryza sativa         C           Ryegrass, Italian         Lolium multiflorum         C           Sandbur         Cenchrus spp.         S           Shattercane         Sorghum bicolor         S           Signalgrass, broadleaf		Poa trivialis	С
Crabgrass, large         Digitaria sanguinalis         C           Crabgrass, smooth         Digitaria ischaemum         C           Cupgrass, Southwestern         Eriochloa gracilis         C           Cupgrass, woolly         Eriochloa villosa         S           Fescue, rattail         Vulpia myuros         C           Foxtail, giant         Setaria faberi         C           Foxtail, green         Setaria viridis         C           Foxtail, yellow         Setaria pumila         C           Goosegrass         Eleusine indica         C           Johnsongrass (seedling)         Sorghum halepense         S           Millet, wild proso         Panicum miliaceum         S           Panicum, fall         Panicum dichotomiflorum         C           Panicum, Texas         Panicum texanum         S           Rice, red         Oryza sativa         C           Ryegrass, Italian         Lolium multiflorum         C           Sandbur         Cenchrus spp.         S           Shattercane         Sorghum bicolor         S           Signalgrass, broadleaf         Brachiaria platyphylla         S           Witchgrass         Panicum capillare         C           Sedges <td>Brome, California</td> <td>Bromus carinatus</td> <td>С</td>	Brome, California	Bromus carinatus	С
Crabgrass, smooth Digitaria ischaemum C Cupgrass, Southwestern Eriochloa gracilis C Cupgrass, woolly Eriochloa villosa S Fescue, rattail Vulpia myuros C Foxtail, giant Setaria faberi C Foxtail, green Setaria viridis C Foxtail, yellow Setaria punila C Goosegrass Eleusine indica C Johnsongrass (seedling) Sorghum halepense S Millet, wild proso Panicum miliaceum S Panicum, fall Panicum dichotomiflorum C Panicum, Texas Panicum texanum S Rice, red Oryza sativa C Ryegrass, Italian Lolium multiflorum C Sandbur Cenchrus spp. S Signalgrass, broadleaf Brachiaria platyphylla S Witchgrass Panicum capillare C Sedoes Flatsedge, rice Cyperus Iria C	Brome, downy	Bromus tectorum	С
Cupgrass, Southwestern Eriochloa gracilis C Cupgrass, woolly Eriochloa villosa S Fescue, rattail Vulpia myuros C Foxtail, giant Setaria faberi C Foxtail, green Setaria viridis C Foxtail, yellow Setaria pumila C Goosegrass Eleusine indica C Johnsongrass (seedling) Sorghum halepense S Millet, wild proso Panicum miliaceum S Panicum, fall Panicum dichotomiflorum C Panicum, Texas Panicum texanum S Rice, red Oryza sativa C Ryegrass, Italian Lolium multiflorum C Sandbur Cenchrus spp. S Shattercane Sorghum bicolor S Signalgrass, broadleaf Brachiaria platyphylla S Witchgrass Panicum capillare C Sedoes Flatsedge, rice Cyperus iria C	Crabgrass, large	Digitaria sanguinalis	. C
Cupgrass, woolly         Eriochloa villosa         S           Fescue, rattail         Vulpia myuros         C           Foxtail, giant         Setaria faberi         C           Foxtail, green         Setaria viridis         C           Foxtail, yellow         Setaria pumila         C           Goosegrass         Eleusine indica         C           Johnsongrass (seedling)         Sorghum halepense         S           Millet, wild proso         Panicum milliaceum         S           Panicum, fall         Panicum dichotomiflorum         C           Panicum, Texas         Panicum texanum         S           Rice, red         Oryza sativa         C           Ryegrass, Italian         Lolium multiflorum         C           Sandbur         Cenchrus spp.         S           Shattercane         Sorghum bicolor         S           Signalgrass, broadleaf         Brachiaria platyphylla         S           Witchgrass         Panicum capillare         C           Sedges         Flatsedge, rice         Cyperus iria         C	Crabgrass, smooth	Digitaria ischaemum	С
Fescue, rattail         Vulpia myuros         C           Foxtail, giant         Setaria faberi         C           Foxtail, green         Setaria viridis         C           Foxtail, yellow         Setaria pumila         C           Goosegrass         Eleusine indica         C           Johnsongrass (seedling)         Sorghum halepense         S           Millet, wild proso         Panicum miliaceum         S           Panicum, fall         Panicum dichotomiflorum         C           Panicum, Texas         Panicum texanum         S           Rice, red         Oryza sativa         C           Ryegrass, Italian         Lolium multiflorum         C           Sandbur         Cenchrus spp.         S           Shattercane         Sorghum bicolor         S           Signalgrass, broadleaf         Brachiaria platyphylla         S           Witchgrass         Panicum capillare         C           Sedges         Flatsedge, rice         Cyperus iria         C	Cupgrass, Southwestern	Eriochloa gracilis	С
