

5905-568

01-13-2011

1/15



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

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

Helena Chemical Company
c/o Cheryl Wagner
Wagner Regulatory Associates, Inc.
P.O. Box 640
Hockessin, DE 19707

JAN 13 2011

Subject: Label Amendment in Response to EPA Letter, Dated October 4, 2010
Brush Rhap
EPA Reg. No. 5905-568
Your Submission Dated October 14, 2010

Dear Ms. Wagner:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable, provided you make the following changes:

1. Add "Sorghum" to the list of use sites under the product name on page 1.
2. On page 4, delete the second occurrence of the "Container Disposal" heading (it appears twice).
3. On page 5, move the statement "Do not apply in greenhouses" to a position below the chemigation prohibition so that it's clearly distinguished from it.
4. On page 10, in the formulas for calculating banding rate and volume, clarify that the bandwidth in inches should be divided by the row width in inches by placing a line between these variables or inserting a division symbol (\div).
5. On page 13, insert the word "allowable" into the last sentence of the 4th bulleted statement under "V. Restrictions and Limitations" ("Arid (dry) conditions") so that it reads "The maximum allowable application rate of BRUSH-Rhap may be needed to control susceptible weeds in this environment."

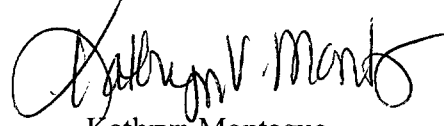
6. On page 13, in the first paragraph under "VI. Food/Feed Crop Specific Information," change "4 pints" to "4 3/4" pints" to agree with the directions for use on pastures, hay, and silage.
7. Move the 3 paragraphs at the bottom of page 13 under "VI. Food/Feed Crop Specific Information" (beginning with the paragraph discussed in item 6, above) to the directions for use on "Pastures, Rangeland and Grass (Hay, Silage)" on page 14, since these paragraphs are not relevant to all food/feed crops.
8. Move the "Crop Rotational Restrictions" on page 14 to section "V. Restrictions and Limitations." The directions for use on several crops refer users to section V for rotational crop information, and this information was located in section V on previously accepted labels.
9. In Table 5 on page 14, correct the maximum rate per acre per season for pasture, hay, and silage to read "4 3/4 pints."
10. On page 14, revise the footnote to Table 5 to read "Refer to specific crop sections for grazing and feeding restrictions."
11. Make sure the words that run off the right side of the page in the three paragraphs at the bottom of page 14 ("hay or" in the first paragraph; "mixes" in the second paragraph; and "during" in the third paragraph) appear on the final printed labeling, and correct this formatting error in future submissions.
12. On page 16, insert the word "for" in the statement above "Sorghum Tank Mixes" so that it reads "Do not harvest for grain or fodder within 30 days of application."
13. Revise the beginning of the second sentence at the top of page 19 under "Rates and Timings" to read "Refer to Tables 1 and 2 to determine ..."
14. In the third sentence at the top of page 19 under "Rates and Timings," change "4 pints" to "4 3/4 pints" to agree with Table 5.
15. On page 21, in the rate restriction statement above "NonCrop Area Restrictions," revise the acid equivalency statement to read "Equivalent to 1.4 lbs. 2,4-D acid and 1.1 lbs. dicamba acid per acre" as in the second paragraph on page 22.

A stamped copy of your label is enclosed for your records. This label supersedes all previously accepted labels for the subject product. You must submit one (1) copy of the final printed label before you release the product for shipment. Products shipped after eighteen (18) months from the date of this letter or the next printing of the label, whichever occurs first, must bear the new, revised label. If these conditions are not complied with, the registration will be

Page 3 of 3
EPA Reg. No. 5905-568

subject to cancellation in accordance with FIFRA §6(e). Your release for shipment of the product constitutes acceptance of these conditions.

