

67760-121

9/24/2013

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

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

Jennifer DeCarlo
Cheminova Inc.
1600 Wilson Blvd.; Suite 700
Arlington, VA 22209

SEP 24 2013

Subject: Notification; Per PR-Notice 98-10
Crusher Herbicide
EPA Reg. No. 67760-121
Date Submitted: September 24, 2013

Dear Ms. DeCarlo:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 dated September 24, 2013 for the product referenced above. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10. The label submitted with the application has been stamped "Notification" and will be placed in our records.

If you have any questions regarding this letter, please contact me at (703) 306-0415 or davis.kable@epa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Kable Bo Davis", enclosed in a large, loopy oval.

Kable Bo Davis
Product Manager 25
Herbicide Branch
Registration Division (7505P)

Please read instructions on reverse before completing form. Form Approved. OMB No. 2070-0060, Approval expires 05-31-98

EPA United States Environmental Protection Agency Washington, DC 20460	<input type="checkbox"/> Registration <input type="checkbox"/> Amendment <input checked="" type="checkbox"/> Other - NOTIFICATION	OPP Identifier Number XXXXXX
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Application for Pesticide - Section I

1. Company/Product Number 67760-121	2. EPA Product Manager Kable Bo Davis	3. Proposed Classification <input checked="" type="checkbox"/> None <input type="checkbox"/> Restricted
4. Company/Product (Name) CRUSHER Herbicide	PM# 25	
5. Name and Address of Applicant (Include ZIP Code) Chemnova, Inc. 1600 Wilson Blvd. Suite 700 Arlington, VA 22209 <input type="checkbox"/> Check if this is a new address		6. Expedited Review. In accordance with FIFRA Section 3(c)(3)(b)(I), my product is similar or identical in composition and labeling to: EPA Reg. No. Product Name <div style="text-align: center; font-size: 1.5em; font-weight: bold;"> NOTIFICATION SEP 24 2013 </div>

Section - II

<input type="checkbox"/> Amendment - Explain below.	<input type="checkbox"/> Final printed labels in response to Agency letter dated _____
<input type="checkbox"/> Resubmission in response to Agency letter dated _____	<input type="checkbox"/> "Me Too" Application
<input checked="" type="checkbox"/> Notification - Explain below.	<input type="checkbox"/> Other - Explain below

Explanation: Use additional page(s) if necessary. (For Section I and Section II.)

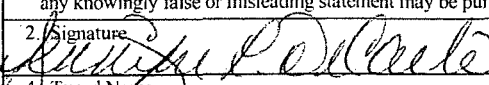
Notification of Minor Label Changes per PR Notice 98-10.

This notification is consistent with the provisions of PR Notice 98-10 and EPA regulations at 40 CFR 152.46, and no other changes have been made to the labeling or the confidential statement of formula of this product. I understand that it is a violation of 18 U.S.C. Sec. 1001 to willfully make any false statement to EPA. I further understand that if this notification is not consistent with the terms of PR Notice 98-10 and 40 CFR 152.46, this product may be in violation of FIFRA and may be subject to enforcement action and penalties under Sections 12 and 14 of FIFRA.

Section - III

1. Material This Product Will Be Packaged In:				2. Type of Container	
Child-Resistant Packaging <input type="checkbox"/> Yes* <input checked="" type="checkbox"/> No <i>*Certification must be submitted</i>	Unit Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes" Unit Packaging wgt. No. per container	Water Soluble Packaging <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If "Yes" Package wgt. No. per container		<input type="checkbox"/> Metal <input checked="" type="checkbox"/> Plastic <input type="checkbox"/> Glass <input checked="" type="checkbox"/> Paper <input type="checkbox"/> Other (Specify)	
3. Location of Net Contents Information <input checked="" type="checkbox"/> Label <input checked="" type="checkbox"/> Container		4. Size(s) Retail Container Various		5. Location of Label Directions <input checked="" type="checkbox"/> On Label <input type="checkbox"/> On labeling accompanying product	
6. Manner in Which Label is Affixed to Product <input checked="" type="checkbox"/> Lithograph <input type="checkbox"/> Other _____ <input checked="" type="checkbox"/> Paper glued <input checked="" type="checkbox"/> Stenciled					

