

7969-332

12/12/2013

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

OFFICE OF  
CHEMICAL SAFETY AND  
POLLUTION PREVENTION

Craig D. Kleppe, Ph.D.  
BASF Corporation  
26 Davis Drive, PO Box 13528  
Research Triangle Park, NC 27709

DEC 12 2013

Subject: Revised Confidential Statement of Formula and Master Labeling to accommodate a change in the co-pack configuration from a dual-chambered jug to individual dry & liquid components packaged together  
Product Name: Optill PRO Powered by KIXOR Herbicide  
EPA Reg. No: 7969-332  
Decision Number(s): 481717

Dear Dr. Kleppe:

The labeling referred to above, submitted in connection with registration in accordance with FIFRA section 3(C)(5), as amended, is acceptable, provided that you submit and/or cite all data required for reregistration/registration review of your product under FIFRA when the Agency requires all registrants of similar products to submit such data.

A stamped copy of your label is enclosed for your records. This label supersedes all previously accepted labels. You must submit one (1) copy of the final printed label before you release the product for shipment. Products released for shipment after eighteen (18) months from the date of this letter must bear the new revised label.

The revised Basic CSF dated July 30, 2013 is acceptable and supersedes all previously accepted Basic CSFs.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA §6(e). Your release for shipment of the product constitutes acceptance of these conditions. If you have questions or concerns regarding this letter, please contact Beth Benbow at (703) 347-8072 or email at [benbow.bethany@epa.gov](mailto:benbow.bethany@epa.gov).

Sincerely,

A handwritten signature in black ink, appearing to read "Kathryn V. Montague".

Kathryn V. Montague  
Product Manager 23  
Herbicide Branch  
Registration Division (7505P)



The Chemical Company

Group 2 14 15 Herbicide

# Optill<sup>®</sup> PRO

## Powered by Kixor<sup>®</sup> Herbicide

ACCEPTED  
 DEC 12 2013  
 Under the Federal Insecticide,  
 Fungicide and Rodenticide Act,  
 this product is a pesticide  
 7969-332

### Premium Residual Option herbicide for use in soybean

**Active Ingredients (Dry Component):**

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. . . . . 17.8%  
 imazethapyr: (±)-2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-ethyl-3-pyridinecarboxylic acid . . . . . 50.2%

**Other Ingredients:** . . . . . 32.0%

**Total:** . . . . . 100.0%

Contains 0.178 pound active ingredient saflufenacil and 0.502 pound acid equivalent imazethapyr per pound formulated as a water-dispersible granule (WG)

**Active Ingredient\* (Liquid Component):**

dimethenamid-P: (S)-2-chloro-N-[(1-methyl-2-methoxy)ethyl]-N-(2,4-dimethyl-thien-3-yl)-acetamide . . . . . 63.9%

**Other Ingredients\*\*:** . . . . . 36.1%

**Total:** . . . . . 100.0%

\*Contains 6.0 pounds of active ingredient per gallon formulated as an emulsifiable concentrate

\*\*Contains petroleum distillates

EPA Reg. No. 7969-332

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: 2 x 2.5 pounds (Dry Component)  
2 x 1.56 gallons (Liquid Component)**

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

<b>FIRST AID</b>	
<b>If in eyes</b>	<ul style="list-style-type: none"> <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>
<b>If swallowed</b>	<ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</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 any liquid to the person.</li> <li>• <b>DO NOT</b> give anything by mouth to an unconscious person.</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 inhaled</b>	<ul style="list-style-type: none"> <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>
<b>HOTLINE NUMBER</b>	
<p>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 at 1-800-832-HELP (4357).</p>	
<p><b>Note to Physician:</b> Contains petroleum distillate. Vomiting may cause aspiration pneumonia.</p>	

## **Precautionary Statements**

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

**WARNING.** Causes substantial but temporary eye injury. Harmful if inhaled, swallowed, or absorbed through the skin. **DO NOT** get in eyes or on clothing. Avoid contact with skin. Avoid breathing spray mist. 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
- 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 (such as a face shield)

### **User Safety Requirements**

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. **DO NOT** reuse them. 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.

### **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 for use in an emergency, such as a spill or equipment breakdown.

**Mixers and loaders for aerial applications must use** a closed system that meets the requirements listed in the Worker Protection Standard (WPS) for Agricultural Pesticides [40 CFR 170.240 (d)(4)] for dermal protection, and must:

- Wear personal protective equipment required in the PPE section of this labeling for applicators and other handlers
- Wear protective eyewear, if the system operates under pressure
- Either use a closed system that also meets the requirements in the WPS for inhalation protection or wear a NIOSH-approved dust-mist respirator with a TC84 cartridge
- Be provided and have immediately available for use in an emergency, such as a spill or equipment breakdown: coveralls, chemical-resistant footwear, and dust-mist respirator, or if using a closed system cab that provides respiratory protection, a NIOSH-approved dust-mist respirator with a TC84 cartridge

## 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 rinsates.

**Groundwater Advisory.** This product 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.

**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.

**Proper Handling Instructions.** This product may not be mixed or loaded 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 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 must 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 capacity **DOES 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.