Foxtail, giant  Setaria faberi  C  Foxtail, green  Setaria viridis  C  Foxtail, yellow  Setaria pumila  C  Goosegrass  Eleusine indica  C  Johnsongrass (seedling)  Sorghum halepense  S  Millet, wild proso  Panicum miliaceum  S  Panicum, fall  Panicum dichotomifforum  C  Panicum, Texas  Panicum texanum  S  Rice, red  Oryza sativa  C  Ryegrass, Italian  Lolium multiflorum  C  Sandbur  Cenchrus spp.  S  Shattercane  Sorghum bicolor  Signalgrass, broadleaf  Brachiaria platyphylla  S  Witchgrass  Panicum capillare  C  Sectoges  Flatsedge, rice  C  C  C  C  C  C  C  C  C  C  C  C  C	Cupgrass, woolly	Eriochloa villosa	S
Foxtail, green         Setaria viridis         C           Foxtail, yellow         Setaria pumila         C           Goosegrass         Eleusine indica         C           Johnsongrass (seedling)         Sorghum halepense         S           Millet, wild proso         Panicum miliaceum         S           Panicum, fall         Panicum dichotomiflorum         C           Panicum, Texas         Panicum texanum         S           Rice, red         Oryza sativa         C           Ryegrass, Italian         Lolium multiflorum         C           Sandbur         Cenchrus spp.         S           Shattercane         Sorghum bicolor         S           Signalgrass, broadleaf         Brachiaria platyphylla         S           Witchgrass         Panicum capillare         C           Sedges         Flatsedge, rice         Cyperus iria         C	Fescue, rattail	Vulpia myuros	С
Foxtail, yellow  Setaria pumilia  C Goosegrass  Eleusine indica  C Johnsongrass (seedling)  Sorghum halepense  S Millet, wild proso  Panicum miliaceum  S Panicum, fall  Panicum dichotomiflorum  C Panicum, Texas  Panicum texanum  S Rice, red  Oryza sativa  C Ryegrass, Italian  Lolium multiflorum  C Sandbur  Cenchrus spp.  S Shattercane  Sorghum bicolor  S Signalgrass, broadleaf  Brachiaria platyphylla  S Witchgrass  Panicum capillare  C Sedges  Flatsedge, rice  C C C C C C C C C C C C C C C C C C	Foxtail, giant	Setaria faberi	С
Goosegrass Eleusine indica C  Johnsongrass (seedling) Sorghum halepense S  Millet, wild proso Panicum miliaceum S  Panicum, fall Panicum dichotomiflorum C  Panicum, Texas Panicum texanum S  Rice, red Oryza sativa C  Ryegrass, Italian Lolium multiflorum C  Sandbur Cenchrus spp. S  Shattercane Sorghum bicolor S  Signalgrass, broadleaf Brachiaria platyphylla S  Witchgrass Panicum capillare C  Sedges  Flatsedge, rice Cyperus iria C	Foxtail, green	Setaria viridis	С
Johnsongrass (seedling)  Sorghum halepense  S  Millet, wild proso  Panicum miliaceum  S  Panicum, fall  Panicum dichotomiflorum  C  Panicum, Texas  Panicum texanum  S  Rice, red  Oryza sativa  C  Ryegrass, Italian  Lolium multiflorum  C  Sandbur  Cenchrus spp.  S  Shattercane  Sorghum bicolor  Signalgrass, broadleaf  Brachiaria platyphylla  S  Witchgrass  Panicum capillare  C  Sedges  Flatsedge, rice  Cyperus iria  S	Foxtail, yellow	Setaria pumila	С
Millet, wild prosoPanicum miliaceumSPanicum, fallPanicum dichotomiflorumCPanicum, TexasPanicum texanumSRice, redOryza sativaCRyegrass, ItalianLolium multiflorumCSandburCenchrus spp.SShattercaneSorghum bicolorSSignalgrass, broadleafBrachiaria platyphyllaSWitchgrassPanicum capillareCSedgesCyperus iriaC	Goosegrass	Eleusine indica	С
Panicum, fall Panicum dichotomiflorum C Panicum, Texas Panicum texanum S Rice, red Oryza sativa C Ryegrass, Italian Lolium multiflorum C Sandbur Cenchrus spp. S Shattercane Sorghum bicolor S Signalgrass, broadleaf Brachiaria platyphylla S Witchgrass Panicum capillare C Sedges Flatsedge, rice Cyperus iria C	Johnsongrass (seedling)	Sorghum halepense	S
Panicum, Texas  Panicum texanum  S  Rice, red  Oryza sativa  C  Ryegrass, Italian  Lolium multiflorum  C  Sandbur  Cenchrus spp.  S  Shattercane  Sorghum bicolor  Signalgrass, broadleaf  Brachiaria platyphylla  S  Witchgrass  Panicum capillare  C  Sedges  Flatsedge, rice  Cyperus iria  C	Millet, wild proso	Panicum miliaceum	S
Rice, red  Oryza sativa  C Ryegrass, Italian  Lolium multiflorum  C Sandbur  Cenchrus spp.  S Shattercane  Sorghum bicolor  Signalgrass, broadleaf  Brachiaria platyphylla  S Witchgrass  Panicum capillare  C Sedges  Flatsedge, rice  Cyperus iria  C	Panicum, fall	Panicum dichotomiflorum	С
Ryegrass, Italian  Lolium multiflorum  C Sandbur  Cenchrus spp.  S Shattercane  Sorghum bicolor  Signalgrass, broadleaf  Brachiaria platyphylla  S Witchgrass  Panicum capillare  C Sedges  Flatsedge, rice  Cyperus iria  C	Panicum, Texas	Panicum texanum	S
SandburCenchrus spp.SShattercaneSorghum bicolorSSignalgrass, broadleafBrachiaria platyphyllaSWitchgrassPanicum capillareCSedgesCyperus iriaC	Rice, red	Oryza sativa	С
Shattercane       Sorghum bicolor       S         Signalgrass, broadleaf       Brachiaria platyphylla       S         Witchgrass       Panicum capillare       C         Sedges       C         Flatsedge, rice       Cyperus iria       C	Ryegrass, Italian	Lolium multiflorum	С
Signalgrass, broadleaf Brachiaria platyphylla S   Witchgrass Panicum capillare C   Sedges C   Flatsedge, rice Cyperus iria C	Sandbur	Cenchrus spp.	S
Witchgrass Panicum capillare C  Sedges  Flatsedge, rice Cyperus iria C	Shattercane	Sorghum bicolor	S
Sedges Flatsedge, rice Cyperus iria C	Signalgrass, broadleaf	Brachiaria platyphylla	S
Flatsedge, rice Cyperus iria C	Witchgrass	Panicum capillare	С
	Sedges		
Nutsedge, yellow Cyperus esculentus S	Flatsedge, rice	Cyperus iria	С
	Nutsedge, yellow	Cyperus esculentus	S