Sincerely,



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

Enclosure



**ACCEPTED
with COMMENTS**

**In EPA Letter Dated:
JAN 3 2011**

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

5905-568

For control of a wide-spectrum of annual, biennial, and perennial broadleaf weeds and brush in Conservation Reserve Program land; Certain Non-Crop Areas, Set Aside Acres, and for Forest Management, PASTURES, RANGELAND AND GRASS (Hay, Silage), SUGARCANE, AND WHEAT

ACTIVE INGREDIENT(S):

3,6-dichloromethoxybenzoic acid.....	18.28%
2,4-Dichlorophenoxyacetic acid.....	24.62%
INERT INGREDIENTS:	<u>57.10%</u>
TOTAL	100.00%

Equivalent to: Dicamba Acid, 1.8 lbs./gal., 2,4-D Acid, 2.4 lbs./gal.
Isomer specific by AOAC Method 6.D01-5 (12th Ed.)

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

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

FIRST AID	
IF IN EYES:	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice
IF SWALLOWED:	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have a person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious or convulsing person.
IF ON SKIN OR CLOTHING:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for further treatment advice.
HOT LINE NUMBER - Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.	
NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.	

EPA REG. NO. 5905-568
EPA EST. NO. 42750-MO-001

NET CONTENTS:
SN 052809

Manufactured For:
Helena Chemical Company
225 Schilling Blvd., Suite 300
Collierville, TN 38017

PRECAUTIONARY STATEMENTS

5
15

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER

Corrosive. Causes irreversible eye damage. Harmful if swallowed. Harmful if absorbed through skin. Do not get in eyes or on clothing. Avoid contact with skin, eyes or clothing.

PERSONAL PROTECTIVE EQUIPMENT

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

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

- Long-sleeved shirt and long pants
- Shoes plus socks
- Goggles or face shield
- Chemical resistant gloves

Chemical-resistant apron when mixing, loading, cleaning up spills or equipment, or otherwise exposed to the concentrate.

See engineering controls for additional requirements

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry. After each day of use, clothing or PPE must not be re-used until it has been cleared.

ENGINEERING CONTROL STATEMENTS

When handlers use 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.

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

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

This pesticide is toxic to fish and aquatic invertebrates. Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Drift and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Application around a cistern or well may result in contamination of drinking water or groundwater.

Endangered Species Concerns:

6
15

The use of any pesticide in a manner that may kill or otherwise harm and endangered species or adversely modify their habitat is a violation of federal law.

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.

Unless otherwise directed in supplemented labeling, all applicable directions, restrictions, precautions and **Conditions of Sale and Warranty** are to be followed. This labeling must be in the user's possession during application.

Use of this product in certain portions of California, Oregon, and Washington is subject to the January 22, 2004 Order for injunctive relief in Washington Toxics Coalition, et. al. v. EP, C01-0132C (W.D. WA). For further information, please refer to <http://www.epa.gov/espp/litstatus/wtc>.

AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours.

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

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

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

USE REQUIREMENTS FOR PASTURES, PERENNIAL GRASSLANDS, RANGELAND, FALLOW LAND AND NONCROP AREAS: Do not enter or allow others to enter treated areas until sprays have dried.

STORAGE AND DISPOSAL

PROHIBITIONS: Do not contaminate water, food, or feed by storage or disposal. Do not store under conditions that might adversely affect the container or its ability to function properly.

PESTICIDE STORAGE: Do not store below temperature of 32°F or above 100°F. Store in original container in a well-ventilated area separately from fertilizer, feed, and foodstuffs. Keep container tightly closed when not in use. Reduce stacking height where local conditions can affect package strength.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. Wastes resulting from this product may be disposed of on site or at an approved waste disposal facility. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal law and may contaminate groundwater. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL:

CONTAINER DISPOSAL:

NONREFILLABLE CONTAINER (EQUAL TO OR LESS THAN 5 GALLONS): Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 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 or reconditioning, 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 CONTAINER (GREATER THAN 5 GALLONS): Do not reuse or refill this container. Offer for recycling, if available. 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. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling or reconditioning, 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.

REFILLABLE CONTAINER: Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

When this container is empty, replace the cap and seal all openings that have been opened during use; and return the container to the point of purchase or to a designated location named at the time of purchase of this product in a bulk container. This container may only be refilled with this herbicide. **DO NOT REUSE THE CONTAINER FOR ANY OTHER PURPOSE.** Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn-out threads and closure devices. Check for leaks after refilling and before transporting. Do not transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, contact ChemTrec at 1-800-424-9300 or Helena Chemical Company at 901-761-0050. If not returned to the point of purchase or to the designated location, triple rinse emptied container and offer for recycling. Disposal of this container must be in compliance with state and local regulations.