This product must be used in a manner which will prevent back-siphoning in wells, spills, or improper disposal of excess pesticide spray mixture.

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

Dimethenamid-P has properties that may result in surface water contamination via dissolved runoff and runoff erosion. Practices should be followed to minimize the potential for dissolved runoff and/or runoff erosion.

**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 as described below.

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 washwater, and rainwater that may fall on the pad. The containment capacity does not apply to vehicles delivering pesticide shipments to the mixing/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 which 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 as affected by soil type in the **Crop-specific Information** section of this label.

**DO NOT** apply if all three criteria exist: 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), and 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 0.5 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 labeling 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 **Optill® PRO herbicide**. The use of **Optill PRO** 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.

The separate formulated **Dry** and **Liquid** components of **Optill PRO** are not for individual sale or use.

**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 (such as a face shield)

### 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.

#### 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 Handling

**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 ≤ 50 pounds and ≤ 5 gallons ) as follows:

Empty the remaining contents of both chambers into application equipment or a mix tank and ensure to drain the liquid chamber for 10 seconds after the flow begins to drip. Fill both chambers of 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 of both chambers into application equipment or mix tank and ensure to drain the liquid chamber 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. Pressure rinse both chambers of container, either simultaneously or sequentially, by inserting the pressure rinsing nozzle in the chamber(s) of the container and rinse at about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

### 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.

### Product Information

**Optill® PRO herbicide** is a combination of two separate formulated components defined as follows, which are intended to be applied together as a tank mix application.

1. **Dry** component: two containers each weighing 40 ounces (2.5 pounds) of a saflufenacil and imazethapyr product formulated as a water-dispersible granule.
2. **Liquid** component: two jugs each containing 200 fluid ounces (1.56 gallons) of a dimethenamid-P product formulated as an emulsifiable concentrate.

**Optill PRO** is packaged as **Dry** and **Liquid** components together in a carton (containing two 2.5 pound containers of the **Dry** component and two 1.5 gallon jugs of the **Liquid** component) that contains enough saflufenacil, imazethapyr, and dimethenamid-P to treat 40 acres.

**Optill PRO** provides both contact burndown and residual preemergence broadleaf and grass weed control (refer to **Table 1** for lists of weeds controlled) in soybean. Refer to **Crop-specific Information** section for instructions on herbicide tank mixtures.

Make burndown applications of **Optill PRO** when weeds are small and actively growing. An adjuvant is required with **Optill PRO** for optimum burndown activity (refer to **Additives** section for details). 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 higher spray volumes. Angling nozzles forward (to 45 degrees) may improve penetration of denser weed canopies.

Residual preemergence applications of **Optill PRO** must be activated by at least 1/2 inch of rainfall or sprinkler irrigation prior to weed seedling emergence. When **Optill PRO** is not activated, a labeled postemergence herbicide or cultivation may be needed to control weed escapes.

**Table 1. Weeds Controlled by Optill® PRO herbicide**

Common Name	Scientific Name	Level of Control		Maximum Height or Diameter (inches)
		Residual Application	Burndown Application	
<b>Broadleaf Weeds</b>				
Alligatorweed	<i>Alternanthera philoxeroides</i>	—	C	4
Amaranth, Palmer <sup>1</sup>	<i>Amaranthus palmeri</i>	C	C	6
Amaranth, Powell	<i>Amaranthus powellii</i>	C	C	6
Anoda, spurred	<i>Anoda cristata</i>	C	C	2
Artichoke, Jerusalem	<i>Helianthus tuberosus</i>	—	C	8
Bedstraw, catchweed	<i>Galium aparine</i>	—	C	3
Beets, wild	<i>Beta vulgaris</i>	—	C	5
Beggarticks, hairy	<i>Bidens pilosa</i>	—	C	6
Beggarweed, Florida	<i>Desmodium tortuosum</i>	—	C	6
Bindweed, field	<i>Convolvulus arvensis</i>	—	S <sup>2</sup>	6
Buckwheat, wild	<i>Polygonum convolvulus</i>	C	C	3
Buffalobur	<i>Solanum rostratum</i>	S	S	3
Canola, volunteer (rapeseed)	<i>Brassica</i> spp.	C	C	6
Carpetweed	<i>Mollugo verticillata</i>	C	C	6
Chickweed, common	<i>Stellaria media</i>	—	C	3
Chickweed, mouse-ear	<i>Cerastium vulgatum</i>	—	C	3
Cocklebur, common	<i>Xanthium strumarium</i>	S	C	8
Cowcockle	<i>Vaccaria pyramidata</i>	—	C	4
Cress, hoary	<i>Cardaria draba</i>	—	S	2
Dandelion	<i>Taraxacum officinale</i>	—	S <sup>2</sup>	6
Eveningprimrose, cutleaf	<i>Oenothera laciniata</i>	—	C	4
Falseflax, smallseed	<i>Camelina microcarpa</i>	—	C	4
Filaree, redstem	<i>Erodium cicutarium</i>	—	S	3
Filaree, whitestem	<i>Erodium moschatum</i>	—	S	3
Fleabane, hairy	<i>Conyza bonariensis</i>	—	C	6
Fleabane, rough	<i>Erigeron asper</i>	—	C	3
Flixweed	<i>Descurainia sophia</i>	—	C	6
Galinsoga	<i>Galinsoga parviflora</i>	C	—	—
Goosefoot, nettleleaf	<i>Chenopodium murale</i>	—	C	3
Groundcherry, cutleaf	<i>Physalis angulata</i>	—	C	6
Groundsel, common	<i>Senecio vulgaris</i>	—	C	4
Henbit	<i>Lamium amplexicaule</i>	—	S	3
Horseweed (marestail)	<i>Conyza canadensis</i>	—	C	6
Jimsonweed	<i>Datura stramonium</i>	S	C	3
Knotweed, prostrate	<i>Polygonum aviculare</i>	—	C	3