<sup>&</sup>lt;sup>1</sup> To complement control, **Integrity** should be used in tank mixes or sequential applications with other labeled herbicides that provide additional control of noted weeds.

Table 2. Broadleaf Weeds Controlled by a Burndown Application of Integrity™ herbicide

Common Name	Scientific Name	C = Control S = Suppression	Maximum Height or Diameter (inches)
Amaranth, Palmer	Amaranthus palmeri	C	6
Bedstraw, catchweed	Galium aparine	C	3
Beggarticks, hairy	Bidens pilosa	C	6
Beggarweed, Florida	Desmodium tortuosum		
Bindweed, field	Convolvulus arvensis	S <sup>1</sup>	6
Buckwheat, wild	Polygonum convolvulus	C	3
Canola, volunteer (rapeseed)	Brassica spp.	C	6
Carpetweed	Mollugo verticillata	C	6
Chickweed, common	Stellaria media	S	. 3
Cocklebur, common	Xanthium strumarium	C	6
Cowcockle	Vaccaria pyramidata	C	4
Dandelion	Taraxacum officinale	S1	6
Eveningprimrose, cutleaf	Oenothera laciniata	С	4
Falseflax, smallseed	Camelina microcarpa	С	4
Filaree, broadleaf	Erodium botrys	C	4
-ilaree, redstem	Erodium cicutarium	S	3
Filaree, whitestem	Erodium moschatum	С	4
	Conyza bonariensis	C	6
-lixweed	Descurainia sophia	С	6
Goosefoot, nettleleaf	Chenopodium murale	С	3
Groundcherry, cutleaf	Physalis angulata	C	6
Groundsel, common	Senecio vulgaris	С	4
-lenbit	Lamium amplexicaule	S	3
Horseweed (marestail)	Conyza canadensis	С	6
Knotweed, prostrate	Polygonum aviculare	С	3
Kochia	Kochia scoparia	С	3
_adysthumb	Polygonum persicaria	С	6
_ambsquarters, common	Chenopodium album	С	6
_ambsquarters, narrowleaf	Chenopodium pratericola	С	6
_ettuce, miner's	Claytonia perfoliata	С	6
_ettuce, prickly	Lactuca serriola	С	6
Mallow, common	Malva neglecta	С	6
Mallow, little (cheeseweed)	Malva parviflora	С	6
Mallow, Venice	Hibiscus trionum	С	6
Marestail (horseweed)	Conyza canadensis	С	6
Morningglory, entireleaf	lpomoea hederacea var. integriuscula	С	6
Morningglory, ivyleaf	Ipomoea hederacea	C .	6
Morningglory, pitted	Ipomoea lacunosa	С	6
Morningglory, tall	lpomoea purpurea	С	6
Mustard, black	Brassica nigra	С	6
Mustard, tumble	Sisymbrium altissimum	С	6
Mustard, wild	Sinapis arvensis	C	6
Nettle, burning	Urtica urens	C	4

Table 2. Broadleaf Weeds Controlled by a Burndown Application of Integrity™ herbicide (continued)

Common Name	Scientific Name	C = Control S = Suppression	Maximum Height or Diameter (inches)
Nightshade, black	Solanum nigrum	C	6
Nightshade, cutleaf	Solanum triflorum	С	6
Nightshade, Eastern black	Solanum ptycanthum	С	6
Nightshade, hairy	Solanum saccharoides	С	6
Pennycress, field	Thlaspi arvense	C	6
Pigweed, prostrate	Amaranthus blitoides	С	6 .
Pigweed, redroot	Amaranthus retroflexus	С	6
Pigweed, smooth	Amaranthus hybridus	С	6
Puncturevine	Tribulus terrestris	С	6
Purslane, common	Portulaca oleracea	С	3
Pusley, Florida	Richardia scabra	S	3
Ragweed, common <sup>2</sup>	Ambrosia artemisiifolia	C	6
Ragweed, giant	Ambrosia trifida	· C	6
Rocket, London	Sisymbrium irio	С	6
Sesbania, hemp	Sesbania exaltata	С	4
Shepherd's-purse	Capsella bursa-pastoris	С	6
Sida, prickly	Sida spinosa	С	6
Smartweed, Pennsylvania	Polygonum pensylvanicum	C	6
Sowthistle, annual	Sonchus oleraceus	С	6
Sowthistle, spiny	Sonchus asper	С	6
Spurge, garden	Chamaesyce hirta	С	6
Spurge, prostrate	Chamaesyce humistrata	С	6
Spurge, spotted	Chamaesyce maculata	C	6
Sunflower, common	Helianthus annuus	С	6
Tansymustard, green	Descurainia incana	С	6
Tansymustard, pinnate	Descurainia pinnata	С	6
Thistle, Canada	Cirsium arvense	S <sup>1</sup>	6
Thistle, Russian	Salsola kali	С	3
Velvetleaf	Abutilon theophrasti	С	6
Waterhemp <sup>2</sup>	Amaranthus tuberculatus	С	6
Willowweed	Epilobium adenocaulon	С	3

<sup>&</sup>lt;sup>1</sup> Control of seedling stage and suppression of perennial growth stage

<sup>&</sup>lt;sup>2</sup> Populations of noted weeds exist that are known to be resistant to burndown applications of **Group 14/Group E** herbicides and will not be controlled by herbicides like **Integrity**. See the **Resistance Management** section for practices to manage and minimize the impact of resistant weeds (e.g. tank mixes or alternation with other herbicide modes of action, crop rotation and mechanical control).

#### **Mode of Action**

Integrity<sup>™</sup> herbicide combines the two active ingredients: saffufenacil, a potent inhibitor of protoporphyrinogenoxidase belonging to herbicide mode-of-action Group 14 (WSSA)/Group E (HRAC), and dimethenamid-P, a chloroacetamide belonging to the herbicide mode-of-action Group 15/Group K<sub>3</sub>. Saflufenacil is rapidly absorbed by roots and foliage. Following inhibition of the protoporphyrinogen-oxidase, plant death is the result of membrane damage. Under active growing conditions, susceptible emerging weed seedlings usually develop chlorotic and necrotic injury symptoms within hours and die within a few days. Susceptible germinating weed seeds will usually die as they reach the soil surface or shortly after emergence. Dimethenamid-P is a root-and-shoot inhibitor that controls susceptible weed seedlings before or soon after they emerge from the soil.

### **Resistance Management**

While weed resistance to protoporphyrinogen-oxidaseinhibiting herbicides is relatively infrequent, populations of resistant biotypes are known to exist. Resistance management practices include:

- Following labeled application rate and weed growth stage recommendations
- 2. Avoiding repeated applications of herbicides with the same mode of action
- Utilizing tank mixes and sequential applications with other effective herbicides possessing different modes of action
- Using crop rotation so that crop competition, tillage or herbicides with alternative modes of action can be used to control weed escapes

### **Crop Tolerance**

Field corn, popcorn, sweet corn, and grain sorghum are tolerant to **Integrity** when applied according to label directions as a preplant to preemergence treatment and under normal environmental conditions. Crop injury may occur under stressful growing conditions (e.g. low soil fertility, seedling disease, extreme hot or cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought).

Severe crop injury will result if **Integrity** is applied postemergence (over the top) to corn or sorghum.

# **Application Instructions**

**Integrity** may be applied preplant surface, preplant incorporated or preemergence to field corn, popcorn, sweet corn, and grain sorghum. Apply **Integrity** only prior to crop emergence.

