

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

May 11, 2018

Brian L. Bret Regulatory Leader Dow AgroSciences, LLC 9330 Zionsville Rd 308/2E Indianapolis, IN 46268

Subject: Notification per PRN 98-10 – add signal word to human hazard statement Product Name: Kerb 3.3 SC EPA Registration Number: 62719-578 Application Date: March 21, 2018 Decision Number: 540989

Dear Mr. Bret:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. 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.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

If you have any questions, please contact Mindy Ondish by phone at 703-605-0723, or via email at ondish.mindy@epa.gov.

Sincerely,

Mindy Ondish for

Reuben Baris Product Manager 25 Herbicide Branch Registration Division (7505P) Office of Pesticide Programs

# Kerb<sup>®</sup> 3.3 SC

#### EPA Reg. No. 62719-578 Alternate Brand Names: Kerb SC (sub-label A), Kerb SC T&O (sub-label B)

# **Registration Notes:**

Label Notification based on EPA stamp-accepted label dated August 17, 2017.

The following typographical error is corrected as follows:

- 1. Sub Label A: Insert missing signal word and KOOROC at top of booklet page 1 (page 5 of this document).
- 2. Sub Label B: Insert missing signal word and KOOROC at top of booklet page 1 (page 34 of this document).

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# NOTIFICATION 62719-578

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

05/11/2018

[Alternate Brand Names: Kerb SC (sub-label A), Kerb SC T&O (sub-label B)

# [Sub-Label A – Crop Uses]

(Base label):

# Kerb<sup>®</sup> 3.3 SC HERBICIDE

For use on alfalfa, apple, apricot, artichoke (globe), birdsfoot trefoil, blackberry, boysenberry, blueberry, cherry, clover, crown vetch, endive, escarole, grape, head and leaf lettuce, nectarine, peach, pear, plum, prune, radicchio greens, raspberry, rhubarb, sainfoin, winter peas, woody ornamentals, nursery stock of ornamentals, and Christmas trees

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Group 3	HERBICIDE
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Active Ingredient:

prona	mi	de: :	3,5	-dichloro-N	1-	
1.4					• •	

(1,1-dimethyl-2-propynyl) benzamide	35.6%
Other Ingredients	<u>64.4%</u>
Total	100.0%

Contains 3.3 lbs of active ingredient per gallon.

# Keep Out of Reach of Children **CAUTION**

# **Precautionary Statements**

# Hazards to Humans and Domestic Animals

Causes Moderate Eye Irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using toilet.

# **Personal Protective Equipment (PPE):**

Applicators and other handlers must wear:

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

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

When handlers use enclosed cabs or aircraft in a manner that meet 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.

# **User Safety Recommendations**

# Users should:

- Remove clothing 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.

# First Aid

**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 eye. Call a Poison Control Center or doctor for treatment advice.

**Note:** Have the product container or label with you when calling a Poison Control Center or doctor or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

# **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.

# **Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

# Nonrefillable rigid containers 5 gallons or less:

# Storage and Disposal

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

**Pesticide Storage:** Store in a cool, dry place but not below 32°F (0°C). Do not remove package from container except for immediate use.

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

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Triple rinse or pressure 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 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

# **Refillable containers larger than 5 gallons:**

# Storage and Disposal

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

**Pesticide Storage:** Store in a cool, dry place but not below 32°F (0°C). Do not remove package from container except for immediate use.

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

**Container Handling:** 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 a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

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# Refer to label booklet for Directions for Use.

Notice: Read the entire label. Use only according to label directions. Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-578

EPA Est.

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Produced for Dow AgroSciences LLC 9330 Zionsville Road Indianapolis, IN 46268

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(cover / shipping container):

# Kerb<sup>®</sup> 3.3 SC HERBICIDE

For use on alfalfa, apple, apricot, artichoke (globe), birdsfoot trefoil, blackberry, boysenberry, blueberry, cherry, clover, crown vetch, endive, escarole, grape, head and leaf lettuce, nectarine, peach, pear, plum, prune, radicchio greens, raspberry, rhubarb, sainfoin, winter peas, woody ornamentals, nursery stock of ornamentals, and Christmas trees

Group	3	HERBICIDE
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Active Ingredient:

pronamide: 3,5-dichloro-N-	
(1,1-dimethyl-2-propynyl) benzamide	35.6%
Other Ingredients	64.4%
Total	100.0%

Contains 3.3 lbs of active ingredient per gallon.

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Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

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# **Precautionary Statements**

Hazards to Humans and Domestic Animals Keep Out of Reach of Children CAUTION

Causes Moderate Eye Irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using toilet.

# Personal Protective Equipment (PPE):

- Applicators and other handlers must wear:
- Coveralls over short-sleeved shirt and short pants
- Waterproof gloves
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing or loading

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

When handlers use enclosed cabs or aircraft in a manner that meet 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.

# **User Safety Recommendations**

Users should:

- Remove clothing 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.

# First Aid

**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 eye. Call a Poison Control Center or doctor for treatment advice.

**Note:** Have the product container or label with you when calling a Poison Control Center or doctor or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

# **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.

# **Directions for Use**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying. 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 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 24 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 over short-sleeved shirt and short pants
- Waterproof gloves
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure

# **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.

# Keep unprotected persons out of treated area until sprays have dried.

# Storage and Disposal

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

**Pesticide Storage:** Store in a cool, dry place but not below 32°F (0°C). Do not remove package from container except for immediate use.

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

# Nonrefillable containers 5 gallons or less:

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Triple rinse or pressure 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 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

# Refillable containers larger than 5 gallons:

**Container Handling:** 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 a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

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# Product Information

Kerb<sup>®</sup> 3.3 SC is effective for the control of a wide range of grasses and certain broadleaf weeds. The product is a soil active herbicide with uptake by sensitive weeds occurring through the roots. Before using this herbicide for a specific crop use, study the following general use information that provides important instructions for the safe and effective application of the product.

**Use Restrictions:** Only hand-spray applications of pronamide are permitted to ornamentals and nursery stocks.

**Chemigation:** Do not apply this product through any type of irrigation system except as directed under the Chemigation section or as specified by other labeling.

# **Spray Drift Management**

Avoiding spray drift at the application site is the responsibility of the applicator. The potential for spray drift is determined by the interaction of many equipment-and-weather-related factors. The applicator and the grower are responsible for considering all these factors when making decisions.

Do not apply when weather conditions may cause drift to nontarget areas. Drift may result in injury to adjacent crops and vegetation.

Applications must be made at the lowest height above the target area that still provides uniform coverage of the target. Making applications at the lowest yet effective height reduces exposure of droplets to wind.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

- 1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
- 2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where certain states have more stringent regulations, they must be observed.

The applicator must be familiar with and take into account the information covered in the following **Aerial Spray Drift Advisory Information** section.

# Aerial Spray Drift Advisory Information

This section is advisory in nature and does not supersede mandatory label requirements.

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. 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 Inversion section of this label).

#### Controlling Droplet Size:

- **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 specified pressures. Use the lower spray pressures specified for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. 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 Orientation-** Orienting nozzles so that the spray is released backwards, parallel to the airstream will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets and lower drift than other nozzle types.

**Boom Length:** For some use patterns, reducing the effective boom length to less than <sup>3</sup>/<sub>4</sub> of the wingspan or rotor length may further reduce drift without reducing swath width.

**Application Height:** Do not make applications at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

**Swath Adjustment:** When applications are made with a cross-wind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Increase swath adjustment distance with increasing drift potential (higher wind, smaller drops, etc.).

**Wind:** Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Avoid application below 2 mph due to variable wind direction and high inversion potential. Note: Local terrain can influence wind patterns. Every applicator must be familiar with local wind patterns and how they affect spray drift.

**Temperature and Humidity:** When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

**Temperature Inversions:** Do not apply during a temperature inversion, because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures 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. The presence of inversion conditions can be indicated by ground fog. However, if fog is not present, the movement of smoke from a ground source or an aircraft smoke generator can also identify inversion conditions. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upwards and rapidly dissipates indicates good vertical air mixing.

**Sensitive Areas:** Apply this pesticide when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

# **Resistance Management**

Kerb 3.3 SC is a Group 3 herbicide. Any weed population may contain or develop plants naturally resistant to this product and other Group 3 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Kerb 3.3 SC will not control known Group 3 resistant biotypes or labeled weeds. Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance management strategies should be followed.

To delay herbicide resistance:

- Where possible, rotate the use of Kerb 3.3 SC or other Group 3 herbicides with different herbicide groups that control the same weeds in a field.
- For best resistance management stewardship, avoid use more than once per season and use Kerb 3.3 SC in programs with other herbicides with different modes of action.
- Where possible, rotate the use of Kerb 3.3 SC or other Group 3 herbicides with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group when such use is permitted.
- Herbicide use should be based upon an IPM program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical), cultural, biological and other chemical control practices.
- Monitor treated weed populations for resistance development.
- Prevent movement of resistance weed seeds to other fields by cleaning harvesting and tillage equipment and planting clean seed.
- Contact your local extension specialist or certified crop advisers for any additional pesticide resistance management and/or integrated weed management requirements for specific crops and weed biotypes.