(continued)

Table 1. Weeds Controlled by Optill® PRO herbicide (continued)

Common Name	Scientific Name	Level of Control		Maximum Height or Diameter (inches)
		Residual Application	Burndown Application	
<b>Broadleaf Weeds</b> (continued)				
Kochia <sup>1</sup>	<i>Kochia scoparia</i>	C	C	1 to 3 Suppression of button/puffball stage at < 1-inch tall
Ladysthumb	<i>Polygonum persicaria</i>	C	C	6
Lambsquarters, common	<i>Chenopodium album</i>	C	C	6
Lambsquarters, narrowleaf	<i>Chenopodium pratericola</i>	—	C	6
Lettuce, miner's	<i>Claytonia perfoliata</i>	—	C	3
Lettuce, prickly	<i>Lactuca serriola</i>	—	C	6
Mallow, common	<i>Malva neglecta</i>	—	C	6
Mallow, little (cheeseweed)	<i>Malva parviflora</i>	—	C	6
Mallow, Venice	<i>Hibiscus trionum</i>	S	C	6
Marestail (horseweed)	<i>Conyza canadensis</i>	—	C	6
Marshelder	<i>Iva xanthifolia</i>	C	C	4
Milkweed, common	<i>Asclepias syriaca</i>	—	C	3
Morningglory, entireleaf	<i>Ipomoea hederacea</i> var. <i>integriuscula</i>	S	C	6
Morningglory, ivyleaf	<i>Ipomoea hederacea</i>	S	C	6
Morningglory, palmleaf	<i>Ipomoea wrightii</i>	—	C	6
Morningglory, pitted	<i>Ipomoea lacunosa</i>	S	C	6
Morningglory, smallflower	<i>Jacquemontia tamnifolia</i>	C	C	3
Morningglory, tall	<i>Ipomoea purpurea</i>	S	C	6
Mustard, black	<i>Brassica nigra</i>	C	C	6
Mustard, tumble	<i>Sisymbrium altissimum</i>	—	C	6
Mustard, wild	<i>Sinapis arvensis</i>	C	C	6
Nettle, burning	<i>Urtica urens</i>	—	C	4
Nightshade, black	<i>Solanum nigrum</i>	C	C	6
Nightshade, cutleaf	<i>Solanum triflorum</i>	S	C	6
Nightshade, Eastern black	<i>Solanum ptycanthum</i>	C	C	6
Nightshade, hairy	<i>Solanum saccharoides</i>	C	C	6
Pennycress, field	<i>Thlaspi arvense</i>	—	C	6
Pepperweed, field	<i>Lepidium campestre</i>	—	C	3
Pepperweed, Virginia	<i>Lepidium virginicum</i>	—	C	3
Pigweed, prostrate	<i>Amaranthus blitoides</i>	C	C	6
Pigweed, redroot	<i>Amaranthus retroflexus</i>	C	C	6
Pigweed, smooth	<i>Amaranthus hybridus</i>	C	C	6
Pigweed, spiny	<i>Amaranthus spinosus</i>	C	C	6
Poinsettia, wild	<i>Euphorbia heterophylla</i>	C	—	—
Puncturevine	<i>Tribulus terrestris</i>	C	C	6
Purslane, common	<i>Portulaca oleracea</i>	C	C	3
Pusley, Florida	<i>Richardia scabra</i>	C	S	3

(continued)



Table 1. Weeds Controlled by Optill® PRO herbicide (continued)