Section - IV

1. Contact Point (Complete items directly below for identification of individual to be contacted, if necessary, to process this application)		
Name Jennifer L. DeCarlo	Title Registration Manager	Telephone No. (Include Area Code) 973-356-5557
Certification I certify that the statements I have made on this form and all attachments thereto are true, accurate and complete. I acknowledge that any knowingly false or misleading statement may be punishable by fine or imprisonment or both under applicable law.		6. Date Application Received <div style="font-size: 1.5em; font-weight: bold;">(Stamped)</div>
2. Signature 		
3. Title Registration Manager		
4. Typed Name Jennifer L. DeCarlo		5. Date September 24, 2013



Cheminova, Inc.
Washington Office
1600 Wilson Boulevard
Suite 700
Arlington, VA 22209

Phone: (703) 373-8883
Fax: (703) 373-8887

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September 24, 2013

Kable Bo Davis, Product Manager, Team 25
Document Processing Desk (NOTIF)
Office of Pesticide Programs
U.S. Environmental Protection Agency
Room S-4900, One Potomac Yard
2777 South Crystal Drive
Arlington, VA 22202-4501

**Subject: Crusher Herbicide
EPA Reg. No. 67760-121
Application for Notification per PR Notice 98-10**

Dear Mr. Davis,

Cheminova, Inc. is hereby submitting the enclosed Notification per PR Notice 98-10, Section II, Labeling Notifications, Subparagraph E, Changes in Packaging and Related Labeling Statements. This notification is being submitted in order to fix a typo on our label, making the label consistent with what the Agency has on record for this registration. Therefore, the following typo has been corrected:

- a. On page 4, under Product Information, "water soluble" has been corrected to read "water dispersible".

To support this notification, enclosed, please find the following documents:

- Application for notification (Form 8570-1)
- One copy of revised labeling highlighting the requested changes
- Two copies of revised labeling

If you have any questions or require any additional information, please contact me at 973-356-5557 or by e-mail at jennifer.decarlo@cheminova.com.

Sincerely,

A handwritten signature in black ink, appearing to read "Jennifer L. DeCarlo".

Jennifer L. DeCarlo
Registration Manager

Enclosures

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NOTIFICATION

SEP 24 2013

CRUSHER™ Herbicide

Group 2 Herbicide

For preplant and preemergence weed control in field corn and for preplant weed control in cotton, peanuts and soybeans

ACTIVE INGREDIENTS:

<i>Rimsulfuron</i>	
N-((4,6-dimethoxypyrimidin-2-yl)aminocarbonyl)-3-(ethylsulfonyl)-2-pyridinesulfonamide.....	25.0%
<i>Thifensulfuron-Methyl</i>	
Methyl 3-[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)amino]carbonyl]amino]sulfonyl]-2-thiophenecarboxylate.....	25.0%
OTHER INGREDIENTS	<u>50.0%</u>
TOTAL	<u>100.0%</u>

KEEP OUT OF REACH OF CHILDREN CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.

IN CASE OF A MEDICAL EMERGENCY INVOLVING THIS PRODUCT, CALL TOLL FREE, DAY OR NIGHT 1-866-303-6950.

Read the entire label before using this product.
Use only according to label instructions.

Read the WARRANTY DISCLAIMER, INHERENT RISKS OF USE, and LIMITATION OF REMEDIES before buying or using. If terms are unacceptable, return product at once, unopened, and the purchase price will be refunded.

Note to PM, the following bracketed statements are individually optional depending on the packaging configuration and whether a booklet label design is used:

- a. [See First Aid statement on back panel of booklet.]
- b. [See First Aid statement on back panel.]
- c. [See additional precautionary statements and Directions for Use in booklet.]
- d. [Read the entire label before using this product. See First Aid, Precautionary Statements, and Directions for Use on individual packages.]

EPA Reg. No. 67760-121
NET CONTENTS:

EPA Est. No.

Cheminova, Inc.
One Park Drive, Suite 150
P.O. Box 110566
Research Triangle Park, NC 27709

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
KEEP OUT OF REACH OF CHILDREN
CAUTION**

Harmful if absorbed through skin. Causes moderate eye irritation Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

FIRST AID	
IF ON SKIN OR CLOTHING:	Take off contaminated clothing. Rinse skin with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.
IF IN EYES:	Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice.
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-866-303-6950 for emergency medical treatment information.	

PERSONAL PROTECTIVE EQUIPMENT (PPE)

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

WPS USES: Applicators and other handlers must wear: long sleeved shirt and long pants, shoes plus socks, and chemical resistant gloves from category A (such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber) all ≥14 mils.