In Case of Spill: In case of large-scale spillage regarding this product, call ChemTrec 800-424-9300.

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 re-use. Keep the spill out of all sewers and open bodies of water.

I. PRODUCT INFORMATION

BRUSH-RHAP® is a postemergence herbicide for controlling a wide spectrum of annual, biennial, and perennial broadleaf weeds and brush in pastures, rangeland, and grass (hay, silage), sorghum, sugarcane, wheat, conservation reserve program land, postharvest, fallow, crop stubble, set-aside acres, general farmstead areas, certain noncrop areas, and for forest management.

Use of this product in certain portions of California, Oregon, and Washington is subject to the January 22, 2004 Order of Injunctive Relief in Washington Toxics Coalition et al vs. EPA CO1-132C (W.D.WA.). For information, please refer to www.epa.gov/espp/litstatus/wtc.

Mode of Action

BRUSH-RHAP® contains two active ingredients uniquely formulated to be used alone or tank mixed with other listed products as well as liquid fertilizer solutions. **BRUSH-RHAP®** is readily absorbed by plants through shoot and root uptake, translocates throughout the plant's system, and accumulates in areas of active growth. **BRUSH-RHAP®** interferes with the plant's growth hormones (auxins) resulting in death of many broadleaf weeds.

For best results, thoroughly clean sprayer equipment (tank, lines and nozzles) immediately after use by flushing system with water and heavy duty detergent or other suitable tank cleaner.

II. APPLICATION INSTRUCTIONS

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. Apply **BRUSH-RHAP®** at the rates and growth stages listed in **Tables 1 and 2** as follows unless instructed differently by section on **Food/Feed Crop Specific Information** or **Non-Food/Feed Use (Land not Harvested, Grazed or Foraged) - Specific Information**. **BRUSH-RHAP®** may be applied using water or sprayable fluid fertilizer as a carrier. The most effective application rate and timing varies based on the target weed species (refer to **Tables 1 and 2**). In mixed populations of weeds the correct rate is determined by the weed species requiring the highest rate. Delaying application permits weeds to exceed the maximum size and will prevent adequate control. For certain specified applications liquid fertilizer or oil may replace part or all of the water as diluent. If dry flowable (DF), wettable powder (WP) or flowable (F) tank mix products are to be used, these should generally be added to the spray tank first. Refer to the mixing directions on the labels of the tank mix products.

Irrigation:

In irrigated areas, it may be necessary to irrigate before treatment to ensure active weed growth.

CHEMIGATION PROHIBITION

Do not apply this product through any type of irrigation system. Do not apply in greenhouses.

Spray Coverage:

Weeds must be thoroughly covered with spray. Dense leaf canopies shelter smaller weeds and prevent adequate spray coverage.

Sensitive Crop Precautions:

BRUSH-RHAP® may cause injury to desirable trees and plants, particularly beans, cotton, flowers, fruit trees, grapes, ornamentals, peas, potatoes, soybeans, sunflowers, tobacco, tomatoes and other broadleaf plants when contacting their roots, stems or foliage. At high temperatures (about 85 degrees or higher), vapors from this product may cause injury to the aforementioned susceptible crops. These plants are most sensitive to **BRUSH-RHAP®** during their development or growing stage. Do not treat areas where either possible downward movement into the soil or surface washing may cause contact of **BRUSH-RHAP®** with the roots of desirable trees and shrubs.

AERIAL APPLICATION METHODS AND EQUIPMENT

Water Volume: Use 3-10 gallons of water per acre. Use the higher spray volume when treating dense or tall vegetation.

Application Equipment: Select nozzles designed to produce minimal amounts of fine spray particles. Make applications at the lowest stage height to reduce the exposure of spray droplets to evaporation and wind. The applicator must follow the most restrictive use cautions to avoid drift hazards, including those found in this labeling as well as applicable state and local regulations and ordinances.

SPRAY DRIFT MANAGEMENT

A variety of factors including weather conditions (e.g., wind directions, wind speed, temperature, relative humidity) and method of application (e.g., ground, aerial, airblast) can influence pesticide drift. The applicator must evaluate all factors and make appropriate adjustments when applying this product.