# Weed Spectrum

Kerb 3.3 SC may be used for both preemergence and early postemergence control of winter annual and perennial grasses and chickweed and for preemergence control only of certain other broadleaf weeds and certain other grasses listed.

# Weeds Controlled Both Preemergence and Early Postemergence

Weeds Controlled Dotti Freemer	genee and Larry i ostemergene
barley, foxtail	Hordeum jubatum
barley, volunteer	Hordeum vulgare
bentgrass	Agrostis species
bluegrass, annual	Poa annua
bluegrass, bulbous	Poa bulbosa
bluegrass, Kentucky	Poa pratensis
brome, downy (cheatgrass)	Bromus tectorum
chickweed, common	Stellaria media
chickweed, mouse-ear	Cerastium vulgatum
fescue, tall	Festuca arundinaceae
goatgrass, jointed	Aegilops cylindrica

oat, volunteer	Avena sativa
oat, wild	Avena fatua
orchardgrass	Dactylis glomerata
quackgrass	Agropyron repens
rye, volunteer	Secale cereale
ryegrass, Italian	Lolium multiflorum
ryegrass, perennial	Lolium perenne
velvetgrass	Holcus lanatus
wheat, volunteer	Triticum aestivum

#### Weeds Controlled Only Preemergence

barnyardgrass canarygrass carpetweed crabgrass, large dodder, field foxtail, yellow goosefoot, nettleleaf goosegrass henbit knotweed, prostrate lambsquarters, common lovegrass mallow, little (cheeseweed) morningglory, annual mustard, wild nettle, burning nightshade, black nightshade, hairy panicum, fall purslane, common radish, wild rocket, London shepherdspurse smartweed, pale sorrel. red (from seed) tomato, volunteer

Echinochloa crus-galli Phalaris canariensis Mollugo verticillata Digitaria sanguinalis Cuscuta campestris Setaria lutescens Chenopodium murale Eleusine indica Lamium amplexicaule Polygonum aviculare Chenopodium album Eragrostis diffusa Malva parviflora Ipomoea purpurea Brassica kaber Urtica urens Solanum nigrum Solanum sarrachoides Panicum dichotomiflorum Portulaca oleracea Raphanus sativus Sisymbrium irio Capsella bursa-pastoris Polygonum lapathifolium Rumex acetosella Solanum esculentum

**Note:** The weed species controlled by Kerb 3.3 SC are dependent on the rate used, specific crop culture involved, and the associated conditions of temperature, soil type and moisture availability. Refer to specific crop use directions for weed species controlled.

#### Dosage

The rate of Kerb 3.3 SC required will vary depending on the crop culture involved and weed species to be controlled. See specific crop use directions for all dosage instructions. All dosage instructions listed in this label are in terms of pints of product or pounds of active ingredient per broadcast acre. For banded application, reduce the amount of Kerb 3.3 SC used per acre according to the following formula:

Band Width (in inches)		Rate per		Amount Needed per Acre
Row Width (in inches)	Х	Acre Broadcast	=	for Band Application

# **Timing and Application**

Unless specific directions are given under the crop to be treated, apply Kerb 3.3 SC in the fall or early winter, when temperatures do not exceed 55°F, **but prior to freeze-up**. Best weed control results occur

when Kerb 3.3 SC is applied preemergence to the weeds and when application is followed by rainfall or irrigation to move the product into the root zone of the germinating weeds.

Mix Kerb 3.3 SC thoroughly in clean water at the required concentration and apply uniformly as a spray. For ground application, use a conventional low-pressure herbicide sprayer equipped with flat fan nozzles spaced and calibrated to uniformly deliver 20 to 50 gallons of spray per acre. For aerial applications apply in a coarse droplet spray at 5 to 10 gallons per acre. Accurately calibrate spray equipment prior to each use.

# **Compatibility with Other Pesticides**

Kerb 3.3 SC is compatible with most commonly used agricultural pesticides, crop oil concentrate and adjuvants. When preparing tank mixes, consult spray compatibility charts or State Cooperative Extension Service Specialists prior to actual use. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use(s). Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

# Effect of Soil Type, Moisture and Temperature

Kerb 3.3 SC is most active in coarse to medium textured soils of low organic matter and relatively inactive in peat or muck soils or mineral soils high in organic matter content at rates specified in this label. Herbicidal activity is best in soils containing less than 4 percent organic matter. Use in soils with higher organic matter may result in inconsistent or incomplete weed control.

The herbicidal activity of Kerb 3.3 SC is mainly through root absorption in sensitive weed species. Rain, melting snow or irrigation is **essential** following treatment to move Kerb 3.3 SC into the root zone of germinating weeds.

Under field conditions, Kerb 3.3 SC will remain relatively stable with little loss of herbicidal activity when soil temperatures are less than 55°°F. As soil temperatures increase, degradation of the active ingredient takes place. Kerb 3.3 SC may degrade rather quickly if left exposed on the soil surface in warm weather. If Kerb 3.3 SC is applied when air temperatures exceed 85°F, the treatment must be soil incorporated to a shallow depth (top two to three inches) or watered into the soil as soon as possible.

# **Cultural Considerations**

For best results apply Kerb 3.3 SC to a trash-free soil surface. Clean cultivation before application is preferable, but not necessary. To obtain optimum weed control in areas not clean cultivated, the area to be treated must be free of surface litter (dead or decaying crop and weed debris, mowing clippings, etc.). Trash-free areas create ideal conditions for rapid movement of Kerb 3.3 SC into the weed root zone following rain or irrigation.

# **Rotation Crop Planting Information**

Follow the directions given below when rotation crops will be planted to areas previously treated with Kerb SC:

Amount of Kerb 3.3 SC Applied Per Acre	Root and Tuber Vegetables	Brassica Leafy Vegetables, Cucurbits, Fruiting Vegetables, and Bulb Vegetables	Leafy Vegetables (except Brassica Vegetables) and Legumes	Cereal Grains	All Other Rotated Crops (1)		
Up to 5.0 pints (2.0 lb ai/acre)	90	45	30	180	365		

#### Waiting Period in Days before Planting the Crops Indicated (1):

(1) There are no plant back restrictions for Kerb SC when rotating to artichokes, grapes, berry fruits, pome fruits, or stone fruits.

Whether Kerb 3.3 SC is bed-topped, banded or broadcast, the beds must be knocked down and the field cross-disked before rotation crops other than artichokes, head or leaf lettuce, endive, radicchio or escarole are planted.

Where the Kerb 3.3 SC treatment is to be followed by a rotation crop within 180 days of application, bedtopped or banded applications are suggested.

# Artichoke (Globe)

# Arizona and California

#### **Product Information**

Kerb 3.3 SC is a selective herbicide for the control of susceptible weeds in either established (ratoon) or transplanted globe artichokes.

#### Weeds Controlled

Kerb 3.3 SC is effective at 5.0 to 9.5 pints of product (2 to 4 lb active ingredient) per treated acre for the preemergence control of the following weeds:

barley, volunteer bluegrass, annual chickweed, common chickweed, mouse-ear foxtail, yellow goosefoot, nettleleaf henbit knotweed, prostrate mallow, little (cheeseweed) mustard, wild nettle, burning nightshade, hairy oat, volunteer oat, wild ryegrass, Italian wheat, volunteer

Kerb 3.3 SC Rate (Per Broadcast Acre) <sup>1</sup>					
Сгор	Weeds	Dependable Rainfall or Overhead Irrigation (pt/Acre)	Less Dependable Rainfall or Furrow Irrigation	Comments	
globe artichokes (established ratoon)	susceptible annual grasses, volunteer grains and broadleaf weeds	5.0 9.5	Do not apply Do not apply	sandy soils, sandy loams and silt loams silt, silty clay loams, clay loams and clay soils	
globe artichokes (newly transplanted crowns)	susceptible annual grasses, volunteer grains and broadleaf weeds	5.0	Do not apply	all soil types except peat and muck soils	

<sup>1</sup> Dosage instructions listed on this label are in terms of pints Kerb 3.3 SC per acre broadcast application. For banded treatments down artichoke rows or between rows, reduce the amount of Kerb 3.3 SC used per acre according to the following formula:

Band Width (in inches)		Rate per		Amount Needed per Acre
Row Width (in inches)	Х	Acre Broadcast	=	for Band Application

# Dosage and Timing

# Established Ratoon Artichokes

Apply Kerb 3.3 SC in a single postemergence application to the crop after tillage operations are completed and shoot regrowth of the artichokes has occurred. Apply Kerb 3.3 SC preemergence to the weeds and before new artichoke leaves are greater than 14 to 16 inches long. Apply Kerb 3.3 SC in a banded treatment over the crop row at the rate of 5.0 to 9.5 pints of product per broadcast acre (see dosage rate for soil type in chart). A second application of Kerb 3.3 SC at the same rate may be applied 60 days or more prior to harvest in a banded treatment directed to the untreated soil surface between the artichoke rows after the ditching operation is completed later in the season.