Follow manufacturer's instructions for cleaning / maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

USER SAFETY RECOMMENDATIONS:
Users should: Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

ENVIRONMENTAL HAZARDS

Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

PESTICIDE STORAGE: Store product in original container only. Store in a cool, dry place.

PESTICIDE DISPOSAL: Waste resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

CONTAINER HANDLING:

Nonrefillable containers less than or equal to 5 gallons:

Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ 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. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Nonrefillable containers (specific container type):

Fiber drums with liner:

Nonrefillable container. Do not reuse or refill this container. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of liner in sanitary landfill or by incineration if allowed by State and local authorities. If burned, stay out of smoke. Empty and dispose of drum in same manner.

Sack tote:

Nonrefillable container. Do not reuse or refill this container. Completely empty container by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of in sanitary landfill or by incineration if allowed by State and local authorities. If burned, stay out of smoke.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Agricultural Use Requirements

Use this product only in accordance with its labeling and 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 4 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection

Standard and that involves contact with anything that has been treated, such as plants, soil or water, is: coveralls, shoes plus socks, and chemical resistant gloves. Category A (such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber), all \geq 14 mils.

PRODUCT INFORMATION

CRUSHER™ herbicide is a water soluble-dispersible granule containing 50.0% active ingredient by weight. CRUSHER herbicide is a selective herbicide for burndown and residual control of certain annual grass and broadleaf weeds when applied preplant or preemergence to field corn. It may also be applied 30 days or more preplant to cotton or soybeans and 45 days or more preplant to peanuts for winter vegetation management. Residual weed control is dependent on rainfall or sprinkler irrigation for herbicide activation. CRUSHER herbicide may be applied in tank mixtures with other herbicides labeled for use in the intended crop. However, in the case of tank mixes with other herbicides, the most restrictive label must be followed.

CRUSHER™ herbicide is absorbed through the roots and leaf tissue of plants, rapidly inhibiting the growth of susceptible weeds. Rainfall or sprinkler irrigation is needed to move CRUSHER herbicide into the soil. Susceptible weeds will generally not emerge from preemergence application. In some cases, susceptible weeds may germinate and emerge a few days after application, but growth then ceases and leaves become chlorotic three to five days after emergence. Death of leaf tissue and growing point will follow in some species, while others will remain green but stunted and noncompetitive.

The herbicidal action of CRUSHER herbicide may be less effective on weeds stressed from adverse environmental conditions (such as extreme temperatures or moisture), abnormal soil conditions, or cultural practices.

APPLICATION INFORMATION
Field Corn – Preplant-Preemergence

RATE

Apply 1.0-1.8 ounces CRUSHER herbicide per acre. Cheminova specifies a use rate of 1 ounce per acre for most applications.

Not all field corn varieties have been tested; nor does Cheminova have access to all seed company data. Consequently, Cheminova is not responsible for any crop injury arising from the use of CRUSHER herbicide on field corn. When tank mixing check the tank mix partner label for tolerances and instructions for use. In addition, consult any additional supplemental labeling information relative to potential corn hybrid sensitivity to CRUSHER herbicide.

TIMING TO CROP

CRUSHER herbicide may be applied preplant after fall harvest through early spring, up to planting, whenever the ground is not frozen, to control emerged weeds and to provide limited residual control of early-emerging spring weeds. Additionally, CRUSHER herbicide may be applied anytime after planting, but before corn emergence. Do not apply postemergence to corn. Apply at least 30 days prior to planting in the states of Florida east of US 231 and Georgia. Control of emerged weeds will require the addition of spray adjuvants as noted in this label.

SEQUENTIAL APPLICATION

CRUSHER herbicide may be used in a sequential herbicide program for corn. Apply CRUSHER herbicide for burndown and residual weed control, followed by a post, in-crop

application of SOLIDA® or HARASS® herbicides. Refer to the appropriate product label for use restrictions, application information, rotational crop guidelines, and cautionary statements prior to application.

ADDITIONAL CONTROL OF GRASSES AND BROADLEAVES

CRUSHER herbicide may be tank mixed with full or reduced rates of labeled preplant/preemergence grass and broadleaf herbicides to provide added residual activity or burndown activity on emerged weeds. Sequential applications of labeled postemergence herbicides may also be made following preplant applications of CRUSHER herbicide. Consult tank mix partner labeling for rate and soil-type restrictions.

COTTON/SOYBEANS – PREPLANT ONLY

RATE

Apply CRUSHER herbicide at 1.0 ounce per acre.