Droplet Size

When applying sprays that contain 2,4-D as the sole active ingredient, or when applying sprays that contain 2,4-D mixed with active ingredients that require a coarse or coarser spray, apply only as a coarse or coarser spray (ASAE standard 572) or a volume mean diameter of 385 microns or greater for spinning atomizer nozzles.

When applying sprays that contain 2,4-D mixed with other active ingredients that require a medium or more fine spray, apply only as a medium or coarser spray (ASAE standard 572) or a volume mean diameter of 300 microns or greater for spinning atomizer nozzles.

Wind Speed

Do not apply at wind speeds greater than 15 mph. Only apply this product if the wind direction favors on-target deposition and there are not sensitive areas (including, but not limited to, residential areas, bodies of water, known habitat for nontarget species, nontarget crops) within 250 feet downward. If applying a medium spray, leave one swath unsprayed at the downwind edge of the treated field.

Temperature Inversions

If applying at wind speeds less than 3 mph, the applicator must determine if: a) conditions of temperature inversion exist, or b) stable atmospheric conditions exist at or below nozzle height. Do not make applications into areas of temperature inversions or stable atmospheric conditions.

Susceptible Plants

Do not apply under circumstances where spray drift may occur to food, forage, or other plantings that might be damaged or crops thereof rendered unfit for sale, use or consumption. Susceptible crops include, but are not limited

to, cotton, okra, flowers, grapes (in growing stage), fruit trees (foliage), soybeans (vegetative stage), ornamentals, sunflowers, tomatoes, beans, and other vegetables, or tobacco. Small amounts of spray drift that might not be visible may injure susceptible broadleaf plants.

Other State and Local Requirements

Applicators must follow all state and local pesticide drift requirements regarding application of 2,4-D herbicides. Where states have more stringent regulations, they must be observed.

Equipment

All aerial and ground application equipment must be properly maintained and calibrated using appropriate carriers or surrogates.

For aerial application:

The boom length must not exceed 75% of the wingspan or 90% of the rotor blade diameter.

Release spray at the lowest height consistent with efficacy and flight safety. Do not release spray at a height greater than 10 feet above the crop canopy unless a greater height is required for aircraft safety. This requirement does not apply to forestry or rights-of-way applications.

When applications are made with a crosswind, the swath will be displaced downwind. The applicator must compensate for this by adjusting the path of the aircraft upwind.

For ground boom application:

Do not apply with a nozzle height greater than 4 feet above the crop canopy.

Table 1. Application Rate and Timing – Annual Weeds

(For use in non-food/feed crops only: the addition of liquid fertilizer (28-0-0,32-0-0) solutions at ½ the GPA spray solution has shown to give increased efficacy.)

Weeds Controlled (including ALS – and triazine-resistant)	Rate Per Acre (according to weed growth stage)					
	1/3 pints	2/3 pints	1 pints	1 1/8 pints	1 2/3 pints	2 pints
Beebalm, Spotted	-	-	-	pre-bloom	post-bloom	-
Broomweed	1-3"	3" branching	-	branching	-	after branching
Buckwheat, Wild	-	1-6"	-	-	-	-
Buffalobur	-	-	-	1-6"	-	flowering
Burdock	-	pre-flower	-	-	-	-
Buttercup	-	pre-flower	-	early bloom	late bloom	-
Chickweed, Common	-	seedling	1-3"	-	-	-
Cockle, Cow	-	< 3"	-	-	-	-
Cocklebur, Common	-	1-6"	6-12"	12-18"	-	-
Coreopsis, Plains	1-4"	1-6"	-	-	-	-
Croton, Woolly	-	4-12"	12-30"	-	-	-
Dogfennel	-	-	-	10-15"	-	-
Evening Primrose	-	< 2"	-	2-6"	-	-
Flax	-	< 2"	-	-	-	-
Fleabane, Annual	-	1-4"	4-8"	8"	-	-
Fixweed	-	< 3"	-	-	-	-
Henbit	-	-	preflower	-	flower	-
Knotweed Spp.	-	< 3" runners	-	> 3" runners	-	actively growing