#### **Transplanted Artichoke Crowns**

Apply Kerb 3.3 SC in a single application after transplanting the crowns but before new shoots have developed 3 to 4 new leaves. Apply Kerb 3.3 SC preemergence to the weeds and banded over the crop row at the rate of 5.0 pints of product per broadcast acre. Do not use higher rates of Kerb 3.3 SC than 5.0 pints per acre in one season. A second application of Kerb 3.3 SC at the same rate may be applied 60 days or more prior to harvest in a banded treatment directed to the untreated soil surface between the artichoke rows after the ditching operation is completed later in the season.

#### Application

Kerb 3.3 SC may be applied by aircraft or ground sprayer for preemergence control of susceptible grasses and broadleaf weeds in established ration artichokes or transplanted artichoke crowns.

**Aerial:** Mix the specified amount of Kerb 3.3 SC in a minimum of 10 gallons of water per acre for aerial application. Avoid drift to all other crops and non-target areas.

**Ground:** Mix the specified amount of Kerb 3.3 SC in clean water and apply uniformly with a ground sprayer in 20 to 50 gallons of water per acre. Reduce dosage and volume accordingly for banded treatments. Use a standard low pressure herbicide sprayer equipped with flat fan nozzles that give uniform spray distribution.

#### **Moisture and Irrigation Requirements**

Moisture is necessary to activate Kerb 3.3 SC in the soil and move it into the root zone of germinating weeds. In artichoke culture natural rainfall or supplementary overhead irrigation within 1 to 3 days after the application of Kerb 3.3 SC is essential for effective weed control. For best results use overhead sprinkler irrigation equipment to irrigate the field with 1 to 2 inches of water after application of Kerb 3.3 SC.

# Effect of Soil Type

Do not apply Kerb 3.3 SC to highly organic or muck soils because herbicidal activity is lowered significantly in these soils. Follow dosage rates suggested in the dosage instruction chart according to the soil type for established and transplanted artichokes.

#### **Rotation Crops**

Artichokes are generally long-term perennial crops. In the event that artichokes are discontinued and a rotational crop will be planted within one year where Kerb 3.3 SC was applied at the rate of 5.0 pints of product per acre, follow the rotational crop requirements specified in the Product Information section of this label under Rotational Crop Planting Information.

#### **Artichoke - Specific Use Restrictions**

- Do not apply more than 4 lb/acre active ingredient (9.5 pt/acre of Kerb 3.3 SC) to established artichokes or more than 2 lb/acre active ingredient (5.0 pt/acre of Kerb 3.3 SC) to newly transplanted artichokes or make more than one "in-row" application per year.
- Do not harvest artichokes within 60 days of final application.
- Do not make more than one application to the artichoke row per year. Do not make more than one application to the untreated soil between the rows per year.

# Blackberry/Boysenberry/Raspberry

# (Idaho, Oregon and Washington Only)

#### Product Information

Kerb 3.3 SC is a selective herbicide for fall and winter applications to established blackberries, boysenberries, and raspberries for both preemergence and postemergence control of certain winter annual and perennial grasses.

#### Dosage

Kerb 3.3 SC may be applied at the rate of 2.5 to 7.0 pints of product (1 to 3 lb active ingredient) per acre broadcast application. The rate will depend on the weed species present and the soil texture of the site being treated. Follow the weed control instructions listed in the chart below:

Pints of Kerb 3.3 SC Per Broadcast Acre <sup>1</sup>					
Weeds Controlled	Dependable Rainfall or Overhead Irrigation <sup>2</sup>	Comments			
bluegrass, annual	2.5 - 5.0	Use low rates on light to			
quackgrass	5.0 - 7.0	medium soils and high rates			
ryegrass, perennial	5.0 - 7.0	on heavy soils			

<sup>1</sup> Dosage rates specified are in pints of Kerb 3.3 SC per acre broadcast application. Reduce rates accordingly for banded applications.

<sup>2</sup> For effective weed control, rainfall or overhead irrigation is essential following the application of Kerb 3.3 SC.

# **Crop Sensitivity**

Apply to established cane fruits to avoid injury. Newly transplanted blackberries, boysenberries, and raspberries must be well rooted and transplanted for at least 3 months prior to the application of Kerb 3.3 SC.

# **Timing and Application**

Apply Kerb 3.3 SC only during the fall or winter months. For optimum results, apply Kerb 3.3 SC during November or December. Do not make applications when the ground is frozen. Mix the specified amount of Kerb 3.3 SC in clean water and apply uniformly with a low pressure ground sprayer in 20 to 50 gallons of water per acre.

# Blackberry/Boysenberry/Raspberry - Specific Use Restrictions

• Do not apply more than 3 lb/acre active ingredient (7.0 pt/acre of Kerb 3.3 SC) or make more than one application of Kerb 3.3 SC per year.

Blueberry

**Product Information** 

Kerb 3.3 SC is a selective herbicide for fall and winter applications to established blueberries for both preemergence and postemergence control of winter annual and perennial grasses and chickweed and preemergence control of certain broadleaf weeds.

#### **Dosage Instructions**

Kerb 3.3 SC may be applied at the rate of 2.5 to 5.0 pints of product (1 to 2 lb active ingredient) per acre broadcast application. The rate will depend on the weed species present. Follow the weed control rates specified in the chart below:

Weeds Controlled	Pt/Acre Kerb 3.3 SC <sup>1</sup> Dependable Rainfall or Overhead Irrigation <sup>2</sup>
bluegrass, annual brome, downy (cheatgrass) chickweed oat, wild sorrel, red (from seed)	2.5
bentgrass bluegrass, Kentucky fescue, tall orchardgrass quackgrass ryegrass, perennial velvetgrass	5.0

<sup>1</sup> Dosage rates specified are in pints of Kerb 3.3 SC per acre broadcast application. Reduce rates accordingly for banded applications.

<sup>2</sup> For effective weed control, rainfall or overhead irrigation is essential following the application of Kerb 3.3 SC.

#### **Crop Sensitivity**

Apply to established blueberry plants to avoid injury. Do not apply Kerb 3.3 SC to newly transplanted blueberry plants until roots are well established.

#### **Timing and Application**

Apply Kerb 3.3 SC in a single application during the fall or early winter months, but prior to soil freeze-up and snow cover. Optimum herbicidal activity occurs when applications are made under cool temperature conditions (55°°F or less) and are followed by rainfall or overhead irrigation.

Mix the specified amount of Kerb 3.3 SC in clean water and apply uniformly with a low pressure ground sprayer in 20 to 50 gallons of water per acre.

#### **Blueberry - Specific Use Restrictions**

• Do not apply more than 2 lb/acre active ingredient (5.0 pt/acre Kerb 3.3 SC) or make more than one application of Kerb 3.3 SC per year.

# Alfalfa, Clover, Birdsfoot Trefoil, Crown Vetch and Sainfoin Grown for Forage and Seed

#### **Product Information**

Kerb 3.3 SC is a selective herbicide for fall or winter applications to alfalfa, clover, birdsfoot trefoil, crown vetch and sainfoin for both preemergence and postemergence control of susceptible winter annual and perennial grasses and for preemergence control of certain broadleaf weeds.

#### Dosage

Kerb 3.3 SC may be applied at the rate of 1.25 to 5 pints of product (0.5 to 2 lb active ingredient) per broadcast acre application. The required rate will depend on the weed species present as well as the type of irrigation used or the dependability of rainfall following application. The effective rate will be higher in low rainfall areas or where furrow irrigation is used than in areas of dependable rainfall or where overhead irrigation is practiced. Follow the weed control instructions given in the chart below for fall or winter applications of Kerb 3.3 SC:

Pints Kerb 3.3 SC Per Broadcast Acre				
	Dependable Rainfall Low Rainfall			
	or	or		
Weeds Controlled	Overhead Irrigation	Furrow Irrigation		
Apply preemergence or	1.25 – 2.0	2.0 - 2.5		
postemergence to these weeds:				
barley, foxtail				
bluegrass, annual				
brome, downy (cheatgrass)				
chickweed				
grain, volunteer				
oat, wild				
ryegrass, Italian				
bluegrass, Kentucky	2.0 – 2.5	2.5 – 3.5		
orchardgrass				
ryegrass, perennial				
quackgrass	2.5 – 3.5	3.5 – 5.0		
Apply preemergence only to these	2.0 - 2.5	2.5 - 3.5		
weeds:				
sorrel, red (from seed)				
mustard, wild	3.5	5.0		
radish, wild				
rocket, London				
shepherdspurse				

**Note:** For control of spring germinating cheatgrass and dodder, refer to specific instructions under Spring Use Directions for Established Alfalfa.