Common Name	Scientific Name	Level of Control		Maximum Height or Diameter (inches)
		Residual Application	Burndown Application	
<b>Broadleaf Weeds</b> (continued)				
Radish, wild	<i>Raphanus raphanistrum</i>	—	S	4
Ragweed, common <sup>1</sup>	<i>Ambrosia artemisiifolia</i>	S	C	6
Ragweed, giant <sup>1</sup>	<i>Ambrosia trifida</i>	S	C	6
Redmaids	<i>Calandrinia ciliata</i>	—	C	3
Rocket, London	<i>Sisymbrium irio</i>	—	C	4
Rocket, yellow	<i>Barbarea vulgaris</i>	—	C	3
Sesbania, hemp	<i>Sesbania exaltata</i>	—	C	4
Shepherd's-purse	<i>Capsella bursa-pastoris</i>	C	C	6
Sida, prickly	<i>Sida spinosa</i>	S	C	6
Smartweed, Pennsylvania	<i>Polygonum pennsylvanicum</i>	C	C	6
Smartweed, swamp (seedling)	<i>Polygonum coccineum</i>	—	C	3
Sowthistle, annual	<i>Sonchus oleraceus</i>	—	C	6
Sowthistle, spiny	<i>Sonchus asper</i>	—	C	6
Spurge, petty	<i>Euphorbia peplus</i>	—	C	3
Spurge, prostrate	<i>Euphorbia supina</i>	—	S	3
Spurge, spotted	<i>Euphorbia maculata</i>	C	S	3
Spurry, corn	<i>Spergula arvensis</i>	—	C	3
Starbur, bristly	<i>Acanthospermum hispidum</i>	—	C	2
Sunflower, common	<i>Helianthus annuus</i>	S	C	6
Swinecress	<i>Coronopus didymus</i>	—	C	3
Tansymustard, green	<i>Descurainia incana</i>	—	C	3
Tansymustard, pinnate	<i>Descurainia pinnata</i>	—	C	6
Thistle, Canada	<i>Cirsium arvense</i>	—	S <sup>2</sup>	6
Thistle, Russian	<i>Salsola kali</i>	C	C	3
Velvetleaf	<i>Abutilon theophrasti</i>	S	C	6
Watercress, creeping	<i>Coronopus squamatus</i>	—	C	2
Watercress	<i>Nasturtium officinale</i>	—	C	3
Waterhemp <sup>1</sup>	<i>Amaranthus tuberculatus</i>	C	C	6
Willowweed	<i>Epilobium adenocaulon</i>	—	C	3

**Table 1. Weeds Controlled by Optill® PRO herbicide** (continued)

Common Name	Scientific Name	Level of Control C = Control S = Suppression		Maximum Height or Diameter (inches)
		Residual Application	Burndown Application	
<b>Grass Weeds</b>				
Barley, volunteer	<i>Hordeum vulgare</i>	—	S	2
Barnyardgrass	<i>Echinochloa crus-galli</i>	C	S	3
Canarygrass, littleseed	<i>Phalaris minor</i>	S	S	2
Crabgrass, large	<i>Digitaria sanguinalis</i>	C	S	3
Crabgrass, smooth	<i>Digitaria ischaemum</i>	C	S	3
Cupgrass, woolly	<i>Eriochloa villosa</i>	S	C	3
Foxtail, giant	<i>Setaria faberi</i>	C	C	6
Foxtail, green	<i>Setaria viridis</i>	C	C	3
Foxtail, yellow	<i>Setaria pumila</i>	C	C	3
Goosegrass	<i>Eleusine indica</i>	C	—	—
Johnsongrass (rhizome)	<i>Sorghum vulgare</i>	—	S	6
Johnsongrass (seedling)	<i>Sorghum vulgare</i>	C	C	8
Millet, wild proso	<i>Panicum miliaceum</i>	S	S	3
Oats, volunteer	<i>Avena sativa</i>	—	S	2
Oats, wild	<i>Avena fatua</i>	—	S	3
Panicum, fall	<i>Panicum dichotomiflorum</i>	C	—	—
Panicum, Texas	<i>Panicum texanum</i>	S	—	—
Rice, red	<i>Oryza rufipogon</i>	C	C	3
Sandbur	<i>Cenchrus spp.</i>	S	—	—
Shattercane	<i>Sorghum bicolor</i>	S	C	8
Signalgrass, broadleaf	<i>Brachiaria platyphylla</i>	S	C	8
Wheat, volunteer	<i>Triticum spp.</i>	—	S	2
Sorghum, alnum	<i>Sorghum alnum</i>	S	C	3
<b>Sedges</b>				
Nutsedge, purple	<i>Cyperus rotundus</i>	S <sup>2</sup>	S <sup>2</sup>	3
Nutsedge, yellow	<i>Cyperus esculentus</i>	S <sup>2</sup>	S <sup>2</sup>	3

<sup>1</sup>Populations of noted weeds exist that are known to be resistant to **Group 2/Group B, Group 14/Group E, and/or Group 9/Group G** (e.g. glyphosate) herbicides. **Optill PRO** may not provide full-season control of these herbicide-resistant biotypes. See the **Resistance Management** section for practices to manage and minimize the impact of resistant weeds (e.g. tank mix or alternate with other herbicide modes of action, crop rotation, and mechanical control).

<sup>2</sup>Control of seedling stage and suppression of perennial growth stage

## Mode of Action

**Optill® PRO herbicide** contains three herbicide active ingredients. Saflufenacil is a potent inhibitor of protoporphyrinogen-oxidase, belonging to herbicide mode-of-action **Group 14 (WSSA)/Group E (HRAC)**. Imazethapyr is a potent inhibitor of acetohydroxyacid synthase, belonging to herbicide mode-of-action **Group 2 (WSSA)/Group B (HRAC)**.