TIMING TO CROP

CRUSHER herbicide may be applied preplant after fall harvest through early spring 30 days or more prior to planting, whenever the ground is not frozen, to control emerged weeds and to provide limited residual control of early-emerging spring weeds.

BURNDOWN TANK MIXTURES

CRUSHER herbicide may be used as a preplant residual burndown treatment and may be tank mixed with other herbicides that are registered for preplant in cotton/soybean, including glyphosate, paraquat, glufosinate, 2,4-D LVE, and dicamba. Read and follow all instructions on this label and the labels of any tank mix partner before using in mixtures with CRUSHER herbicide. If the instructions on the tank mix partner label conflict with this CRUSHER herbicide label, do not use in a tank mixture with CRUSHER herbicide. Always follow directions of the most restrictive label.

SEQUENTIAL APPLICATION

CRUSHER herbicide may be used in a sequential herbicide program in soybeans. Apply CRUSHER for burndown control and residual weed control 30 days or more prior to planting, followed by an appropriate application of labeled postemergence herbicide products. Refer to the product labels for use restrictions, application information, rotational crop guidelines, and cautionary statements prior to application.

PEANUTS – PREPLANT ONLY

RATE

Apply CRUSHER herbicide at 1.0 ounces per acre.

TIMING TO CROP

CRUSHER herbicide may be applied preplant after fall harvest through early spring 45 days or more prior to planting peanuts whenever the ground is not frozen, to control emerged weeds and to provide limited residual control of early-emerging spring weeds.

ADDITIONAL CONTROL OF GRASSES AND BROADLEAVES

CRUSHER herbicide may be tank mixed with full or reduced rates of preplant herbicides registered for cotton and soybeans, such as EDITION® BROADSPEC.

SPRAY ADJUVANTS

For control of emerged weeds, application of CRUSHER herbicide must contain an appropriate adjuvant. If applied in tank mix combination with a glyphosate, such as GLYFOS® X-tra or glufosinate herbicide that contains a built-in adjuvant system, no additional surfactant needs to be added.

TANK MIX APPLICATIONS

For expanded weed control, CRUSHER herbicide may be tank mixed with full or reduced rates of other herbicides labeled for fall application, such as NUANCE® herbicide, simazine, or 2,4-D ester. Refer to the other product's label for rotational crop intervals and other directions for use. When tank mixing, the most restrictive label applies.

Petroleum Crop Oil Concentrate (COC) or Modified Seed Oil (MSO)

- Apply at 1% volume/volume (1 gal. per 100 gal. spray solution), or 2% under arid conditions.
- Oil adjuvants must contain at least 80% high quality, petroleum (mineral) or modified vegetable seed oil with at least 15% surfactant emulsifiers.

Nonionic Surfactant (NIS)

- Apply 0.125 to 0.25% v/v (1 qt per 100 gal spray solution) or 0.5% under arid conditions.
- Surfactant products must contain at least 60% nonionic surfactant with a hydrophilic/lipophilic balance (HLB) greater than 12.

Ammonium Nitrogen Fertilizer

- Use 2 qt./acre of a high-quality urea ammonium nitrate (UAN), such as 28%N or 32%N, or 2 lb./acre of a spray grade ammonium sulfate (AMS). Use 4 qt./acre UAN or 4 lb./acre AMS under arid conditions.
- Do not use liquid nitrogen fertilizer as the total carrier solution.

Special Adjuvant Types

- Combination adjuvant products may be used at doses that provide the required amount of NIS and ammonium nitrogen fertilizer. Consult product literature for use rates and restrictions.
- Do not use with spray additives that alter the pH of the spray solution below pH 5.0 or above pH 9.0 as rapid product degradation can occur. Spray solutions of pH 6.0-8.0 allow for optimum stability of CRUSHER herbicide.

WEEDS CONTROLLED – SUPPRESSED

CRUSHER herbicide may be tank mixed with glyphosate, paraquat, glufosinate, 2,4-D LVE, and dicamba herbicides for improved control of the below emerged weed species when applied preplant or preemergence. For application methods and other use specifications, use the most restrictive label directions for the intended combination

Alfalfa, volunteer
 Barley, volunteer
 Barnyardgrass
 Bluegrass, annual
 Canada thistle

Marestail, horseweed
 Millet, wild proso
 Morningglory, ivyleaf
 Mustard, birdsrape, black, wild
 Nightshade, hairy