#### **Timing and Application**

Apply Kerb 3.3 SC during the fall or winter months. Optimum herbicidal activity occurs when applications are made under cool temperature conditions (55°to 60°F) and are followed by rainfall or overhead irrigation. Applications must always be made **before soil freeze-up**.

Applications may be made postemergence to established, actively growing or dormant forage legumes or to new plantings after the legume has reached the trifoliate leaf stage. In established forage legume stands, applications must be made after the last cutting when the weather and soil temperatures are cool. In fall seeded forage legumes, applications must be made after legumes have reached the trifoliate leaf stage. In spring-seeded forage legumes, applications of Kerb 3.3 SC must be made the following fall or early winter to control winter annual and perennial grasses. Do not use Kerb 3.3 SC as a preplant or preemergence treatment or before the trifoliate leaf stage of the legume has developed in new plantings as injury to the legume stand may result. Remove or disperse trash, crop residues and ashes before treatment.

Mix the specified amount of Kerb 3.3 SC in clean water and apply uniformly with a ground sprayer at 20 to 50 gallons per acre. Use a conventional herbicide sprayer equipped with flat fan nozzles at 40 to 60 psi.

#### **Rotation Crops**

Where rotation crops are to follow within one year of the Kerb 3.3 SC treatment to alfalfa, clover, birdsfoot trefoil, crown vetch or sainfoin, follow the directions given in the Product Information section of this label under Rotation Crop Planting Information.

# Specific Use Restrictions - Alfalfa, Clover, Birdsfoot Trefoil, Crown Vetch and Sainfoin

- Do not use more than 2 lb/acre active ingredient (5 pt/acre Kerb 3.3 SC) per year.
- Do not harvest alfalfa seed within 50 days after application.
- Do not graze or harvest for forage or dehydration within the following intervals after application:

Alfalfa - below 3.5 pt /acre Kerb 3.3 SC	25 days
(west of Mississippi River)	-
Alfalfa -3.5-5 pt /acre Kerb 3.3 SC	45 days
(west of Mississippi River)	
Clover, birdsfoot trefoil, crown vetch, sainfoin	120 days
(entire U.S.) and alfalfa - Up to 5 pt /acre	-
Kerb 3.3 SC	
(East of Mississippi River)	

# Spring Use Directions for Established Alfalfa Dodder Control in Alfalfa Seed Crops

# Only In California, Colorado, Idaho, Nevada, Oregon, Utah and Washington

# **Dodder Control:**

For effective control Kerb 3.3 SC must be moved into the soil either by rainfall or irrigation before the germination of dodder. Preferably, irrigation must be made within 1 to 3 days following the Kerb 3.3 SC application, but can be delayed up to 2 weeks if necessary provided that irrigation precedes dodder germination. If irrigation of the field treated with Kerb 3.3 SC must be delayed, a light mechanical incorporation (maximum 1-inch depth) must follow the Kerb 3.3 SC application and the field irrigated within 2 weeks.

When using flood type or overhead sprinkler irrigation systems the amount of irrigation following the Kerb 3.3 SC application must not exceed one inch of water. Excess irrigation following the Kerb 3.3 SC application and prior to germination of dodder may decrease the effectiveness of Kerb 3.3 SC.

# **Dosage and Timing**

For effective control, Kerb 3.3 SC must be applied before dodder germinates. Follow directions given below depending on method of irrigation used:

Furrow Irrigation: Apply Kerb 3.3 SC at the rate of 3.5 to 5.0 pints of product (1.5 to 2 lb active ingredient) per acre. Incorporate lightly at time of application and irrigate within seven days.
Flood Irrigation: Apply Kerb 3.3 SC at the rate of 3.5 pints of product (1.5 lb active ingredient) per acre. Flood field with 0.5 to 1.0 inch of water within 1 to 3 days after application.
Overhead Sprinkler Irrigation: Use same directions as given above for flood irrigation.

Excessive amounts of irrigation water following Kerb 3.3 SC application may adversely affect the herbicidal activity.

# Cheatgrass Control in Established Alfalfa (Spring Applications):

# Dosage and Timing

Spring application of Kerb 3.3 SC will control cheatgrass if application is made when cheatgrass has recently germinated or expected to germinate. Apply Kerb 3.3 SC as a broadcast application at the rate of 2.0 to 2.5 pints of product (0.8 to 1 lb active ingredient) per acre.

# Head and Leaf Lettuce/ Endive/Escarole/Radicchio Greens

#### **Product Information**

Kerb 3.3 SC is a selective herbicide for the control of certain annual grasses and broadleaf weeds in direct seeded or transplanted head or leaf lettuce, endive, escarole and radicchio greens.

#### Weeds Controlled

Kerb 3.3 SC is effective for the preemergence control of the following weeds:

#### Grasses

barley, foxtail barley, volunteer barnyardgrass bluegrass, annual brome, downy (cheatgrass) canarygrass crabgrass foxtail, yellow goosegrass lovegrass oats, volunteer panicum, fall ryegrass, Italian rye, volunteer wheat, volunteer

#### **Broadleaf Weeds**

carpetweed chickweed, common goosefoot, nettleleaf henbit knotweed lambsquarters, common morningglory, annual mustard, wild nettle, burning nightshade, black nightshade, hairy purslane, common rocket, London shepherdspurse smartweed, pale tomato, volunteer

#### Dosage

For head lettuce, endive, escarole, and radicchio greens, Kerb 3.3 SC may be applied at the rate of 2.5 to 5.0 pints of product (1 to 2 lb active ingredient) per acre broadcast application. For leaf lettuce, Kerb 3.3 SC may be applied at the rate of 1.25 to 5.0 pints of product (1/2 to 2 lb active ingredient) per acre broadcast application. The dosage rate required is dependent on soil texture, target weeds, duration of control expected, and method of irrigation. Lower rates may result in a shorter duration of weed control or less efficacy on hard to control weeds. At rates specified on this label, Kerb 3.3 SC may not be as effective when applied for weed control on highly organic (peat and muck) soils.

Pints Kerb 3.3 SC Per Broadcast Acre <sup>1</sup>			
Weeds	Dependable Rainfall or Overhead Irrigation	Less Dependable Rainfall or Furrow Irrigation	Soil Texture Group <sup>2</sup>
susceptible annual grasses	2.5 – 3.5 (surface application)	3.5 – 5.0 (soil incorporation)	coarse and medium textured soils
broadleaf weeds	3.5 – 5.0 (surface application)	5.0 (soil incorporation)	fine textured soils

For head lettuce, endive, escarole and radicchio greens: follow the dosage instructions listed in chart below:

<sup>1</sup> Reduce dosage rate accordingly for banded applications.

<sup>2</sup> Soil Texture Group

**Coarse:** sand, loamy sand, sandy loam **Medium:** loam, silt loam, silt, sandy clay loam **Fine:** silty clay loam, clay loam, sandy clay, silty clay, clay

For leaf lettuce: follow the dosage instructions listed in chart below:

Pints Kerb 3.3 SC Per Broadcast Acre <sup>1</sup>				
Weeds	Dependable Rainfall or Overhead Irrigation	Less Dependable Rainfall or Furrow Irrigation	Soil Texture Group <sup>2</sup>	
susceptible annual grasses	1.25– 3.5 (surface application)	3.5 – 5.0 (soil incorporation)	coarse and medium textured soils	
broadleaf weeds	3.5 – 5.0 (surface application)	5.0 (soil incorporation)	fine textured soils	

<sup>1</sup> Reduce dosage rate accordingly for banded applications.

<sup>2</sup> Soil Texture Group

**Coarse:** sand, loamy sand, sandy loam **Medium:** loam, silt loam, silt, sandy clay loam **Fine:** silty clay loam, clay loam, sandy clay, silty clay, clay

#### Crop Sensitivity

Most varieties of head or leaf lettuce can tolerate specified rates of Kerb 3.3 SC. Do not use more than 3.5 pints of product (1.5 lb active ingredient) per acre on val temp, grande verde and prima verde varieties of crisp head lettuce, or on endive, escarole and radicchio greens.

#### **Timing and Application**

Kerb 3.3 SC can be applied either pre-plant, post-plant, or postemergence to head or leaf lettuce, endive, escarole or radicchio greens in banded, bed-topped or broadcast applications. Most applications will be made preemergence to the crop just before or after planting and preemergence to the weeds. Applications can be made before or after thinning of head or leaf lettuce but must be made prior to weed emergence. For split application, see directions below.

Mix the specified amount of Kerb 3.3 SC in clean water and apply uniformly with a ground sprayer in 20 to 50 gallons of water per treated acre. Reduce dosage and volume accordingly for banded treatments. Use a standard low pressure sprayer equipped with flat fan nozzles that provide uniform spray distribution.