Dimethenamid-P inhibits very long chain fatty acid (VLCFA) synthesis, belonging to the mode-of-action **Group 15 (WSSA)/Group K3 (HRAC)**. The **Dry** component active ingredients of **Optill PRO** are rapidly absorbed by roots and foliage. Plant death is the result of membrane damage and inhibition of the production of branched chain amino acids. Under active growing conditions, susceptible emerged weeds usually develop chlorotic and necrotic injury symptoms within hours and die within a few days. Susceptible emerging weed seedlings will usually die as they reach the soil surface or shortly after emergence. The **Liquid** component active ingredient of **Optill PRO** is absorbed by roots and shoots of weeds following germination. Plant death is the result of very long chain fatty acid synthesis inhibition; susceptible weeds typically do not emerge.

## Resistance Management

While weed resistance to protoporphyrinogen-oxidase-inhibiting herbicide is relatively infrequent, populations of resistant biotypes to protoporphyrinogen-oxidase or acetohydroxyacid-synthase-inhibiting herbicides are known to exist. Weed resistance to VLCFA synthesis-inhibiting herbicides is rare. Resistance management practices include:

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

## Crop Tolerance

Soybeans are tolerant to **Optill PRO** 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. seedling disease, extreme hot or cold weather, excessive moisture, high soil pH, high soil salt concentration or drought).

Severe crop injury will result if **Optill PRO** is applied post-emergence (over the top) to soybeans.

## Application Instructions

Apply **Optill PRO** prior to crop emergence only.

### Application Methods and Equipment

**Optill PRO** may be applied by either ground or air. Thorough spray coverage is required 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. Equipment should be adjusted 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.

**Optill PRO** may only be applied using water as the spray carrier.

### 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:

1. 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 150-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, and shrub lands).

### Ground Application Requirements

**Water Volume.** Use 5 or more gallons of water per treated acre for weed control applications. Thorough spray coverage is required for control of emerged broadleaf weeds. High populations and/or variations in size can prevent adequate spray coverage. Controlling fall-germinated weeds in the spring (e.g. horseweed/marestail) will also require thorough spray coverage. Use higher spray volumes (e.g. 15 to 20 gallons of water per acre) in these situations to increase spray coverage and optimize burndown activity.

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 burn-down 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.
2. 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 35-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, and shrub lands).

### 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 must 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
2. 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 must 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 **Optill® PRO herbicide**, an adjuvant system must be used that includes the following:

Adjuvant	Rate
methylated seed oil <sup>1</sup> (MSO)	1 gal/100 gals <sup>2</sup> (1% v/v)
PLUS	PLUS
ammonium sulfate (AMS)	8.5 to 17 lbs/100 gals (1% to 2% w/v)
<b>or</b>	<b>or</b>
urea ammonium nitrate (UAN)	1.25 to 2.5 gals/100 gals (1.25% to 2.5% v/v)

<sup>1</sup> MSO-based adjuvant **MUST** contain at least 60% methylated seed oil. Poor performance may occur with adjuvants containing less than 60% methylated seed oil.

<sup>2</sup> **DO NOT** use less than 1 pint/A of MSO with low-volume (< 12.5 gallons per acre) aerial or ground applications.

BASF highly recommends the use of AMS fertilizer when mixing **Optill PRO** with glyphosate-based herbicides.

**DO NOT** use a nonionic surfactant (NIS) as a substitute for 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

**Optill® PRO herbicide** 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 **Crop-specific Information** section for details.

Tank mixtures with contact herbicides (e.g. carfentrazone, paraquat) may reduce the burndown activity of **Optill PRO**.

### Compatibility Test for Mix Components

Before mixing components, always perform a compatibility jar test.

1. 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.
2. Add components in the sequence indicated in the mixing order using 2 teaspoons for each pound or 1 teaspoon for each pint of label rate per acre.
3. Always cap the jar and invert 10 cycles between component additions.
4. 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

The mixing of **Optill PRO** and other products in the spray water must be conducted as follows:

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.
5. **Water-soluble additives** (including dry and liquid fertilizers such as ammonium sulfate or urea ammonium nitrate)
6. **Water-dispersible products** (including **Dry** component of **Optill PRO** and others, such as dry flowables, wettable powders, suspension concentrates, or suspo-emulsions)

7. **Water-soluble products** (such as glyphosate)
8. **Emulsifiable concentrates** (including **Liquid** component of **Optill PRO** and methylated seed oil adjuvants)
9. **Remaining quantity of water**

**NOTE: DO NOT** pour the **Liquid** component of **Optill PRO** into the spray tank before the **Dry** component of **Optill PRO** or poor product mixing may result.