Weeds Controlled (including ALS – and triazine-resistant)	Rate Per Acre (according to weed growth stage)					
	1/3 pints	2/3 pints	1 pints	1 1/8 pints	1 2/3 pints	2 pints
Kochia	-	1-6"	6-10"	10-20"	-	actively growing
Lambsquarters, Common	-	1-6"	6-10"	10-20"	-	actively growing
Mallow, Common	-	< 3"	-	-	-	-
Morningglory, Ivyleaf	-	pre-flower	-	-	-	-
Morningglory, Tall	-	pre-flower	-	post-flower	-	-
Mustards, Annual	-	rosette	-	early bolt	-	-
Mustards, Tansy	-	< 3"	-	-	-	-
Pennycress, Field	-	-	-	rosette	-	-
Pepperweed, Virginia	-	-	1-3"	3-6"	after branching	-
Pigweed, Prostrate	-	< 3"	-	-	-	-
Pigweed, Redroot	-	< 3"	3-10"	-	-	-
Pigweed, Smooth	-	< 3"	-	-	-	-
Pigweed, Tumble	-	< 3"	-	mature	-	-
Poorjoe	-	prior to flower	-	-	-	actively growing
Purslane, Common	-	< 3"	3-8"	-	-	-
Ragweed, Common	-	-	-	>10"	-	-
Ragweed, Western Ragweed, Lanceleaf	1-3"	3-6"	6-10"	actively growing	-	-
Sedge ¹	-	-	-	-	-	-
Shepherdspurse	-	rosette	-	-	-	-
Smartweed, Pennsylvania	-	< 4"	-	-	4-12"	-
Sneezeweed, Bitter	-	1-4"	prior to flower	flower	-	-
Sowthistle	-	rosette	-	bolting	-	-
Sunflower	-	1-3"	3-6"	6-24"	-	-
Thistle, Russian	-	-	-	rosette	-	-
Velvetleaf	-	< 6"	6-20"	> 20"	-	-

¹ For use in non-food/feed crop only. Adding crop oil concentrate has shown to improve performance on actively growing annual sedge.

Table 2. Application Rate and Timing – Biennial and Perennial Weeds

(The addition of liquid fertilizer (28-0-0,32-0-0) at ½ the GPA of the spray solution has proven to give increase suppression or control on certain species of weeds.)

Weeds Controlled	Rate Per Acre (according to weed growth stage)					
	1/3 pints	2/3 pints	1 pints	1 1/8 pints	1 2/3 pints	2 – 3 1/4 pints
Bindweed, Field	-	-	-	-	-	actively growing
Bittercress	-	2-3"	-	-	-	-
Buckeye species ¹	-	-	-	-	full leaf	-
Bullnettle ²	-	-	-	flower	-	-
Chircory	-	-	-	-	early bolting	-
Clove, Bur	-	-	pre-flower	-	-	-
Dandelion, Common	-	rosette	-	bolting	-	-

Weeds Controlled	Rate Per Acre (according to weed growth stage)					
	1/3 pints	2/3 pints	1 pints	1 1/8 pints	1 2/3 pints	2 - 3 1/4 pints
Dewberry, Southern ¹	-	-	-	-	-	spring or fall
Dock, Curly	-	-	prior to bolting	-	after bolting	-
Elderberry ²	-	-	-	-	-	actively growing
Goldenrod, Missouri	-	-	-	3-15"	flower	-
Groundsel, Texas	-	rosette	post-bolting	-	-	-
Honeysuckle, Hairy	-	-	-	-	spring or fall	-
Horsenettle, Carolina ¹	-	-	-	-	-	flower or berry
Ivy, Poison	-	-	-	after bloom	-	-
Knapweed, Black ²	-	-	-	-	-	actively growing
Knapweed, Russian ²	-	-	-	-	-	actively growing
Knapweed, Spotted	-	-	-	-	-	actively growing
Marshelder	-	-	-	<12"	12"/prebloom	
Mesquite ³	-	-	-	-	-	45-90 days after budbreak
Milkweed, Antelopehorn ²	-	-	-	pre-flower	-	Flower
Nightshade, Silverleaf ¹	-	-	-	full flower	-	-
Nightshade, Black ¹	-	-	-	full flower	-	actively growing
Persimmon, Eastern ³	-	-	-	-	-	actively growing
Prickly, Lettuce	-	-	-	rosette	-	actively growing
Rabbitbrush ²	-	-	-	-	-	-
Ragwort, Tansy	-	-	-	rosette	-	actively growing
Redvine ²	-	-	-	-	-	actively growing
Sagebrush, Fringed ²	-	-	-	-	-	actively growing
Smartweed	-	-	-	-	-	-
Sorrel, Red	-	-	rosette	bolting	flower	actively growing
Sowthistle ²	-	-	-	-	-	actively growing
Spurge, Leafy ²	-	-	-	-	-	full leaf
Tallow Tree, Chinese ⁴	-	-	-	-	-	-
Thistle, Bull	-	-	rosette	bolting	-	actively growing
Thistle, Canada ²	-	-	-	-	-	-
Thistle, Musk	-	-	-	rosette/bolting	-	-
Thistle, Plumeless	-	-	rosette	bolting	-	-
Vetch, Hairy	-	1-4"	4-8"	8" full flower	-	-
Yankeeeweed	-	-	-	10-18"	-	rosette
Yellow Starthistle ¹	-	-	-	-	-	-