#### **Split Application**

Kerb 3.3 SC application can be split so that part of the maximum allowable application rate of the product can be initially applied to head or leaf lettuce, endive, escarole or radicchio greens, and the balance of the maximum allowable application rate can be applied up to 10 days later. Total amount of Kerb 3.3 SC

applied must not exceed the maximum rates indicated on this label, up to 5 pts/acre of product (2 lb/acre active ingredient) per crop. For leaf lettuce, total amount of Kerb 3.3 SC applied must not exceed the maximum rates indicated on this label, up to 5 pts/acre of product (2 lb/acre active ingredient) per crop, or more than 10 pints of product (4 lb active ingredient) per acre per year. For split applications, follow pre harvest interval based on total amount of product applied per crop.

The value of split applications and optimal timing for the second application will vary depending on season, weed species present and environmental conditions.

#### Application Moisture Requirements

Kerb 3.3 SC acts mainly through root absorption, therefore it is necessary to move Kerb 3.3 SC into the root zone of germinating weeds to provide effective control. This can be accomplished by overhead sprinkler irrigation, by rainfall or by shallow mechanical incorporation.

#### **Sprinkler Irrigation**

Kerb 3.3 SC can be applied to the soil surface without mechanical incorporation after planting or transplanting if overhead irrigation is used. An initial irrigation of 1 to 2 inches must promptly follow the application of Kerb 3.3 SC, especially in hot weather.

#### Applications Dependent on Natural Rainfall

In areas of dependable natural rainfall, Kerb 3.3 SC can be applied as a surface treatment preemergence to the weeds. Applications to direct seeded or transplanted head or leaf lettuce, endive, escarole or radicchio greens are most successful when followed by 1/2 to 1 inch of rainfall within two to three days after application.

#### **Furrow Irrigation -Mechanical Incorporation**

Where rainfall is not dependable or supplementary overhead irrigation is not used, shallow pre-plant incorporation is required. PTO-driven incorporators or rolling cultivators that thoroughly mix Kerb 3.3 SC into the top 2 inches of soil are suggested.

Incorporation must be simultaneous or immediately after application of Kerb 3.3 SC, especially in hot weather. Irrigation must be started as soon as possible.

Where furrow irrigation is used, spray application and mechanical incorporation must be made after beds have been formed. Kerb 3.3 SC will not be as effective if disked in prior to bed shaping. Hoeing, thinning, or shallow cultivation of soil treated with Kerb 3.3 SC will not destroy its herbicidal activity.

#### Temperature

Kerb 3.3 SC is not highly volatile, but it may degrade rather quickly if left exposed on the soil surface in warm weather. If applied when air temperatures exceed 85°F it must be shallow incorporated or watered into the soil as soon as possible, preferably within 1 or 2 days.

# **Rotation Crops**

Follow the directions given in the Product Information section of this label under Rotation Crop Planting Information.

# Head or Leaf Lettuce/Endive/Escarole/Radicchio Greens - Specific Use Restrictions

- Do not apply Kerb 3.3 SC to head lettuce, endive, escarole, radicchio varieties that will be harvested less than 55 days after treatment.
- For use on leaf lettuce, follow the table below for preharvest intervals based on the total application rate per crop. For split applications, follow pre harvest interval based on total amount of product applied per crop, not based on the split rate amount applied.

Use rate	PHI	
Up to 1.25 pts/A (0.5 lbs ai/A)	25 day	/S
Up to 1.8 pts/A (0.75 lb ai/A)	35 day	/S

Up to 3.75 pts/A (1.5 lbs ai/A)	45 days
Up to 5.0 pts/A (2.0 lbs ai/A)	55 days

- Do not apply more than one application of Kerb 3.3 SC to each crop of head or leaf lettuce, endive, escarole or radicchio greens, or more than twice if split application is made.
- Do not apply more than 2 lb/acre active ingredient (5.0 pt/acre Kerb 3.3 SC) per crop.
- For leaf lettuce, do not apply more than 2 lb/acre active ingredient (5 pt/acre Kerb 3.3 SC) per crop, or more than 4 lbs active ingredient (10 pt/acre Kerb 3.3SC) per acre per year.

# Aerial Application (For Use in Arizona and California)

Kerb<sup>®</sup> 3.3 SC herbicide may be applied by aircraft for preemergence control of susceptible grasses and broadleaf weeds in head or leaf lettuce. Kerb 3.3 SC must be applied at the dosage rate of 2.5 to 5.0 pints of product (1.0 to 2.0 pounds active ingredient) per treated acre depending on soil type (refer to comments under Dosage Chart above). Mix the specified amount of Kerb 3.3 SC in 10 to 20 gallons of water per acre for aerial application. For aerial applications of Kerb 3.3 SC on head or leaf lettuce, consult the label carefully for plantback information. Avoid drift to all other crops and non-target areas.

# Chemigation Application (For Use in Arizona and California)

Kerb 3.3 SC herbicide may be applied by chemigation for weed control in direct seeded or transplanted head or leaf lettuce, endive, escarole or radicchio greens but must be applied prior to weed emergence. Application may be made preemergence to head or leaf lettuce, endive, escarole, or radicchio greens or postemergence to head or leaf lettuce. **Do not apply postemergence to endive, escarole, or radicchio greens.** 

**Application Rate:** Apply Kerb 3.3 SC at the rate of 1.25 to 2.5 pints per acre (0.5 to 1.0 lb active ingredient per acre) depending upon soil type, weed species and level of infestation.

Weeds	Pints Kerb 3.3 SC Per Acre Chemigation Application <sup>1</sup>	Soil Texture Group <sup>1</sup>
Susceptible annual grasses and broadleaf	1.25 to 2.5 (Surface application)	Coarse and medium textured soils
weeds	1.25 to 2.5 (Surface application)	Fine textured soils

<sup>1</sup> Soil Texture Group

Coarse: sand, loamy sand, sandy loam Medium: loam, silt loam, silt, sandy clay loam Fine: silty clay loam, clay loam, sandy clay, silty clay, clay

**Split Chemigation Application:** Kerb 3.3 SC chemigation application can be split so that part of the maximum allowable application rate of the product can be initially applied to head or leaf lettuce, endive, escarole or radicchio greens, and the balance of the maximum allowable application rate can be applied up to 10 days later. Total amount of Kerb 3.3 SC applied must not exceed 2.5 pints product (1 lb. active ingredient) per acre per crop season. For leaf lettuce, total amount of Kerb 3.3 SC applied must not exceed 2.5 pints product (1 lb. active ingredient) per acre per crop season. For leaf lettuce, total amount of Kerb 3.3 SC applied must not exceed 2.5 pints product (2 lbs active ingredient) per acre per year. For split applications, follow pre harvest interval based on total amount of product applied per crop.

**Application Moisture Requirements:** Kerb 3.3 SC acts mainly through root absorption; therefore, it is necessary to move Kerb 3.3 SC into the root zone of germinating weeds to provide effective control. This can be accomplished by applying a minimum of 0.75 inch of overhead sprinkler irrigation when applied by chemigation to fields that have been pre-irrigated.

**Time of Treatment:** Applying Kerb 3.3 SC after initial irrigation of the crop may help limit movement of the herbicide below the root zone of germinating weeds and may improve weed control. Depending on climatic conditions, chemigation generally should be within three to six days after the first post-plant

irrigation. The following recommendations are provided as a general guideline for AZ and CA desert growing conditions. Optimal chemigation timing for other growing areas may differ from those listed below.

Timing	Date	Application Timing (Days After Starting Sprinklers)
early	Sept. 1 to Oct 15	1 – 3
mid	Oct 15 to Dec 15	3 – 6
late	Dec 15 to Jan	5-6

**Chemigation Equipment:** Kerb 3.3 SC may be applied through center pivot, lateral move, solid set or hand move systems capable of uniform delivery of the herbicide. Solid set or hand move systems should be capable of delivering a uniform pressure of 60 to 70 psi at all nozzles. Pipes and nozzles must be positioned to provide uniform coverage of the treatment area. Placement of nozzles in diamond shaped ( $\blacklozenge$ ) pattern will provide more uniform coverage. Do not apply when wind velocity is sufficient to distort uniformity of coverage or cause drift to susceptible non-target plants.

The injection-metering pump must be calibrated as specified by the manufacturer and checked periodically during application to insure proper operation. Pesticide injection hoses, which connect chemigation-metering equipment to the sprinkler irrigation system, should be of braided reinforced construction with an internal tube made of nylon, cross-linked polyethylene, or high-density polyethylene.

**Mixing:** Mixing tanks should be large enough to contain the entire amount of herbicide mixture for the area to be treated. Use a minimum of 3 gallons of water per 1.2 pints of Kerb 3.3 SC. Agitation of the herbicide mixture is required at all times during mixing and application (injection).

**Application:** For hand move or solid set systems set to deliver about 1/10 inch of water per hour, Kerb 3.3 SC should be injected over a period of 1 to 2 hours. Once the herbicide has been injected, continue irrigation for at least the time required to flush the system and deliver additional irrigation sufficient to incorporate the herbicide into the upper inch of soil.