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** - Refer to the **Crop-specific Information** section for maximum cropping seasonal application use rates. A cropping season is defined as the period following harvest of the preceding crop through the harvest of the planned or current crop.
- **DO NOT** apply **Optill PRO** after crop emergence or severe crop injury will occur.
- **Rainfastness** - **Optill PRO** 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.
- **DO NOT** apply **Optill PRO** through any type of irrigation system (e.g. chemigation).
- Full-rate application of products containing chlorimuron ethyl, chloransulam-methyl, flumetsulam, or imazaquin in the same year as **Optill PRO** may increase the risk of injury to sensitive follow crops. Consult the respective labels of these products for recommended uses of these products in combinations.
- Only rotational crops harvested at maturity may be used for feed or food.
- When organophosphate or carbamate insecticides are tank mixed with **Optill PRO**, temporary injury may result to the treated crops.
- **Optill PRO is not for sale, distribution, or use in Nassau and Suffolk counties in New York State, or in California.**

## Rotational Crop Restrictions, Crop Rotation, and Emergency Replanting Intervals

Use **Table 2** and its exceptions in the paragraphs following the table to determine the proper interval between **Optill PRO** application and rotational crop planting. This interval can be used to determine the acceptable planting interval for rotational crops as well as replanting after crop failure (because of environmental factors such as drought, frost or hail, etc.). Be sure to determine the rotational crop

interval for tank mix products and utilize the most restrictive interval of all products applied.

**Table 2. Rotational Crop Planting and Emergency Replanting Intervals after an Application of Optill® PRO herbicide**

Crop	Rotational Crop Interval (months after application)	
Clearfield® corn	0	
Soybeans	0 to 1 <sup>a</sup>	
Clearfield wheat	4	
Edible beans and peas (other than Southern peas)	4	
Peanuts		
Rye		
Wheat		
Field corn	8.5	
Field corn grown for seed		
Alfalfa	9	
Clover		
Southern peas		
Barley	9.5	
Clearfield canola		
Clearfield sunflower		
Tobacco		
Cotton	18	
Lettuce		
Oats		
Popcorn		
Safflower		
Sorghum		
Sunflower		
Sweet corn		
Flax		26
Potatoes		
Other crops	40 <sup>b</sup>	

<sup>a</sup> The planting interval for this crop and rates are further defined in the respective **Crop-specific Information** section of this label. Use the longer interval within listed ranges for indicated crops grown on coarse-textured soils with organic matter less than or equal to 2.0%.

<sup>b</sup> Following 40 months after an **Optill PRO** application and before planting any crop not listed elsewhere in the **Rotational Crop Restrictions, Crop Rotation, and Emergency Replanting Intervals**, 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, the intended rotational crop may be planted the following year. Sugar beet production can be reduced when grown in soil conditions with a pH less than 6.5. If the field is limed to adjust pH

prior to planting rotational crops not listed in **Rotational Crop Restrictions, Crop Rotation, and Emergency Replanting Intervals**, apply the lime at least 12 months prior to planting the rotational crop.

Use of **Optill PRO** 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.

**Exceptions to Crop Rotation Restrictions**

**Barley**

**(Delaware, Indiana, Kentucky, Maryland, New Jersey, Ohio, Pennsylvania, and Virginia only)**

Barley may be planted 4 months following an **Optill PRO** application in these states.

**Corn Inbred Lines**

Corn inbred seed lines may be planted the year following an application of **Optill PRO**. Growers are directed to contact the seed company for information and recommendations regarding the planting of corn grown for seed in fields treated with **Optill PRO** 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 **Optill PRO** shall be assumed by the user.

**Sweet Corn and Popcorn Varieties**

**(Illinois, Indiana, Iowa, Minnesota, Ohio, Tennessee, and Wisconsin only)**

Sweet corn and popcorn varieties may be planted the year following an application of **Optill PRO**. Some sweet corn and popcorn varieties may be injured when planted at less than 18 months following an application of **Optill PRO**. Before planting sweet corn for processing, contact the processor company for information and recommendations regarding the tolerance of sweet corn varieties planned for fields treated with **Optill PRO** the previous year. **DO NOT** plant fresh market sweet corn varieties prior to 18 months after **Optill PRO** use. Before planting popcorn, contact the popcorn company for information and recommendations regarding the tolerance of popcorn varieties planned for fields treated with **Optill PRO** the previous year. Because growing conditions, environmental conditions, and grower practices are beyond the control of BASF, all risks and consequences associated with planting sweet corn or popcorn varieties into fields treated previously with **Optill PRO** shall be assumed by the user. Stunting and maturity-delay or other adverse effects may result when sweet corn or popcorn are planted following **Optill PRO** use.

**Certain Vegetable Crops**

**(Alabama, Delaware, Florida, Georgia, Indiana, Kentucky, Maryland, New Jersey, North Carolina, Pennsylvania, South Carolina, and Virginia only)**

The following crops may be planted 18 months following the last application of **Optill® PRO herbicide**: Bahiagrass, cabbage, cantaloupe, cucumber, Irish potato, onion, sweet pepper transplants, sweet potato transplants, tomato transplants and watermelon.

**Field Corn and Field Corn Grown for Seed (Arizona, Hawaii, Idaho, Montana, Nevada, Oregon, Utah, Washington, and Wyoming)**

Plant 9.5 months after **Optill PRO** application.