Weeds Controlled	Rate Per Acre (according to weed growth stage)					
	1/3 pints	2/3 pints	1 pints	1 1/8 pints	1 2/3 pints	2 - 3 1/4 pints
¹ May require repeat applications ² Recommended rate will provide top growth suppression only. ³ For improved root kill or woody species such as mesquite and eastern persimmon spray 2 pints of per acre BRUSH-RHAP® each year for 3 consecutive years. ⁴ Under dense populations, a second application may be needed the following growing season. For increased control of weeds such as blackberry and dewberry, BRUSH-RHAP® may be tank mixed with Ally® herbicide (0.1-0.2 ounces per acre), if labeled for the use site.						

Ground Application (Banding)

When applying **BRUSH-RHAP®** herbicide by banding, determine the amount of herbicide and water volume needed using the following formula:

$$\frac{\text{Bandwidth in inches}}{\text{Row width in inches}} \times \text{Broadcast rate per acre} = \text{Banding herbicide rate per acre}$$

$$\frac{\text{Bandwidth in inches}}{\text{Row width in inches}} \times \text{Broadcast rate volume per acre} = \text{Banding water volume per acre}$$

Ground Application (Broadcast)

Water volume: Use 10-25 gallons of spray solution per broadcast acre for optimal performance. Use the higher spray volume when treating dense or tall vegetation.

Application Equipment: Select nozzle design to produce minimal amounts of fine spray particles. Spray nozzles as close to the weeds as is practical for good weed coverage.

Spot or Small Area Application

BRUSH-RHAP® may be applied to individual clumps or small areas of undesirable vegetation using handgun or similar types of application equipment. Apply diluted sprays to allow complete wetting (up to runoff) of foliage and stems. For knapsack or other small capacity sprayers, prepare a solution of **BRUSH-RHAP®** in water according to **Table 3** (assuming that the spot treatment rate equates to 40 gallons pre acre on the broadcast basis.) Adding a surfactant (0.5% by volume) can help improve control.

Do not make spot treatments in addition to broadcast or band treatments.

Application equipment: Select nozzles designed to produce minimal amounts of fine spray particles. Spray with nozzles as close to the weeds as is practical for good weed coverage.

Table 3. – Knapsack Sprayer Dilution Instructions

Sprayer Capacity (gallons of water)	Amount of BRUSH-RHAP® to add to the spray tank
1 gallon	2/3 fluid ounce*
3 gallons	2 fluid ounces
5 gallons	3 fluid ounces

* 1 fluid ounce = 2 tablespoons

III. ADDITIVES

To improve burndown of emerged weeds, surfactants and/or low use rates of liquid fertilizers (28-0-0; 32-0-0), or crop oil concentrate may be used with **BRUSH-RHAP®** herbicide or **BRUSH-RHAP®** tank mixes applied after the

weeds have emerged. Crop oil concentrate is for non-food/feed crop uses only. Do not apply tank mixes that include Ammonium Sulfate or Crop Oil Concentrate to any food/feed crop use listed on this label. For food/feed crop use, do not use liquid fertilizers that contain Ammonium Sulfate (AMS) as a source of nitrogen as tolerances in commodities derived from the crop may contain residues that exceed established tolerances.