Chamomile, false
 Chickweed, common
 Cocklebur
 Crabgrass
 Dandelion (6" diameter)
 Dock, curly
 Filaree, redstem
 Foxtail, bristly, giant, green
 and yellow
 Garlic, wild
 Henbit
 Johnsongrass, seedling
 Kochia
 Lambsquarters, common

Panicum, fall
 Pigweed, prostrate, redroot, smooth
 Quackgrass
 Ragweed, common
 Ryegrass, Italian†
 Sandbur, field, longspine
 Shepherd's purse
 Signalgrass, broadleaf
 Smartweed, Pennsylvania
 Stinkgrass
 Velvetleaf
 Wheat, volunteer
 Wild buckwheat
 Wild oat
 Wild radish
 Yellow nutsedge

BURNDOWN CONTROL – CRUSHER herbicide Alone

Grasses (1-2")

Barley, volunteer
 Barnyardgrass
 Bluegrass, annual
 Crabgrass, large (1/2")
 Cupgrass, woolly (1")
 Foxtail, bristly, giant, green
 and yellow
 Johnsongrass, seedling*
 Millet, wild proso*

Panicum, fall
 Quackgrass*
 Ragweed, common
 Ryegrass, Italian*†
 Shattercane (4")
 Signalgrass, broadleaf*
 Stinkgrass*
 Wheat, volunteer
 Wild oat*
 Yellow nutsedge*

Broadleaves (1-3")

Alfalfa, volunteer
 Buckwheat, common
 Buttercup, small flower
 Canada thistle*
 Chickweed, common, mouseear
 Cocklebur*
 Dandelion (6" diameter)
 Dock, curly
 Eveningprimrose, cutleaf**
 Field pennycress
 Geranium, Carolina
 Groundsel, common
 Henbit
 Knotweed, prostrate
 Kochia
 Lambsquarters, common

Morningglory, ivyleaf*
 Mustard, birdsrape, black, wild
 Nightshade, hairy*
 Pigweed, prostrate, redroot, smooth†
 Purslane, common*
 Ragweed, common*
 Shepherd's purse
 Signalgrass, broadleaf
 Smartweed, Pennsylvania, Ladysthumb
 Sowthistle
 Velvetleaf
 Wallflower, bushy
 Wild garlic
 Wild radish

*Partial control/suppression

**Must add 2,4-D LVE (4 lbs formulation) or dicamba for control

BURNDOWN CONTROL – CRUSHER™ herbicide Alone

Grasses

- Barnyardgrass
- Bluegrass, annual*
- Crabgrass, large*
- Foxtail, bristly, giant, green
and yellow
- Panicum, fall*
- Ryegrass, Italian*†
- Signalgrass, broadleaf
- Wheat, volunteer
- Wild oat*

*Partial control/suppression

Broadleaves

- Carpetweed*
- Chamomile, false
- Cocklebur*
- Filaree, redstem
- Henbit
- Jimsonweed*
- Kochia (ALS-sensitive)
- Lambsquarters, common
- Morningglory, ivyleaf*
- Mustard, birdsrape, black, wild
- Nightshade*, hairy, black
- Palmer amarantha*
- Pigweed, prostrate, redroot, smooth†
- Purslane, common*
- Ragweed, common*

- Russian thistle, seedling*
- Smartweed, Pennsylvania*
- Velvetleaf*

*Partial control/suppression
†resistant biotypes are known to occur

MIXING INSTRUCTIONS

Fertilizer Carrier Instructions

CRUSHER™ herbicide may be mixed with water or pre-slurried in water and added to liquid fertilizer for application. When using liquid fertilizer as the carrier, always pre-slurry CRUSHER herbicide in water before adding fertilizer solutions. Add the CRUSHER herbicide slurry to the final complete liquid fertilizer mixture. Do not add CRUSHER herbicide during the fertilizer mixing process. Always use good agitation while adding the CRUSHER herbicide slurry to liquid fertilizers and maintain good agitation until sprayed.

When using liquid fertilizer as the carrier, conduct a compatibility test with all components prior to mixing.

Do not use with spray additives or liquid fertilizer carriers that alter the pH of the spray solution below pH 5.0 or above pH 9.0 as rapid product degradation can occur. Spray solutions of pH 6.0 – 8.0 allow for optimum stability of CRUSHER herbicide.

Do not use with spray additives that alter the pH of the spray solution below pH 5.0 or above pH 9.0 as rapid product degradation can occur. Spray solutions of pH 6.0-8.0 allow for optimum

stability of CRUSHER herbicide.