**Crop-specific Information**

This section provides use directions for **Optill PRO** in soybean. Be sure to read about product 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 application directions, **Optill PRO** may be applied for burndown control of emerged weeds and/or residual control of germinating weeds (refer to **Table 1** for list of weeds controlled) before planting (preplant/preseed) or after planting but before crop emergence. Depending on the time between **Optill PRO** application and planting, a followup in-crop herbicide application may be needed for complete weed control throughout the growing season.

Thorough spray coverage is required for control of emerged broadleaf weeds. High populations and/or variations in size can prevent adequate spray coverage. Controlling fall-germinated weeds in the spring (e.g. horseweed/marestail) will also require thorough spray coverage. Use higher spray volumes (e.g. 15 to 20 gallons of water per acre) in these situations to increase spray coverage and optimize burndown activity.

**Soybean**

**Optill PRO** may be applied in the fall and/or in the spring as a preplant or preemergence burndown application in reduced or no-till soybean for weed control (refer to **Table 1** for list of weeds controlled). An adjuvant system (refer to **Additives** section for details) is required for optimum burndown activity.

**Application Rate**

**Optill PRO** is a combination of two separate formulated components defined as follows, which are intended to be applied together as a tank mix application.

1. **Dry** component: two containers each weighing 40 ounces (2.5 pounds) of a formulated water-dispersible granule.

2. **Liquid** component: two jugs each containing 200 fluid ounces (1.56 gallons) of a formulated emulsifiable concentrate.

The entire contents of the **Optill PRO** carton will treat 40 acres.

If the intended treatment area is less than 40 acres, apply a rate ratio equivalent to 2 ounces of the **Dry** component with 10 fluid ounces of the **Liquid** component on a per acre basis. **DO NOT** apply to soybean using a different ratio of the **Dry** and **Liquid** components on a per acre basis.

**Application Timing**

**Fall Application**

Apply **Optill PRO** for burndown and/or residual weed control after the prior crop is harvested. Applications must be made prior to first killing frost. Fall applications can be made to all soil types.

**Spring Application**

Apply **Optill PRO** early preplant through preemergence for burndown and/or residual weed control prior to crop emergence. A sequential application of **Sharpen® herbicide** at 1.0 and 2.0 fl ozs/A may be made with a minimum of 30 and 60 days between applications, respectively.

**Soybean Planting Interval**

Depending on soil texture and organic matter, an interval between **Optill PRO** application and soybean planting may be required (see **Table 3**). These intervals must be observed prior to planting soybeans or crop injury may occur.

**Table 3. Minimum Preplant Intervals Required Between Optill PRO Application and Soybean Planting**

Minimum Preplant Interval by Soil Texture and Organic Matter Content (days)		
Soil Texture	Organic Matter	
	≤ 2.0%	> 2.0%
<b>Coarse</b> (Sand, loamy sand, and sandy loam)	30	None
<b>Medium</b> (Silt, silt loam, loam, and sandy clay loam)	None	None
<b>Fine</b> (Sandy clay, silty clay, silty clay loam, clay loam, and clay)	None	None

## Crop-specific Restrictions and Limitations

- **DO NOT** apply more than 2.0 ozs/A of the **Dry** component (0.022 lb ai/A of saflufenacil and 0.063 lb ae/A imazethapyr) in a single application or cumulatively per cropping season.
- **DO NOT** apply more than a maximum cumulative amount of 0.089 lb ai/A of saflufenacil per cropping season in soybean from all product sources.
- **DO NOT** apply more than a maximum cumulative amount of 0.98 lb ai/A dimethenamid-P (21.0 fl ozs/A of **Liquid** component) per cropping season in soybean from all product sources.
- **DO NOT** apply **Optill® PRO herbicide** to soybean in North Dakota and Minnesota north of Highway #210.
- **DO NOT** apply when soybeans have reached the cracking stage or after emergence because severe crop injury will result.
- **DO NOT** apply **Optill PRO** with other products containing **Group 14/Group E** herbicides (such as sulfentrazone or flumioxazin) as a tank mix or sequential application within 30 days of planting because crop injury may result.
- When applying **Optill PRO** in a sequential spring application with other products containing **Group 14/Group E** herbicides, separate applications by at least 44 days.
- **Group 14/Group E** herbicides labeled for post-emergence applications in soybean may be used 14 days after soybean emergence.
- **DO NOT** graze or feed treated soybean forage, hay or straw to livestock.
- There must be a **Preharvest Interval** of at least 85 days between an application of **Optill PRO** and soybean grain harvest.
- Ensure that the seed row is sufficiently covered with soil to avoid washing and concentration of the herbicide in the seed zone.
- Always use the most restrictive preplant interval of all inclusive herbicides when applying **Optill PRO** as part of a tank mix.

## Tank Mixtures

Broad-spectrum burndown of additional grasses or broadleaf weeds will require a tank mix. **Optill PRO** may be tank mixed with one or more of, but not limited to, the following herbicide products:

- **Clarity® herbicide**
- **Outlook® herbicide**
- **Prowl® H<sub>2</sub>O herbicide**
- 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.

**TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.**

**TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BUYER'S EXCLUSIVE REMEDY AND BASF'S EXCLUSIVE LIABILITY, WHETHER IN CONTRACT, TORT, NEGLIGENCE, STRICT LIABILITY, OR OTHERWISE, SHALL BE LIMITED TO REPAYMENT OF THE PURCHASE PRICE OF THE PRODUCT.**

**TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, BASF AND THE SELLER DISCLAIM ANY LIABILITY FOR CONSEQUENTIAL, EXEMPLARY, SPECIAL OR INDIRECT DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT.**

BASF and the Seller offer this product, and the Buyer and User accept it, subject to the foregoing **Conditions of Sale and Warranty** which may be varied only by agreement in writing signed by a duly authorized representative of BASF.

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007969-00332.20130729.**NVA 2013-04-387-0133**  
Supersedes: NVA 2011-04-387-0188

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Research Triangle Park, NC 27709



The Chemical Company

[Base decal Dry component]



The Chemical Company

Group 2 14 15 Herbicide

# Optill PRO

Powered by Kixor® Herbicide

Premium Residual Option herbicide for use in soybean

**Active Ingredients (Dry Component):**

safufenacil: N'-[2-chloro-4-fluoro-5-(3-methyl-2,6-dioxo-4-(trifluoromethyl)-3,6-dihydro-1(2H)-pyrimidinyl)benzoyl]-N-isopropyl-N-methylsulfamide ..... 17.8%

imazethapyr: (±)-2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1H-imidazol-2-yl]-5-ethyl-3-pyridinecarboxylic acid ..... 50.2%

**Other Ingredients:** ..... 32.0%

**Total:** ..... 100.0%

Contains 0.178 pound active ingredient safufenacil and 0.502 pound acid equivalent imazethapyr per pound formulated as a water-dispersible granule (WG)

EPA Reg. No. 7969-332

EPA Est. No.

## KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCION

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.)

**Precautionary Statements: Hazards to Humans and Domestic Animals. CAUTION.** Harmful if absorbed through skin. Harmful if swallowed. Causes moderate eye irritation. Avoid contact with skin, eyes, or 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. See leaflet for complete Environmental Hazards and Groundwater and Surface Water Advisories. **FIRST AID: If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice. **If swallowed:** Call a poison control center or doctor immediately for treatment advice. **DO NOT** induce vomiting unless told to do so by a poison control center or doctor. **DO NOT** give any liquid to the person. **DO NOT** give anything by mouth to an unconscious person. **If in eyes:** Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after first 5 minutes; then continue rinsing eyes. Call a poison control center for treatment advice. **If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably by mouth to mouth, if possible. Call a poison control center or doctor for further treatment advice. **HOTLINE 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 at 1-800-832-HELP (4357).

**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. **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 Handling: 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. See leaflet for complete container disposal directions including triple rinsing and pressure rinsing instructions. See leaflet 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).

Not for individual sale or use.

Net Contents: 2 x 2.5 pounds (Dry Component)

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

[Based on NVA 2013-04-387-0133]

[Base decal Liquid component]



The Chemical Company

Group 2 14 15 Herbicide

# Optill PRO

Powered by Kixor® Herbicide

Premium Residual Option herbicide for use in soybean

**Active Ingredient\* (Liquid Component):**

dimethenamid-P: (S)-2-chloro-N-[(1-methyl-2-methoxy)ethyl]-N-(2,4-dimethyl-thien-3-yl)-acetamide ..... 63.9%

**Other Ingredients\*\*:** ..... 36.1%

**Total:** ..... 100.0%

\*Contains 6.0 pounds of active ingredient per gallon formulated as an emulsifiable concentrate

\*\*Contains petroleum distillates

EPA Reg. No. 7969-332

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.)

**Precautionary Statements: Hazards to Humans and Domestic Animals. WARNING.** Causes substantial but temporary eye injury. Harmful if inhaled, swallowed, or absorbed through the skin. **DO NOT** get in eyes or on clothing. Avoid contact with skin. Avoid breathing spray mist. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. **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. 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. Dimethenamid-P has properties that may result in surface water contamination via dissolved runoff and runoff erosion. Practices should be followed to minimize the potential for dissolved runoff and/or runoff erosion. See leaflet for complete Environmental Hazards. **FIRST AID: If in eyes:** Hold eyes open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes; then continue rinsing eyes. Call a poison control center for treatment advice. **If swallowed:** Call a poison control center or doctor immediately for treatment advice. **DO NOT** induce vomiting unless told to do so by a poison control center or doctor. **DO NOT** give any liquid to the person. **DO NOT** give anything by mouth to an unconscious person. **If on skin or clothing:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice. **If inhaled:** Move person to fresh air. If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably by mouth to mouth, if possible. Call a poison control center or doctor for further treatment advice. **HOTLINE 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 at 1-800-832-HELP (4357). **Note to Physician:** Contains petroleum distillate. Vomiting may cause aspiration pneumonia.

**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. **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 Handling: 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. See leaflet for complete container disposal directions including triple rinsing and pressure rinsing instructions. See leaflet 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).

Not for individual sale or use.

Net Contents: 2 x 1.56 gallons (Liquid Component)

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