Oil Concentrate

A crop oil concentrate must contain either a petroleum or vegetable oil base and must meet all of the following criteria:

- be non-phytotoxic
- contain only EPA-exempt ingredients
- provide good mixing quality in the jar test, and
- be successful in local experience

The exact composition of suitable products will vary; however, vegetable oil and petroleum oil concentrates should contain emulsifiers to provide good mixing quality. Highly refined vegetable oils have proven more satisfactory than unrefined vegetable oils. For additional information, see **Compatibility Test for Mix Components**.

Nitrogen Source

Sprayable liquid fertilizers: Use ½ GPA of sprayable liquid fertilizers (28-0-0; 32-0-0) per acre. Do not use brass or aluminum nozzles when spraying fertilizers.

Non-ionic Surfactant

The standard label recommendation is 2-4 pints of an 80% active non-ionic spray surfactant per 100 gallons of water. (Rate will vary with the size and condition of weeds to be controlled. Use lowest rate per 100 gallons when weeds are small and actively growing. As weeds increase in size and or become hardened off, the rate of non-ionic surfactant will have to be increased to give optimum coverage and control.)

Table 4. Additive Rate Per Acre

Additive ¹	Rate Additive Per Acre
Non-ionic Surfactant	2-4 pints per 100 gallons ²
Sprayable Liquid Fertilizers (28-0-0, 32-0-0)	½ GPA of spray solution
Crop Oil Concentrate	1 quart

¹ See manufacturer's label for specific rate recommendations.

² Use lowest rate per 100 gallons when weeds are small and actively growing. As weeds increase in size and or become hardened off, the rate of non-ionic surfactant will have to be increased to give optimum coverage and control.

IV. GENERAL TANK MIXING INFORMATION

Tank Mix Partners/Components

Do not tank mix **BRUSH-RHAP®** with any other product that contains 2,4-D and/or dicamba.

The following products may be tank mixed with **BRUSH-RHAP®** according to the specific tank mixing instructions in this label and respective product labels.

- Aim™ (carfentrazone-ethyl)
- Ally® (metsulfuron-methyl)
- Amber® (triasulfuron)
- Asulox® (asulam)

- Atrazine
- Basagran® (bentazon)
- Bronate® (bromoxynil + MCPA)
- Buctril® (bromoxynil)
- Canvas® (thifensulfuron-methyl + tribenuron-methyl + metsulfuron-methyl)
- Cyclone® (paraquat)
- Dakota® (fenoxaprop-p-ethyl + MCPA)
- Evik® (ametryn)
- Express® (tribenuron-methyl)
- Finesse® (chlorsulfuron + metsulfuron-methyl)
- Glean® (chlorsulfuron)
- Gly Star™ Plus (glyphosate)
- Gramoxone® Extra (paraquat)
- Harmony® Extra (thifensulfuron-methyl + tribenuron-methyl)
- Karmex® (diuron)
- Kerb™ (pronamide)
- Laddok® S-12 (bentazon + atrazine)
- MCPA
- Paramount® (quinclorac)
- Peak® (prosulfuron)
- Permit® (halosulfuron-methyl)
- Roundup® Ultra (glyphosate)
- Sencor® (metribuzin)
- Sinbar® (terbacil)
- Stinger™ (clopyralid)
- Tordon™ (picloram)
- Touchdown® (glyphosate)

Read and follow the applicable **Restrictions and Limitations** and **Directions for Use** on all products involved in tank mixing. The most restrictive labeling applies to tank mixes. Physical incompatibility, or reduced weed control may result from mixing **BRUSH-RHAP®** with other pesticides (fungicides, herbicides, insecticides, or miticides), additives, or fertilizers.

Compatibility Test for Mix Components

Before mixing components, always perform a compatibility jar test.

For 20 gallons per acre spray volume, use 3.3 cups (800 ml) of water. For other spray volumes adjust accordingly. Only use water from the intended source at the source temperature.

Add components in the sequence indicated in the **Mixing Order** using 2 teaspoons for each pound or 1 teaspoon for each pint of specified label rate per acre.

Always cap the jar and invert 10 cycles between component additions.

When the components have all been added to the jar, let the solution stand for 15 minutes. Evaluate the solution for uniformity and stability. The spray solution should not have free oil on the surface, nor fine particles that precipitate to the bottom, nor 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 still incompatible, do not mix the ingredients in the same tank.