#### Chemigation Use Restrictions for Head or Leaf Lettuce, Endive, Escarole or Radicchio Greens

- Do not apply Kerb 3.3 SC to direct seeded varieties of head lettuce, endive, escarole and radicchio greens that will be harvested less than 55 days after treatment or transplanted head lettuce that will be harvested less than 35 days after application.
- For use on leaf lettuce, follow the table below for preharvest intervals based on the total application rate per crop. For split applications, follow pre harvest interval based on total amount of product applied per crop, not based on the split rate amount applied.

phoa por crop, not bacca on the opiciate amount apprea		
Use rate	PHI	
Up to 1.25 pts/A (0.5 lbs ai/A)	25 days	
Up to 1.8 pts/A (0.75 lb ai/A)	35 days	
Up to 2.5 pts/A (1.0 lbs ai/A)	45 days	

- Do not apply more than one application of Kerb 3.3 SC per crop to head or leaf lettuce, endive, escarole, or radicchio greens or more than two applications if split application is made.
- Do not apply Kerb 3.3 SC postemergence to endive, escarole, or radicchio greens.
- For head lettuce, endive, escarole, or radicchio greens, do not apply more than 1 lb/acre active ingredient (2.5 pts/acre of Kerb 3.3 SC) per crop.
- For leaf lettuce, do not apply more than 1 lb/acre active ingredient (2.5 pts/acre Kerb 3.3 SC) per crop, or more than 2 lbs active ingredient (5 pints Kerb 3.3SC) per acre per year.

#### **Chemigation Instructions**

Do not apply this product through any irrigation system unless the instructions for chemigation are followed. Apply this product only through continuously moving center pivot, lateral move end tow, solid set, or hand move irrigation systems. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers, or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems on the pesticide container label are in place.

A person knowledgeable of the chemigation system and responsible for its operation or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

#### **Sprinkler Chemigation**

- 1. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system.
- 2. The system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back-flow.
- 3. The pesticide injection pipeline must contain a functional automatic, quick closing check valve to prevent the fluid back toward the injection pump.
- 4. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- 5. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- 6. The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point that pesticide distribution is adversely affected.
- 7. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- 8. Do not apply when wind speed favors drift beyond the area intended for treatment.

# Rhubarb

# (Michigan, Oregon, and Washington Only)

#### **Product Information**

Kerb 3.3 SC is a selective herbicide for fall and winter applications to established rhubarb for both preemergence and postemergence control of winter annual and perennial grasses and chickweed and preemergence control of certain broadleaf weeds.

#### Dosage

Kerb 3.3 SC may be applied at the rate of 2.5 to 5.0 pints of product (1 to 2 lb active ingredient) per acre broadcast application. The rate will depend on the weed species present. Follow the weed control instructions listed in the chart below:

Weeds Controlled	Pints Kerb 3.3 SC Per Acre <sup>1</sup> Dependable Rainfall or Overhead Irrigation <sup>2</sup>
bluegrass, annual	2.5
brome, downy (cheatgrass)	
chickweed	
henbit	
oat, wild	
sorrel, red (from seed)	
bentgrass <sup>3</sup>	5.0
bluegrass, Kentucky	
fescue, tall <sup>3</sup>	
orchardgrass <sup>3</sup>	
quackgrass	
ryegrass, perennial	
velvetgrass <sup>3</sup>	

<sup>1</sup> Dosage rates specified are in pints of Kerb 3.3 SC per acre broadcast application. Reduce rates accordingly for banded applications.

- <sup>2</sup> For effective weed control, rainfall or overhead irrigation is essential following the application of Kerb 3.3 SC.
- <sup>3</sup> Kerb 3.3 SC at the rate of 5.0 pints of product per acre may only provide partial control to these weeds.

#### **Crop Sensitivity**

Apply to established rhubarb plants in a dormant growth condition to avoid injury. Do not apply Kerb 3.3 SC to newly transplanted rhubarb or to rhubarb during the active growing stage.

#### **Timing and Application**

Apply Kerb 3.3 SC in a single application during the fall or winter months as a broadcast surface application to dormant rhubarb. Optimum herbicidal activity occurs when applications are made after soil temperatures drop to 55°F or less and are followed by rainfall or overhead irrigation. Applications must be made prior to soil freeze up and snow cover.

Mix the specified amount of Kerb 3.3 SC in clean water and apply uniformly with a low-pressure ground sprayer in 20 to 50 gallons of water per acre.

# **Rhubarb - Specific Use Restrictions**

- Do not apply Kerb 3.3 SC to rhubarb within 38 days of harvest.
- Use of Kerb 3.3 SC in rhubarb is restricted to Michigan, Oregon, and Washington only.
- Do not apply more than 5.0 pints/acre (2 lb active ingredient) Kerb 3.3 SC or make more than one application per year.

# Apple, Apricot, Cherry, Nectarine, Peach, Pear, Plum, Prune and Grape Plantings

#### **Product Information**

Kerb 3.3 SC is a selective herbicide for use in directed spray applications for the control of winter annual and perennial grasses and certain broadleaf weeds in non-bearing and bearing apples, apricots, cherries, nectarines, peaches, pears, plums, prunes, and grape plantings.

#### Weed Control

Kerb 3.3 SC is effective at 2.5 to 9.5 pints of product (1 to 4 lb active ingredient) per treated acre for the preemergence and postemergence control of susceptible winter annual and perennial grasses and chickweed and for preemergence control only of other broadleaf weeds listed on this label. Refer to chart in dosage rate section below for specific weeds controlled.

#### **Dosage and Timing**

Kerb 3.3 SC may be applied in a single, directed application to labeled fruit trees and grape plantings at dosage rates of 2.5 to 9.5 pints of product (1 to 4 lb active ingredient) per treated acre. Application of Kerb 3.3 SC must be in the fall, after the fruit is harvested, but prior to soil freeze-up.

The dosage rate required for effective weed control will depend on the weed species present and the soil texture of the area being treated. Follow the specific rate instructions given in the chart below for the use of Kerb 3.3 SC in labeled fruit trees and grapes:

	Dep O	Pints Kerb 3.3 SC Per Acre Dependable Rainfall or Overhead Irrigation		
	Sc	oil Texture Groι	ւթ <sup>1</sup>	
Weeds Controlled	Coarse	Medium	Fine	
bluegrass, annual brome, downy (cheatgrass) chickweed grain, volunteer oat, wild ryegrass, Italian sorrel, red (from seed)	2.5	3.5	5.0	
bluegrass, Kentucky fescue, tall orchardgrass quackgrass ryegrass, perennial	3.5 – 5.0	5.0 - 7.0	7.0 – 9.5	

<sup>1</sup> Soil Texture Group:

**Coarse**: sand, loamy sand, sandy loam **Medium**: loam, silt loam, silt, sandy clay loam **Fine**: silty clay loam, clay loam, sandy clay, silty clay, clay.

#### Application

Mix the specified amount of Kerb 3.3 SC in clean water and apply uniformly in 40 to 50 gallons of water per acre. Use a low pressure ground sprayer equipped with a breakaway boom and flat fan or off-center (OC) nozzles. Direct Kerb 3.3 SC to the soil and the base of trees and vines.

**Note:** Dosage instructions listed on this label are for surface broadcast application. For banded treatments, the amount of Kerb 3.3 SC used per acre should be reduced according to the following formula:

Width (in inches)		Rate per		Amount Needed per Acre
Row Width (in inches)	Х	Acre Broadcast	=	for Band Application

Kerb 3.3 SC may not be soil incorporated.

#### **Crop Sensitivity**

Apply to established non-bearing or bearing fruit trees and grapes listed on this label to avoid injury. Kerb 3.3 SC may not be applied to seedling trees or vines less than 1 year old or to fall transplanted stock transplanted less than 1 year or to spring transplanted stock transplanted less than 6 months.

#### **Cultural Considerations**

Kerb 3.3 SC acts mainly through root absorption in sensitive weed species. Dependable rainfall or overhead irrigation is essential following the application for effective weed control. Trash-free areas

create ideal conditions for rapid movement of Kerb 3.3 SC into the weed root zone following rain or irrigation. Clean cultivation before application is preferable but not necessary.

To obtain optimum weed control in areas not clean cultivated, the area to be treated must be free of surface litter (dead or decaying weeds, leaves, mowing clippings, etc.) If area to be treated is under a mixed grass or weed sod, it must be mowed and the clippings removed.

# Apple, Apricot, Cherry, Nectarine, Peach, Pear, Plum, Prune, and Grape Plantings - Specific Use Restrictions

- Do not feed or allow livestock to graze areas treated with Kerb 3.3 SC.
- Do not apply more than 4 lb/acre active ingredient (9.5 pints/acre of Kerb 3.3 SC) to labeled fruit trees or grapes or make more than one application per year.