#### **Application Rates**

Application rates of **Integrity** for residual preemergence weed control may vary depending on soil texture and organic matter. Refer to **Table 3** for soil texture groups used in this label.

**Table 3. Soil Texture Groups** 

Coarse	Medium	Fine
Sand	Silt	Sandy clay
Loamy sand	Silt loam	Silty clay
Sandy loam	Loam	Silty clay loam
	Sandy clay loam	Clay loam
		Clay

An overview of application rates for Integrity by crop use is provided in the Integrity™ herbicide Application Rates chart. Refer to the Crop-specific Information section for specific application directions and the restrictions and limitations by crop and use pattern.

# Integrity™ herbicide Application Rates

	Application Timing and Single Application Rate (fl ozs/A)			or Maximum Cumulative per Cropping Season**
Crop and/or Use	Burndown* (includes early preplant applications)	Burndown* + Residual (includes early preplant, preplant incorporated, and preemergence applications)	Integrity (fl ozs/A)	Integrity Active Ingredients (lb ai/A)
Corn	5 to 10	10 to 25	25	0.11 (saflufenacil) 0.98 (dimethenamid-P)
Fallow	5 to 10	10 to 25	25	0.11 (saflufenacil) 0.98 (dimethenamid-P)
Sorghum	5 to 10	10 to 25	25	0.11 (saflufenacil) 0.98 (dimethenamid-P)

<sup>\*</sup> Best product performance in a contact burndown use pattern is obtained when **Integrity** is applied with a suitable adjuvant system to actively growing weeds (refer to **Additives** section for details).

# **Application Methods and Equipment**

**Integrity** may be applied by either ground or air. Good spray coverage is important for optimum weed control and can be improved with proper adjuvant, nozzle, and spray volume selection.

Use and configure application equipment to provide an adequate spray volume, an accurate and uniform distribution of spray droplets over the treated area, and to avoid spray drift to nontarget areas. Adjust equipment to maintain continuous agitation during spraying with good mechanical or bypass agitation. Avoid overlaps that will increase rates above the use rates specified in this label.

**Integrity** may be applied using either water or sprayable fluid nitrogen fertilizer solutions as the spray carrier. Additionally, **Integrity** may be impregnated on and applied with dry bulk fertilizer.

# **Aerial Application Requirements**

Water Volume. Use 3 or more gallons of water per acre.

The following measures must be followed to reduce the potential of spray drift to nontarget areas from aerial applications:

- The distance of the outermost nozzles on the boom must not exceed 3/4 the length of the fixed wingspan or 90% of rotor blade diameter.
- 2. Use low-drift nozzles such as straight-stream nozzles (D-8 or larger). **DO NOT** use nozzles producing a mist droplet spray.
- 3. Nozzles must always point backward parallel with the airstream and never be pointed downward more than 45 degrees.
- 4. Without compromising aircraft safety, applications should be made at a height of 10 feet or less above the crop canopy or tallest plants.

- 5. **DO NOT** apply during periods of temperature inversions or stable atmospheric conditions.
- 6. Avoid potential adverse effects to nontarget areas by maintaining a (120)<sup>a</sup> foot buffer between the point of direct application and the **closest downwind edge** of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas, shrub lands, and crop lands).
- The buffer zone size is determined by use rate. Refer to the following table for the minimum buffer zone distance required for the intended use rate. Utilize the appropriate buffer zone distance from the following table in the buffer zone statement above.

**NOTE:** This footnote and table will only appear on master label. It will be removed from the final print container label after the appropriate buffer zone distance is selected.

Integrity Use Rate (fl ozs/A)	Saflufenacil Use Rate (lb ai/A)	Saflufenacil Use Rate (g ai/ha)	Buffer Zone Distance (feet)
5	0.011	13	20
10	0.022 <sup>、</sup>	25	26
12	0.045	50	66
13	0.060	63	80
15	0.070	75	100
16	0.071	80	100
18	0.080	94	100
20	0.089	100	100
25	0.111	125	120

<sup>\*\*</sup> A cropping season is defined as the period following harvest of the preceding crop through harvest of the planned or current crop.
NOTE: Integrity must be applied before crop emergence (see Crop-specific Information section for application timing details).

#### **Ground Application Requirements**

**Spray Carrier Volume.** Use 3 or more gallons of water per acre or 20 or more gallons of sprayable fluid fertilizer per acre. Thorough coverage of existing vegetation is essential for burndown applications and higher spray volumes may be necessary for better performance.

The following measures must be followed to reduce the potential of spray drift to nontarget areas from ground applications:

- 1. Apply this product using nozzles which deliver medium to coarse spray droplets as defined by ASAE standard S-572 and as shown in nozzle manufacturer's catalogs. Flat-fan nozzles are recommended for burndown applications while flood-jet type nozzles are recommended for residual soil surface applications. Nozzles that deliver coarse spray droplets may be used to reduce spray drift provided spray volume per acre (GPA) is increased to maintain coverage of target (i.e. weeds or soil surface). DO NOT use nozzles that produce fine (e.g. cone) spray droplets.
- Apply this product only when the potential for drift to adjacent nontarget areas is minimal (e.g. when the wind is 10 MPH or less and is blowing away from sensitive areas). DO NOT apply during periods of temperature inversions or stable atmospheric conditions.
- 3. Avoid potential adverse effects to nontarget areas by maintaining a (60)<sup>a</sup> foot buffer between the application area and the **closest downwind edge** of sensitive terrestrial habitats (such as grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas, shrub lands, and crop lands).
- The buffer zone size is determined by use rate. Refer to the following table for the minimum buffer zone distance required for the intended use rate. Utilize the appropriate buffer zone distance from the following table in the buffer zone statement above.

**NOTE:** This footnote and table will only appear on master label. It will be removed from the final print container label after the appropriate buffer zone distance is selected.

Integrity™ herbicide Use Rate (fl ozs/A)	Saflufenacil Use Rate (lb ai/A)	Saflufenacil Use Rate (g ai/ha)	Buffer Zone Distance (feet)
5	0.011	13	10
10	0.022	25	13
12	0.045	50	33
13	0.060	63	40
15	0.070	75	50
16	0.071	80	50
18	0.080	94	50
20	0.089	100	50
25	0.111	125	60

# **Ground Application (dry bulk fertilizer)**

**Integrity** may be impregnated or coated onto dry bulk granular fertilizer carriers for residual soil surface applications. Impregnation or coating may be conducted by either in-plant bulk or on-board systems. Perform the mixing operation in well-ventilated areas.