Water Carrier Instructions

1. Fill the tank 1/4 to 1/3 full of water.
2. While agitating, add the required amount of CRUSHER herbicide.
3. Continue agitation until the CRUSHER herbicide is fully dissolved, at least 5 minutes.
4. Once the CRUSHER herbicide is fully dissolved, maintain agitation and continue filling tank with water.
5. As the tank is filling, add tank mix partners and then add the required volume of spray adjuvant. Always add spray adjuvant last. Antifoaming agents may be used. Do not use with spray additives that alter the pH of the spray solution below pH 6.0 as rapid product degradation can occur. Spray solutions of pH 7.0 and higher allow for optimum stability of CRUSHER herbicide.
6. Dispersed tank mix partners can settle if the tank mixture is not continually agitated. If settling occurs, thoroughly re-agitate before using.
7. Apply CRUSHER herbicide spray mixture within 24 hours of mixing to avoid product degradation.
8. If CRUSHER herbicide and a tank mix partner are to be applied in multiple loads, fully dissolve the CRUSHER herbicide in clean water prior to adding to the tank.

TANK MIX COMPATIBILITY TESTING

Perform a jar test prior to tank mixing to ensure compatibility with CRUSHER herbicide and other pesticides. Use a clear quart jar with lid and mix the tank mix ingredients in their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately ½ hour. If the mixture balls-up, forms flakes, sludge, gel, oily film or layers, or other precipitates, it is not compatible and the tank mix combination should not be used.

GROUND APPLICATION

- Use a minimum of 15 gallons of water per acre (GPA) to ensure thorough coverage of the weeds and the best performance.
- Use a minimum of 10 GPA for light, scattered stands of weeds.
- For best performance, select nozzles and pressure that deliver MEDIUM spray droplets, as indicated, for example, by ASABE Standard S572.1.
- Nozzles that deliver COARSE spray droplets may be used to reduce drift, provided spray volume is increased to maintain coverage on small weeds.
- For optimal product performance and minimal spray drift, adjust the spray boom to the lowest possible spray height recommended in the manufacturer's specifications.

AERIAL APPLICATION

- Use nozzle types and arrangements that provide optimum spray distribution and maximum coverage at a minimum of 5 GPA.
- Do not apply during a temperature inversion, when winds are gusty, or when conditions favor poor coverage and/or off-target spray movement.

RESTRICTIONS

- Do not plant cotton or soybeans fewer than 30 days following an application of CRUSHER™ herbicide.
- Do not plant field corn less than 30 days following an application of CRUSHER in the states of Florida east of US 231 and Georgia.

- Do not plant peanuts less than 45 days following and application of CRUSHER.
- Do not apply the organophosphate insecticide "Counter" within 60 days of a preplant or preemergence application of CRUSHER since crop injury may result
- Do not apply more than a total of 1.0 ounce active ingredient rimsulfuron per acre per crop year to field corn from all sources. This includes combinations of preplant and preemergence applications of CRUSHER herbicide and "PREQUEL," as well as, rimsulfuron from postemergence applications) of products such as SOLIDA, "REALM Q," "STEADFAST Q," or "RESOLVE Q."
- Do not apply more than a total of 0.5 ounce active ingredient rimsulfuron per acre per crop year to cotton or peanuts from all sources. This includes the preplant application of CRUSHER.
- Do not apply preemergence on corn when planted to coarse textured soils (sand, loamy sand or sandy loam) with less than 1% organic matter.
- Do not apply postemergence to any crop
- Do not graze, feed forage, grain or fodder (stover) from treated areas to livestock within 30 days of CRUSHER herbicide application.

Injury or loss of desirable trees or vegetation may result from failure to observe the following:

- Do not apply, drain or flush equipment on or near desirable trees or other plants or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots.
- Do not use on lawns, walks, driveways, tennis courts, or similar areas. Prevent drift of spray to desirable plants.
- Prevent drift of spray onto desirable plants.
- Do not contaminate any body of water with CRUSHER herbicide.