# Winter Peas

# Winter Annual Weed Control In Winter Peas (Idaho, Oregon and Washington Only)

#### **Product Information**

Kerb 3.3 SC is a selective herbicide for the control of certain winter annual grasses and broadleaf weeds in winter peas (*Pisum sativum* var. arvense).

#### Grasses

barley, volunteer brome, downy oat, volunteer oat, wild ryegrass, Italian wheat, volunteer

#### **Broadleaf Weeds**

chickweed, common chickweed, mouse-ear henbit<sup>1</sup>

<sup>1</sup> Preemergence control only

#### Dosage

Apply Kerb 3.3 SC in a single, broadcast application at the rate of 2.0 to 3.5 pints of product (0.75 to 1.5 lb active) per treated acre. For grass weeds greater than three inches in height use the higher rate.

#### Timing

Apply Kerb 3.3 SC from mid-fall to early winter (November to January) early postemergence to the peas. Peas should be in the second node stage of growth (two to three inches in size) at time of application.

#### Application

Mix the specified amount of Kerb 3.3 SC in clean water and apply uniformly with a ground sprayer in 20 to 50 gallons of water per treated acre. Use a conventional herbicide sprayer equipped with flat fan nozzles that provide uniform spray distribution. Do not feed treated vines to livestock or allow animals to graze on treated areas.

#### Winter Peas - Specific Use Restrictions

- Do not feed treated vines to livestock or allow animals to graze on treated areas.
- Do not apply more than 1.5 lb/acre active ingredient (3.5 pints/acre Kerb 3.3 SC) or make more than one application per year.

# Woody Ornamentals, Nursery Stock of Ornamentals, Christmas Trees

#### **Product Information**

Kerb 3.3 SC is a selective herbicide for fall applications to established woody ornamentals, nursery stock of ornamentals, and Christmas trees for the control of winter annual and perennial grasses and certain broadleaf weeds.

# Crop Sensitivity

At specified rates of Kerb 3.3 SC the following trees and shrubs can tolerate topical applications made in the fall:

arborvitae	firethorn	mountain ash
ash	flowering cherry	mountain laurel
azalea	flowering crabapple	oak
barberry	flowering quince	Ohio buckeye
basswood	forsythia	pine
beech	ginkgo	poplar
birch	hawthorn	privet
boxwood	hemlock	rhododendron
Bradford pear	holly	spirea
cedar	honey locust	spruce
cotoneaster	juniper	sweetgum
dogwood	lilac	sycamore
Douglas-fir	linden	tuliptree
eastern redbud	London plane	viburnum
elm	magnolia	walnut
euonymus	maple	willow
fir	mock orange	yew

Kerb 3.3 SC may be used on established trees and woody ornamentals. Kerb 3.3 SC may not be used on seedling trees or shrubs less than one year old or to fall transplanted stock transplanted less than one year or to spring transplanted stock transplanted less than six months.

# Weed Control

Kerb 3.3 SC may be applied in fall applications at the rate of 2.5 to 5.0 pints of product (1 to 2 lb active ingredient) per broadcast acre for the preemergence and postemergence control of susceptible winter annual and perennial grasses and chickweed and for preemergence control only of other broadleaf weeds listed on this label. Refer to chart in Dosage and Timing section below for specific weeds controlled.

# **Dosage and Timing**

Kerb 3.3 SC may be applied in a single, fall application, either directed or topically applied, to woody ornamentals, nursery stock of ornamentals, or Christmas trees at the rate of 2.5 to 5.0 pints of product (1 to 2 lb active ingredient) per broadcast acre. Apply Kerb 3.3 SC in the fall prior to leaf drop and soil freeze-up. For control of winter annual or perennial grasses or chickweed, applications can be made either preemergence or postemergence to the weeds. For control of other labeled broadleaf weeds, preemergence applications must be used to achieve control.

The dosage rate required will depend on the weed species present in the area to be treated. Follow the weed control instructions given in the chart below:

	Pints Kerb 3.3 SC Per Acre
Weeds Controlled	Broadcast Application
barley, foxtail	2.5
bluegrass, annual	
brome, downy (cheatgrass)	
chickweed	
grain, volunteer	
ryegrass, Italian	
sorrel, red (from seed)	
mustard, wild	3.5
rocket, London	
shepherdspurse	
bluegrass, Kentucky	5.0
orchardgrass	
quackgrass	
ryegrass, perennial	

#### Application

Mix the specified amount of Kerb 3.3 SC in clean water and apply uniformly in 20 to 50 gallons per acre. Use a low pressure ground sprayer equipped with flat fan nozzles spaced to provide uniform distribution. Dosages listed on this label are for surface broadcast application. For banded treatments down the row, reduce the amount of Kerb 3.3 SC used per acre according to the following formula:

Band Width (in inches)		Rate per		Amount Needed per Acre
Row Width (in inches)	Х	Acre Broadcast	=	for Band Application

Kerb 3.3 SC must not be soil incorporated.

**Note**: Most ornamental turf grass species and ground covers are sensitive to Kerb 3.3 SC. Avoid contact of Kerb 3.3 SC with these plants from either direct application, spray drift or from applications to areas that may drain onto established ornamental turf and ground cover.

# Soil and Moisture Requirements

Kerb 3.3 SC is most active in coarse to medium textured soils of low organic matter and is relatively inactive in peat or muck soils or mineral soils high in organic matter content at rates specified in this label. Herbicidal activity is best in soils containing less than 4 percent organic matter. Use in soils of higher organic matter content may result in inconsistent or incomplete weed control.

Kerb 3.3 SC acts mainly through root absorption in sensitive weed species. Dependable rainfall or overhead irrigation is essential following application for effective weed control.

# Woody Ornamentals, Nursery Stock of Ornamentals, Christmas Trees - Specific Use Restrictions

- Apply Kerb 3.3 SC in the fall prior to soil freeze-up.
- Do not soil incorporate Kerb 3.3 SC.
- Do not harvest plants for food or feed for at least one year after treatment.
- Do not apply more than 2 lb/acre active ingredient (5.0 pints/acre Kerb 3.3 SC) or make more than one application per year.

# ATTENTION: This product contains propyzamide (pronamide) a chemical known to the State of California to cause cancer.

# **Terms and Conditions of Use**

If terms of the following Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid.

Otherwise, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies.

# Warranty Disclaimer

Dow AgroSciences 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 permitted by law, Dow AgroSciences 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. Plant 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 temperature, 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 Dow AgroSciences or the seller. All such risks shall be assumed by buyer.

# **Limitation of Remedies**

To the extent permitted by 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 Dow AgroSciences' 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 permitted by law, Dow AgroSciences shall not be liable for losses or damages resulting from handling or use of this product unless Dow AgroSciences is promptly notified of such loss or damage in writing. To the extent permitted by law, in no case shall Dow AgroSciences be liable for consequential or incidental damages or losses.

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

 $^{\odot}$  Trademark of The Dow Chemical Company ("Dow") or an affiliated company of Dow EPA accepted \_\_/\_/\_

[Alternate Brand Names: Kerb SC (sub-label A), Kerb SC T&O (sub-label B)]

[Sub-Label B – T&O Uses] (Base label):

# Kerb<sup>®</sup> 3.3 SC [Kerb SC T&O – Alternate Brand Name] Specialty Herbicide

For use on turf grown for sod, nonresidential sites, golf courses, industrial and office building sites, stadium fields or professional athletic fields; woody ornamentals, ornamental nursery stock, and Christmas trees

Group	3	HERBICIDE
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Active Ingredient:

pronamide: 3,5-dichloro-N-

(1,1-dimethyl-2-propynyl) benzamide	35.6%
Other Ingredients	<u>64.4%</u>
Total	100.0%

Contains 3.3 lbs of active ingredient per gallon.

# Keep Out of Reach of Children **CAUTION**

# **Precautionary Statements**

# Hazards to Humans and Domestic Animals

Causes Moderate Eye Irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using toilet.

# Personal Protective Equipment (PPE):

- Applicators and other handlers must wear:
- Coveralls over short-sleeved shirt and short pants
- Waterproof gloves
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing or loading

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

When handlers use enclosed cabs or aircraft in a manner that meet 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.

# User Safety Recommendations

#### Users should:

- Remove clothing 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.

# First Aid

**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 eye. Call a Poison Control Center or doctor for treatment advice.

**Note:** Have the product container or label with you when calling a Poison Control Center or doctor or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

# **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.

# **Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

# Nonrefillable rigid containers 5 gallons or less:

# Storage and Disposal

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

**Pesticide Storage:** Store in a cool, dry place but not below 32°F (0°C). Do not remove package from container except for immediate use.

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

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Triple rinse or pressure 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 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

# **Refillable containers larger than 5 gallons:**

# Storage and Disposal

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

**Pesticide Storage:** Store in a cool, dry place but not below 32°F (0°C). Do not remove package from container except for immediate use.