Addition of a drying agent may be necessary if the fertilizer and herbicide blend is too wet for uniform application because of high humidity, high urea concentration, or low fertilizer use rate. Slowly add the drying agent to the blend until a flowable mixture is obtained. Drying agents are not recommended for use with on-board impregnation systems.

Under some conditions, fertilizer impregnated with **Integrity** may clog air tubes or deflector plates on pneumatic application systems. Mineral oil may be added to **Integrity** before blending with fertilizer to reduce plugging. **DO NOT** use drying agents when mineral oil is used. To avoid separation of **Integrity** and mineral oil mixes in cold temperatures, either keep mixture heated or agitated prior to blending with fertilizer. Mineral oil may be used at inplant blending stations or on-board injection systems.

Generally fertilizer application rates of at least 200 lbs to 700 lbs per acre of herbicide and fertilizer blend will provide adequate distribution or coverage for **Integrity** across the soil surface. Application must be made uniformly to the soil to prevent possible crop injury and offer satisfactory weed control. Impregnated fertilizer spread at 1/2 rate and overlapped to obtain a full rate will offer a more uniform distribution. A shallow (< 2 inches) incorporation is desirable for improved weed control. Deeper incorporation will dilute the herbicide layer near the soil surface and may result in unsatisfactory weed control.

Use the following formula to determine the herbicide rate when using dry bulk fertilizer applications:

 $\frac{\text{fl ozs herbicide per acre}}{\text{pounds fertilizer per acre}} \times 2000 = \frac{\text{fl ozs herbicide}}{\text{per ton of fertilizer}}$ 

# Chemigation Applications via Sprinkler Irrigation Systems

Integrity may be applied as a chemigation treatment through sprinkler irrigation systems. Apply this product ONLY through a sprinkler irrigation system of the following type: center pivot, end tow, hand move, lateral move, side (wheel) roll or solid set. DO NOT apply this product through any other type of sprinkler irrigation system. Applications may be made alone or in tank mixtures with other herbicides on this label that are registered for use in specified sprinkler irrigation systems. Applications must be made within specific crop stage timings and product use rates given in the container directions for use label.

Uniform distribution of **Integrity**-treated irrigation water is the sole responsibility of the applicator and is required to avoid crop injury, lack of herbicide effectiveness or illegal pesticide residues in the crop. If you have questions about

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calibration, contact State Extension Service specialists, equipment manufacturers, or other experts.

Proper calibration is the responsibility of the applicator. The system must be properly calibrated (with water only) to ensure that the amount of **Integrity<sup>TM</sup> herbicide** applied corresponds to the specified rate. Apply **Integrity** in volume minimums of 0.33 to 0.67 inches of water using the lower volume for coarser textured soils and the higher volume for finer textured soils. Applications made in high volumes of water (more than 1 inch) may result in reduced weed control.

Meter herbicide dilution into irrigation water through the entire time of water application for center pivot and lateral move systems. For solid-set and hand-move irrigation systems, apply **Integrity** through system at the beginning of the set; then follow with additional water to reach volume minimums as listed by soil type. To increase calibration accuracy of injection metering equipment, dilute **Integrity** in a minimum of 3 parts water to 1 part **Integrity**. Maintain agitation in injection nurse tanks to keep a uniform herbicide suspension during application.

#### Special precautions for chemigation:

- DO NOT apply when wind speed favors drift beyond the area intended for treatment.
- DO NOT connect an irrigation system used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
- 3. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
- 4. Tail water (runoff water) from chemigation that contains Integrity should be recirculated and/or contained in the field in a cistern or holding reservoir from the initial application and/or used only on adjacent, approved crops for which Integrity is registered for this type of application.
- 5. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. It must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- 6. The sprinkler chemigation system must contain a functional check valve, vacuum-relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water-source contamination from backflow. In addition, systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- 7. The sprinkler chemigation system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor

- stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- 8. The irrigation line or water pump must include a functional pressure switch that will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

# Chemigation systems connected to public water systems:

- Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- 2. Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- All chemigation systems connected to public water systems must also follow restrictions listed in the preceding section.

### **Cleaning Spray Equipment**

Clean application equipment thoroughly by using a strong detergent or commercial sprayer cleaner according to the manufacturer's directions, followed by triple rinsing the equipment before and after applying this product.

#### **Spray Drift Management**

It is the responsibility of the applicator to avoid spray drift at the application site, especially onto nontarget areas. The interaction of many equipment-related and weather-related factors determines the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The applicator should be familiar with and take into account the information covered in the following spray drift reduction advisory information.

**Controlling Droplet Size.** The most effective way to reduce drift potential is to apply the largest droplets that provide sufficient coverage and control.

**Volume.** Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

**Pressure. DO NOT** exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

**Number of Nozzles.** Use the minimum number of nozzles that provide uniform coverage.

**Nozzle Type.** Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets.

**Swath Adjustment.** When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the upwind and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the application equipment (e.g. aircraft, ground) upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller droplets, etc.).

**Wind.** Drift potential is lowest between wind speeds of 3 to 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. If applying at wind speeds less than 3 mph, the applicator must determine if:

- 1. Conditions of temperature inversion exist, or
- Stable atmospheric conditions exist at or below nozzle height.

**DO NOT** make applications into areas of temperature inversions or stable atmospheric conditions.

**NOTE:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

**Wind Erosion.** Avoid treating powdery, dry or light sandy soils when conditions are favorable for wind erosion. Under these conditions, the soil surface should first be settled by rainfall or irrigation.

#### **Additives**

For optimum burndown activity with **Integrity™ herbicide**, an adjuvant system must be used that includes the following:

Adjuvant	Rate
Methylated seed oil (MSO)	
or	1 gal/100 gals (1% v/v)
Crop oil concentrate (COC)	
PLUS	PLUS
Ammonium sulfate (AMS)	8.5 to 17 lbs/100 gals (1% to 2% w/v)
or	or
Urea ammonium nitrate (UAN)	1.25 to 2.5 gals/100 gals (1.25% to 2.5% v/v)

The use of AMS fertilizer is highly recommended when mixing **Integrity** with glyphosate-based herbicides.