PRECAUTIONS

- Allow at least 3 weeks between preemergence applications of CRUSHER herbicide and postemergence applications of rimsulfuron containing products, such as SOLIDA, "REALM Q," "STEADFAST Q," or "RESOLVE Q."
- CRUSHER herbicide may interact with certain insecticides applied to soybean, cotton, peanuts or corn. Crop response varies with field crop, insecticide used, insecticide application method, and soil type.
- CRUSHER herbicide may be applied to crops previously treated with "Fortress," "Aztec," "or "Force" insecticides or other nonorganophosphate (OP) soil insecticides regardless of soil type.
- Preplant/Preemergence applications of CRUSHER™ herbicides to corn where an application of NUFOS®, or "Thimet" is planned may cause unacceptable crop injury, especially on soils of less than 4% organic matter.
- Crop injury may occur following an application of CRUSHER herbicide if there is a prolonged period of cold weather and/or in conjunction with wet soils.
- Prevent drift or spray to desirable plants.
- Thoroughly clean application equipment immediately after use. (See Sprayer Cleanup section of this label for instructions).

ROTATIONAL CROP GUIDELINES

The following rotational intervals must be observed:

1.0 ounce/A Maximum Use Rate:

Crop	Interval (months)
Corn, field	Anytime
Potatoes	1
Soybeans*	1
Cotton*	1
Tomato	1
Cereals, Winter	3
Cereals, Spring	9
Alfalfa	10
Canola	10
Cucumber	10
Flax	10
Peanuts	1.5
Peas	10
Rice	10
Red Clover	10
Sorghum	10
Corn, pop, seed or sweet	10
Snap beans, dry beans	10
Sunflower	10
Sugarbeets	10
Sweet Potatoes/Yams**	10
Tobacco	10
Crops Not Listed	18
<p>*In the states of Oklahoma and Texas west of I-35 (not including the counties containing I-35) the rotational interval to cotton and soybeans is 10 months. In the state of Virginia the soybean rotational interval is 2 months. In the state of Missouri, excluding the bootheel, the soybean rotational interval south of I-70 is 2 months and north of I-70 is 10 months. STS soybean rotational interval is 1 month.</p> <p>**On soils with pH 6.5 or less</p>	

GREATER THAN 1.0 Ounce/A UP TO 1.8 Ounce/A Maximum Use Rate:

Crop	Interval (months)
Cereals, Spring	9
Cereals, Winter	4
Corn (field)	Anytime
Corn (pop, seed or sweet)	10
Cotton†*	10
Cucumber	10
Flax	10
Potatoes	1
Snap beans, dry beans	10
Soybeans*	10
STS Soybeans	2
Sunflowers	10
Tomatoes	1
Crops not listed	18
<p>†The rotation interval must be extended to 18 months if drought conditions prevail after</p>	

application and before the rotational crop is planted, unless sprinkler irrigation has been applied and totals greater than 15" during the growing season

*If a maximum use rate of 1.33 oz/A is used the rotational interval is 2 months except in the states of Missouri excluding the bootheel, Oklahoma, Texas, or Virginia.

SPRAYER PREPARATION/CLEANUP

It is important that spray equipment is clean and free of previous pesticide deposits before using CRUSHER herbicide. Follow the cleanup procedures specified on the label of the product previously sprayed including directions for rinsate disposal. If no cleanup procedure is provided, use the procedure that follows. Immediately following applications of CRUSHER herbicide, thoroughly clean all mixing and spray equipment to avoid subsequent crop injury.

Note: When applying multiple loads of CRUSHER herbicide, do not allow empty sprayer or mixing equipment to stand overnight. Partially fill the empty equipment with fresh water at the end of each day of spraying, flush the boom, hoses and other equipment, and allow to sit overnight.

Cleanup Procedure

1. Empty the tank and drain the sump completely. Remove any contamination on the outside of the spraying equipment by washing with clean water.
2. Spray the tank walls (including the lid) with clean water using a minimum volume of 10% of the tank volume. Add household ammonia at a solution rate of 1 gal/100 gal water or other similarly approved cleaner to the tank. Circulate the water through the lines, including all by-pass lines, for at least two minutes. Flush the boom well and empty the sprayer. Completely drain the sump.
3. Repeat step 2. For this rinse, the addition of household ammonia or other cleaner is not required.
4. Remove the strainers, nozzles, tips and screens and clean separately in a bucket containing water and ammonia solution.

If only ammonia is used as a cleaner, the rinsate solution may be applied to the crop(s) listed on this label. Do not exceed the maximum-labeled use rate. If other cleaners are used, consult the cleaner label for rinsate disposal instructions. If no instructions are given, dispose of the rinsate on site or at an approved waste disposal facility.

Notes:

1. Always start with a clean spray tank.
2. Steam-cleaning aerial spray tanks is recommended to facilitate the removal of any caked deposits.
3. When CRUSHER herbicide is tank mixed with other pesticides, all cleanout procedures for each product should be examined and the most rigorous procedure should be followed.
4. In addition to this cleanout procedure, all pre-cleanout guidelines on subsequently applied products should be followed as per the individual labels.

SPRAY DRIFT MANAGEMENT

The interaction of many equipment and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making application decisions.

IMPORTANCE OF DROPLET SIZE

AVOIDING SPRAY DRIFT IS THE RESPONSIBILITY OF THE APPLICATOR.

The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. **APPLYING LARGER DROPLETS REDUCES DRIFT POTENTIAL, BUT WILL NOT PREVENT DRIFT IF APPLICATIONS ARE MADE IMPROPERLY OR UNDER UNFAVORABLE ENVIRONMENTAL CONDITIONS!** See **Wind, Temperature and Humidity** and **Temperature Inversions** sections of this label.

Controlling Droplet Size – General Techniques

- **Volume** – Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** – Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. **WHEN HIGHER FLOW RATES ARE NEEDED, USE A HIGHER-CAPACITY NOZZLE INSTEAD OF INCREASING PRESSURE.**
- **Nozzle Type** – use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Considering using low-drift nozzles.

Controlling Droplet Size – Aircraft

- **Number of Nozzles** – Use the minimum number of nozzles with the highest flow rate that provide uniform coverage.
- **Nozzle Orientation** – Orienting nozzles so that the spray is emitted backwards, parallel to the airstream will produce larger droplets than other orientations.
- **Nozzle Type** – Solid stream nozzles (such as disc and core with swirl plate removed) oriented straight back produce larger droplets than other nozzle types.
- **Boom Length** – The boom length must not exceed $\frac{3}{4}$ of the wing or rotor length – longer booms increase drift potential.
- **Application Height** – Application more than 10 ft above the canopy increases the potential for spray drift.

BOOM HEIGHT

Setting the boom at the lowest referenced height (if specified) which provides uniform coverage reduces the exposure of droplets to evaporation and wind. For ground equipment, the boom should remain level with the crop and have minimal bounce.

WIND

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given wind speed. **AVOID GUSTY AND WINDLESS CONDITIONS.**

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

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, set up equipment to product larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog. However, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are preventing drift and not interfering with uniform deposition of the product.

**AIR ASSISTED (AIR BLAST)
FIELD CROP SPRAYERS**

Air assisted field crop sprayers carry droplets to the target area via a downward directed air stream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, is configured properly, and that drift is not occurring.

Note: Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Consult the spray equipment section of this label to determine if use of an air assist sprayer is recommended.

RESISTANCE

When herbicides that affect the same biological site of action are used repeatedly over several years to control the same weed species in the same field, naturally-occurring resistant biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that field. Adequate control of these resistant weed biotypes cannot be expected. If weed control is unsatisfactory, it may be necessary to retreat the problem area using a product affecting a different site of action.

To better manage herbicide resistance through delaying the proliferation and possible dominance of herbicide resistant weed biotypes, it may be necessary to change cultural practices within and between crop seasons such as using a combination of tillage, retreatment, tank-mix partners and/or sequential herbicide applications that have a different site of action. Weed escapes that are allowed to go to seed will promote the spread of resistant biotypes.

It is advisable to keep accurate records of pesticides applied to individual fields to help obtain information on the spread and dispersal of resistant biotypes. Consult your agricultural dealer, consultant, applicator, and/or appropriate state agricultural extension representative for specific alternative cultural practices or herbicide instructions available in your area.

INTEGRATED PEST MANAGEMENT

Cheminova recommends the use of Integrated Pest Management (IPM) programs to control pests. This product may be used as part of an Integrated Pest Management (IPM) program that can include biological, cultural, and genetic practices aimed at preventing economic pest damage. Application of this product should be based on IPM principles and practices including field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your local state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop systems in your area.

WARRANTY DISCLAIMER

Cheminova warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, CHEMINOVA MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

INHERENT RISKS OF USE

It is impossible to eliminate all risks associated with use of this product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Cheminova or the seller. All such risks shall be assumed by Buyer.

LIMITATION OF REMEDIES

To the extent consistent with applicable law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Cheminova's election, one of the following:

- (1) Refund of purchase price paid by buyer or user for product bought, or
- (2) Replacement of amount of product used.

To the extent consistent with applicable law, Cheminova shall not be liable for losses or damages resulting from handling or use of this product unless Cheminova is promptly notified of such loss or damage in writing. To the extent consistent with applicable law, in no case shall Cheminova be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer above and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Cheminova or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

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