**DO NOT** use a nonionic surfactant (NIS) as a substitute for COC or MSO, or poor performance on broadleaf weeds will occur.

When an adjuvant is to be used with this product, BASF recommends the use of a Chemical Producers and Distributors Association (CPDA) certified adjuvant.

# **Tank Mixing Information**

Integrity may be tank mixed with one or more registered herbicide products according to the specific tank mixing instructions in this label and respective product labels. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Always follow the most restrictive label use directions. Refer to the **Crop-specific Information** for tank mixing details.

#### Compatibility Test for Mix Components

Before mixing components, always perform a compatibility jar test.

- For 20 gallons per acre spray volume, use 3.3 cups (800 ml) of water. For other spray volumes, adjust rates accordingly. Only use water from the intended source at the source temperature.
- Add components in the sequence indicated in the Mixing Order section using 2 teaspoons for each pound or 1 teaspoon for each pint of labeled use rate per acre.
- Always cap the jar and invert 10 cycles between component additions.
- When the components have all been added to the jar, let the solution stand for 15 minutes.
- 5. Evaluate the solution for uniformity and stability. The spray solution should not have free oil on the surface, or fine particles that precipitate to the bottom, or thick (clabbered) texture. If the spray solution is not compatible, repeat the compatibility test with the addition of a suitable compatibility agent. If the solution is then compatible, use the compatibility agent as directed on its label. If the solution is still incompatible, **DO NOT** mix the ingredients in the same tank.

#### Mixing Order

- 1. **Water** Fill tank 1/2 to 3/4 full with clean water and start agitation.
- 2. **Agitation** Maintain agitation throughout mixing.
- 3. **Inductor** If an inductor is used, rinse it thoroughly after each component has been added.
- 4. Products in PVA bags Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
- Water-soluble additives (including dry and liquid fertilizers such as ammonium sulfate or urea ammonium nitrate)
- Water-dispersible products (such as dry flowables, wettable powders, suspension concentrates, or suspoemulsions)
- 7. Water-soluble products
- 8. **Emulsifiable concentrates** (including crop oil concentrate or methylated seed oil adjuvants)

#### 9. Remaining quantity of water.

Maintain agitation throughout application until spraying is completed. If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to resuspend the mixture before spraying is resumed. Continue agitation while spraying.

#### **Use Precautions**

- Maximum seasonal use rate DO NOT apply more than a maximum cumulative amount of 25 fl ozs/A of Integrity™ herbicide per cropping season. A cropping season is defined as the period following harvest of the preceding crop through the harvest of the planned or current crop.
- If additional saflufenacil is applied, DO NOT exceed a maximum cumulative amount of 0.134 lb ai/A saflufenacil per cropping season.
- If additional dimethenamid-P is applied, DO NOT exceed a maximum cumulative amount of 0.98 lb ai/A dimethenamid-P per cropping season.
- DO NOT apply Integrity after crop emergence because severe crop injury will occur.
- DO NOT apply Integrity where an at-planting application of organophosphate or carbamate insecticide(s) is planned and/or has occurred because severe injury may result.
- Rainfastness Integrity is rainfast 1 hour after application. Burndown activity may be reduced if rain or irrigation occurs within 1 hour of application.
- DO NOT contaminate irrigation ditches or water used for domestic purposes.
- Integrity is not for sale, distribution, or use in Nassau and Suffolk counties in New York State.

# Crop Rotation and Emergency Replanting Intervals

- Fall-seeded cereal crops may be planted 4 months or more following treatment.
- There are no rotational crop restrictions the spring following the previous year's application of Integrity.
- Field corn, popcorn, sweet corn, and grain sorghum (according to application rates in **Crop-specific Information**) may be replanted immediately after crop failure (because of environmental factors, such as drought, frost, hail, etc.).
- Determine the rotational crop interval for tank mix products and follow the most restrictive interval of all products applied.

# **Crop-specific Information**

This section provides directions for **Integrity** in specific crops. Read general information, mixing, application, weeds controlled, and adjuvant instructions in preceding sections of the label. Read and follow tank mix product labels for restrictions, precautions, instructions, and rotational crop restrictions.

Depending on specific crop application directions, Integrity may be applied for residual control of germinating weed seedlings before planting (preplant) or after planting but before crop emergence (preemergence) (refer to Table 1 for list of weeds controlled) or burndown control of emerged broadleaf weeds (refer to Table 2 for list of weeds controlled).

# Field Com (grain, seed, silage); Popcom, and Sweet Com

Integrity may be applied preplant surface, preplant incorporated, or preemergence to corn. Corn in this label refers to field corn (grown for grain, silage, or seed), popcorn, and sweet corn (not including sweet corn grown for seed). Before applying Integrity to seed corn, sweet corn, or popcorn, verify the selectivity of Integrity on your inbred line or hybrid with your local seed company (supplier) to help avoid potential injury to sensitive inbreds or hybrids.

### **Application Rate**

Integrity can be applied as part of a one-pass or planned sequential (two-pass) weed control program. A one-pass weed control program should be used where no cultivation or postemergence herbicide application is anticipated. One-pass application rates for Integrity when applied alone, in tank mix, or sequentially are provided in Table 4 for field corn and Table 5 for popcorn and sweet corn.

Table 4. Residual Preemergence Rates of Integrity in Field Corn

Rate by Soil Texture and Organic Matter Content (fl ozs/A)			
Organic Matter			
Soil Texture¹	≤ 1.5%	> 1.5%	
Coarse <sup>2</sup>	12	13	
Medium	18	20	
Fine	20	25	

<sup>1</sup> Refer to **Table 3** for definitions of soil texture groups.

<sup>&</sup>lt;sup>2</sup> Use on coarse soils with less than 1.5% organic matter may result in crop injury.

Table 5. Residual Preemergence Rates of Integrity™ herbicide in Popcorn and Sweet Corn

Rate by Soil Texture and Organic Matter Content (fl ozs/A)		
Soil Texture¹	Organic Matter	
	≤ 1.5%	> 1.5%
Coarse	DO NOT USE	10
Medium	13	15
Fine	15	20

<sup>&</sup>lt;sup>1</sup> Refer to **Table 3** for definitions of soil texture groups.

Integrity use rates applied as the residual component of a planned sequential (two-pass) program (see Table 6) will provide control or suppression of listed weeds (Table 1) through early-to-mid season. For full-season weed control, apply a labeled postemergence treatment such as Status® herbicide + glyphosate as the sequential component.

Table 6. Residual Preemergence Rates of Integrity in a Planned Sequential Program<sup>1</sup> in Field Corn

Soil Texture <sup>2</sup>	Rate by Soil Texture (fl ozs/A)
Coarse	10
Medium	13
Fine	16

Application rates in **Table 6** will eliminate early season weed interference until cultivation or a labeled postemergence herbicide is applied. However, application rates in **Table 4** should be applied if **Integrity** is being used to control weeds resistant to another herbicide in the tank mix or sequential weed control program.

# **Application Timing**

# Fall Applications For use only in Iowa, Minnesota, and Wisconsin.

Integrity may be applied in the fall to control weeds in conventional, minimum tillage, or no-till corn production systems planted the following spring. Apply from 13 to 16 fluid ounces of Integrity per acre to medium-textured and fine-textured soils with greater than 2.5% organic matter. Fall applications must be made after October 1.

Broadcast surface apply **Integrity** in the fall after crop harvest when soil temperatures at the 4-inch depth are sustained at less than 55° F and before the ground freezes. Tillage operations may be conducted before or after applying **Integrity**. If following an application, tillage should be no more than 2-inches to 3-inches deep to uniformly incorporate the herbicide into the upper soil surface. If a sequential application program (fall application followed by spring application of **Integrity**) is used, the maximum combined rate of **Integrity** that may be applied is 25 fluid ounces per acre per crop season.

# Early Preplant Surface Application (15 to 30 days prior to planting)

Application rates in **Table 4** should be used when making early preplant surface applications, using the highest application rate for a given soil texture. Early preplant surface applications are not recommended on coarse soils, in areas where average annual rainfall (or rainfall + irrigation) typically exceeds 40 inches, or for popcorn or sweet corn. Cultivation or a labeled postemergence herbicide application may still be required under certain conditions for complete weed control.

Early preplant surface applications may be applied as part of a split application program where applications are made as part of the application timings described in this label. However, the cumulative total of sequential application rates must not exceed the maximum labeled rate for a given soil texture.

# Preplant Surface and Preplant Incorporated Application (up to 14 days prior to planting)

Integrity can be applied at use rates specified in **Table 4**, **Table 5**, or **Table 6** to the soil surface or incorporated up to 14 days before planting on all soil types. For preplant incorporated applications, apply **Integrity** and incorporate into the upper soil surface (1 to 2 inches). Use a harrow, rolling cultivator, field cultivator, or other implement capable of providing uniform shallow incorporation. Avoid deeper incorporation or reduced weed control may result.

# **Preemergence Surface Application**

Apply **Integrity** at use rates specified in **Table 4**, **Table 5**, or **Table 6** as a broadcast treatment to the soil surface after planting and before crop emergence. **Integrity** must be applied before crop emergence or injury will occur.

#### **Burndown plus Residual Weed Control**

In addition to residual weed control obtained at any of the application timings described above, **Integrity** will also provide burndown of emerged broadleaf weeds listed in **Table 2**. An adjuvant system (refer to **Additives** section for details) is required for optimum burndown activity. Burndown control of emerged grasses or additional broadleaf weeds not listed on the label will require a tank mix with another herbicide (such as glyphosate).

Residual preemergence application rates of **Integrity** can follow a fall or early preplant burndown application of **Sharpen™ herbicide** (at 1.0 to 2.0 fl ozs/A). However, **DO NOT** exceed the cropping seasonal maximum cumulative amount of saflufenacil per acre from all product sources. A minimum of 30 days is required between **Integrity** and **Sharpen** applications.

<sup>&</sup>lt;sup>2</sup> Refer to **Table 3** for definitions of soil texture groups.

# **Crop-specific Restrictions and Limitations**

- DO NOT apply Integrity<sup>™</sup> herbicide after corn emergence or severe crop injury will occur.
- DO NOT apply Integrity where an at-planting application of an organophosphate or carbamate insecticide(s) is planned and/or has occurred because severe injury may result.

**EXCEPTION: Integrity** may be applied when **Aztec® 2.1% Granular Insecticide** or **AZTEC® 4.67 G granular insecticide** is applied at planting as a BAND, T-BAND, or IN-FURROW.

- DO NOT apply more than a maximum cumulative amount of 25 fl ozs/A of Integrity per cropping season.
- Corn, popcorn, or sweet corn forage and silage can be harvested, fed, or grazed 80 or more days after application.

#### **Tank Mixtures**

**Integrity** may be tank mixed or applied sequentially with one or more of, but not limited to, the following herbicide products:

- Sharpen™ herbicide
- Status® herbicide
- Clarity® herbicide
- atrazine
- glyphosate (e.g. Roundup\* herbicide)

**NOTE:** Refer to the tank mix product labels to confirm that the respective tank mix products are registered for use on specific corn types; not all corn products are registered for use on seed corn, popcorn, and sweet corn.

# Fallow

**Integrity** may be used as a burndown treatment to control broadleaf weeds at any time of the year during the fallow period following crop harvest and before the following crop is planted.

#### **Application Rates and Timings**

Apply **Integrity** as a broadcast burndown spray at 5.0 to 10.0 fl ozs/A plus recommended adjuvants (refer to **Additives** section for details). Best product performance is obtained when broadleaf weeds are small and actively growing (refer to **Table 2** for list of weeds controlled). Thorough coverage of existing weeds is essential and higher spray volumes may be needed for best performance.

Sequential applications may be made with a minimum of 14 days between applications; **DO NOT** exceed a maximum seasonal cumulative amount of 25 fl ozs/A of **Integrity** per cropping season.

For residual weed control, **Integrity** may be applied at 10 to 25 fl ozs/A.

Specific rotational crop intervals must be observed between an application of **Integrity** and planting of the

following crop (see **Crop Rotation and Emergency Replanting Intervals** section for crop rotation restrictions).

#### **Tank Mixtures**

Broad-spectrum burndown control of grasses and/or additional broadleaf weeds will require a tank mix with another herbicide. **Integrity** may be tank mixed or applied sequentially with one or more of, but not limited to, the following herbicide products:

- Clarity
- Distinct® herbicide
- glyphosate (e.g. Roundup)

### Grain Sorghum

**Integrity** may be applied preplant surface, preplant incorporated, or preemergence to grain sorghum. All **Integrity** applications must only be made to sorghum seed that has been properly treated by the seed company with an approved chloroacetamide herbicide safener or severe injury may occur.

Under high soil moisture and/or cool conditions, **Integrity** application may cause temporary stunting or leaf wrapping of grain sorghum. Grain sorghum will normally outgrow these symptoms within 10 to 14 days.

#### **Application Rate**

The use of and the application rates for **Integrity** in grain sorghum are state dependent. Refer to the following state-specific directions for application rate.

# State-specific (all except CO, KS, NE, SD) Application Use Rates

For grain sorghum grown in all states except Colorado, Kansas, Nebraska and South Dakota, see **Table 7** for application rates for **Integrity** when applied alone, in tank mix, or sequentially.

Table 7. Residual Preemergence Rates of Integrity in Grain Sorghum

Rate by Soil Texture and Organic Matter Content (fl ozs/A)		
Soil Texture¹	Organic Matter	
	≤ 1.5%	> 1.5%
Coarse	DO NOT USE	10
Medium	13	15
Fine	15	20

<sup>&#</sup>x27;Refer to **Table 3** for definitions of soil texture groups.

# State-specific (NE, SD) Application Use Rates

For grain sorghum grown in Nebraska and South Dakota, see **Table 8** for application rates for **Integrity™ herbicide** when applied alone, in tank mix, or sequentially.

Table 8. Integrity Use Rates in Grain Sorghum in NE and SD¹

Rate by Soil Texture and Organic Matter Content (fl ozs/A)		
Soil Texture <sup>2</sup>	Organic Matter	
	≤ 1.5%	> 1.5%
Coarse	DO NOT USE	10
Medium	DO NOT USE	13
Fine	DO NOT USE	16

¹ Application rates in **Table 8** will eliminate early season weed interference. Full-season weed control will require a labeled tank mix partner, sequential postemergence herbicide application, and/or cultivation.

# State-specific (CO, KS) Application Use Rates

For grain sorghum grown in Colorado and Kansas, apply Integrity at 10 fl ozs/A in a tank mixture with Guardsman Max® herbicide or G-Max Lite™ herbicide at the use rates listed in Table 9 and Table 10, respectively.

DO NOT use Integrity on coarse soils.

Table 9. Use Rates for Guardsman Max when Tank Mixed with Integrity in Grain Sorghum in CO and KS<sup>1</sup>

Soil Texture <sup>2</sup>	Guardsman Max Use Rate (pints/A)
Coarse	DO NOT USE
Medium	2.0
Fine	2.75

¹ Application rates in **Table 9** will eliminate early season weed interference. Full-season weed control will require additional atrazine up to the maximum atrazine rate allowed for the soil texture and/or field.

Table 10. Use Rates for G-Max Lite when Tank Mixed with Integrity in Grain Sorghum in CO and KS<sup>1</sup>

Soil Texture <sup>2</sup>	<b>G-Max Lite Use Rate</b> (pints/A)
Coarse	DO NOT USE
Medium	1.5
Fine	2.0

<sup>&</sup>lt;sup>1</sup> Application rates in **Table 10** will eliminate early season weed interference. Full-season weed control will require additional atrazine up to the maximum atrazine rate allowed for the soil texture and/or field.

# **Application Timings**

# Early Preplant Surface Application (15 to 30 days prior to planting)

Application rates in **Table 7** should be used when making early preplant surface applications, using the highest application rate for a given soil texture. Early preplant surface applications are not recommended on coarse soils, in areas where average annual rainfall (or rainfall + irrigation) typically exceeds 40 inches, or for popcorn or sweet corn. Cultivation or a labeled postemergence herbicide application may still be required under certain conditions for complete weed control.

Early preplant surface applications may be applied as part of a split application program where applications are made as part of the application timings described in this label. However, the cumulative total of sequential application rates must not exceed the maximum labeled rate for a given soil texture.

# Preplant Surface and Preplant Incorporated Application (up to 14 days prior to planting)

Integrity can be applied at use rates specified in **Table 7** to the soil surface or incorporated up to 14 days before planting on all soil types. For preplant incorporated applications, apply **Integrity** and incorporate into the upper soil surface (1 to 2 inches). Use a harrow, rolling cultivator, field cultivator, or other implement capable of providing uniform shallow incorporation. Avoid deeper incorporation or reduced weed control may result.

#### **Preemergence Surface Application**

Apply **Integrity** at use rates specified in **Table 7** as a broadcast treatment to the soil surface after planting and before crop emergence. **Integrity** must be applied before crop emergence or injury will occur.

# **Burndown plus Residual Weed Control**

In addition to residual weed control obtained at any of the application timings described above, **Integrity** will also provide burndown of emerged broadleaf weeds listed in **Table 2**. An adjuvant system (refer to **Additives** section for details) is required for optimum burndown activity. Burndown control of emerged grasses or additional broadleaf weeds not listed on the label will require a tank mix with another herbicide (such as glyphosate).

Residual preemergence application rates of **Integrity** can follow a fall or early preplant burndown application of **Sharpen™ herbicide** (at 1.0 to 2.0 fl ozs/A). However, **DO NOT** exceed the cropping seasonal maximum cumulative amount of saflufenacil per acre from all product sources. A minimum of 30 and 60 days is required between **Integrity** applications and **Sharpen** applications of 1.0 and 2.0 fl ozs/A, respectively.

<sup>&</sup>lt;sup>2</sup> Refer to **Table 3** for definitions of soil texture groups.

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# **Crop-specific Restrictions and Limitations**

- DO NOT apply Integrity<sup>™</sup> herbicide after grain sorghum emergence or severe crop injury will occur.
- DO NOT apply Integrity where an at-planting application of an organophosphate or carbamate insecticide(s) is planned and/or has occurred or severe injury may result.
- DO NOT apply more than a maximum cumulative amount of 0.112 lb of saflufenacil per acre from all product sources per cropping season.
- **DO NOT** apply more than a maximum cumulative amount of 25 fl ozs/A of **Integrity** per cropping season.
- Integrity is not registered for use on sweet or forage sorghum.
- Sorghum forage and silage can be harvested, fed, or grazed 70 or more days after application.

#### **Tank Mixtures**

**Integrity** may be tank mixed or applied sequentially with one or more of, but not limited to, the following herbicide products:

- Sharpen™ herbicide
- Clarity® herbicide (preplant only)
- atrazine
- glyphosate (e.g. Roundup® herbicide)

# **Conditions of Sale and Warranty**

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