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

**Container Handling:** 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 a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

#### Nonrefillable rigid containers larger than 5 gallons:

# Storage and Disposal

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

**Pesticide Storage:** Store in a cool, dry place but not below 32°F (0°C). Do not remove package from container except for immediate use.

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

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Triple rinse or pressure 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 1/4 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. **Pressure rinse** as follows: Empty the remaining contents into application equipment or mix tank or collect rinsate for later use or disposal. Insert upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

#### Refer to label booklet for Directions for Use.

Notice: Read the entire label. Use only according to label directions. Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-578

EPA Est.

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(cover/shipping container):

# Kerb<sup>®</sup> 3.3 SC [Kerb SC T&O – Alternate Brand Name] Specialty Herbicide

For use on turf grown for sod, nonresidential sites, golf courses, industrial and office building sites, stadium fields or professional athletic fields; woody ornamentals, ornamental nursery stock, and Christmas trees

Group	3	HERBICIDE
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Active Ingredient:

pronamide: 3,5-dichloro-N-	
(1,1-dimethyl-2-propynyl) benzamide	35.6%
Other Ingredients	64.4%
Total	

Contains 3.3 lbs of active ingredient per gallon.

# Keep Out of Reach of Children **CAUTION**

# **Agricultural Use Requirements**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

# Refer to label booklet for Directions for Use.

Notice: Read the entire label. Use only according to label directions. Before using this product, read Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies at end of label booklet. If terms are unacceptable, return at once unopened.

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-578

EPA Est.

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(Page 1 through end):

# **Precautionary Statements**

Hazards to Humans and Domestic Animals

Keep Out of Reach of Children CAUTION

Causes Moderate Eye Irritation. Avoid contact with eyes or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using toilet. Personal Protective Equipment (PPE):

# Applicators and other handlers must wear:

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

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

When handlers use enclosed cabs or aircraft in a manner that meet 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.

# **User Safety Recommendations**

#### Users should:

- Remove clothing 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.

# First Aid

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 eye. Call a Poison Control Center or doctor for treatment advice.

Note: Have the product container or label with you when calling a Poison Control Center or doctor or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

# **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.

# **Directions for Use**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

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 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 24 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 over short-sleeved shirt and short pants
- Waterproof gloves
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure

# **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.

For all uses except those specified below, do not enter or allow others to enter until sprays have dried. When applied to stadium or professional athletic fields, water-in immediately after application or, do not enter or allow others to enter treated area for 24-hours after application. If product is watered-in after treatment, do not enter or allow other persons to enter until area has dried.

# **Storage and Disposal**

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

**Pesticide Storage:** Store in a cool, dry place but not below 32°F (0°C). Do not remove package from container except for immediate use.

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

# Nonrefillable containers 5 gallons or less:

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Triple rinse or pressure 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 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

# Refillable containers larger than 5 gallons:

**Container Handling:** 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 a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

#### Nonrefillable containers larger than 5 gallons:

**Container Handling:** Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Triple rinse or pressure 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 1/4 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. **Pressure rinse** as follows: Empty the remaining contents into application equipment or mix tank or collect rinsate for later use or disposal. Insert upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

# Product Information

Kerb<sup>®</sup> SC T&O specialty herbicide is effective for the control of a wide range of grasses and certain broadleaf weeds. The product is a soil active herbicide with uptake by sensitive weeds occurring through the roots. Before using this herbicide for a specific use, study the following general use information that provides important instructions for the safe and effective application of the product.

#### **Use Restrictions:**

Only hand-spray applications of pronamide are permitted to ornamentals and nursery stocks.

This product may only be used on turf grown for sod or on nonresidential sites including golf courses, industrial and office building sites, stadium fields, or professional athletic fields. This product may also be used on non-residential woody ornamentals, ornamental nursery stock, and Christmas trees.

**Chemigation:** Do not apply this product through any type of irrigation system unless specified by other labeling.

Aerial Application: Do not apply by air unless specified by other labeling.

# **Spray Drift Management**

Do not apply when weather conditions may cause drift to nontarget areas. Drift may result in injury to adjacent crops and vegetation.

Applications must be made at the lowest height above the target area that still provides uniform coverage of the target. Making applications at the lowest yet effective height reduces exposure of droplets to wind.

Avoiding spray drift at the application site is the responsibility of the applicator. The potential for spray

drift is determined by the interaction of many equipment-and-weather-related factors. The applicator and the grower are responsible for considering all these factors when making decisions.

**Sensitive Areas:** The pesticide must only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

# **Resistance Management**

Kerb SC T&O is a Group 3 herbicide. Any weed population may contain or develop plants naturally resistant to this product and other Group 3 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Kerb SC T&O may not control known Group 3 resistant biotypes or labeled weeds, but has been shown to control *Poa annua* with resistance to other Group 3 herbicides. Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance management strategies should be followed.

To delay herbicide resistance:

- Where possible, rotate the use of Kerb SC T&O or other Group 3 herbicides with different herbicide groups that control the same weeds in a field.
- For best resistance management stewardship, avoid use more than once per season and use Kerb SC T&O in programs with other herbicides with different modes of action.
- Where possible, rotate the use of Kerb SC T&O or other Group 3 herbicides with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group when such use is permitted.
- Herbicide use should be based upon an IPM program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical), cultural, biological and other chemical control practices.
- Monitor treated weed populations for resistance development
- Prevent movement of resistance weed seeds to other fields by cleaning harvesting and tillage equipment and planting clean seed.
- Contact your local extension specialist or certified crop advisers for any additional pesticide resistance management and/or integrated weed management requirements for specific crops and weed biotypes.

# Weed Spectrum

Kerb SC T&O may be used for both preemergence and early postemergence control of winter annual and perennial grasses and chickweed and for preemergence control only of certain other broadleaf weeds and certain other grasses listed.

# Weeds Controlled Both Preemergence and Early Postemergence

Weeds Controlled Dottri Freemer	genice and Larry i Osternergene
barley, foxtail	Hordeum jubatum
barley, volunteer	Hordeum vulgare
Bentgrass	Agrostis species
bluegrass, annual	Poa annua
bluegrass, bulbous	Poa bulbosa
bluegrass, Kentucky	Poa pratensis
brome, downy (cheatgrass)	Bromus tectorum
chickweed, common	Stellaria media
chickweed, mouse-ear	Cerastium vulgatum
fescue, tall	Festuca arundinaceae
goatgrass, jointed	Aegilops cylindrica

oat, volunteer	Avena sativa
oat, wild	Avena fatua
orchardgrass	Dactylis glomerata
Quackgrass	Agropyron repens
rye, volunteer	Secale cereale
ryegrass, Italian	Lolium multiflorum
ryegrass, perennial	Lolium perenne
Velvetgrass	Holcus lanatus
wheat, volunteer	Triticum aestivum

#### Weeds Controlled Only Preemergence

barnyardgrass canarygrass Carpetweed crabgrass, large dodder, field foxtail, yellow goosefoot, nettleleaf Goosegrass Henbit knotweed, prostrate lambsquarters, common Lovegrass mallow, little (cheeseweed) morningglory, annual mustard, wild nettle, burning nightshade, black nightshade, hairy panicum, fall purslane, common radish, wild rocket, London Shepherdspurse smartweed, pale sorrel, red (from seed) tomato, volunteer

Echinochloa crus-galli Phalaris canariensis Mollugo verticillata Digitaria sanguinalis Cuscuta campestris Setaria lutescens Chenopodium murale Eleusine indica Lamium amplexicaule Polygonum aviculare Chenopodium album Eragrostis diffusa Malva parviflora Ipomoea purpurea Brassica kaber Urtica urens Solanum nigrum Solanum sarrachoides Panicum dichotomiflorum Portulaca oleracea Raphanus sativus Sisymbrium irio Capsella bursa-pastoris Polygonum lapathifolium Rumex acetosella Solanum esculentum

**Note:** The weed species controlled by Kerb SC T&O are dependent on the rate used, specific crop or plant culture involved, and the associated conditions of temperature, soil type and moisture availability. Refer to specific use directions for weed species controlled.

#### Dosage

All dosage instructions listed in this label are in terms of pints of product per broadcast acre or pounds of active ingredient per broadcast acre. For banded application, the amount of Kerb SC T&O used per acre must be reduced according to the following formula:

<u>Band Width (in inches)</u>		Rate per		Amount Needed per Acre
Row Width (in inches)	Х	Acre Broadcast	=	for Band Application

# **Timing and Application**

Unless specific directions are given under the site to be treated, Kerb SC T&O should be applied in the fall or early winter, preferably prior to freeze-up. Under field conditions, Kerb SC T&O will remain relatively stable with little loss of herbicidal activity when soil temperatures are less than 55°F. As soil temperatures increase, degradation of the active ingredient takes place. Kerb SC T&O may degrade

rather quickly if left exposed on the soil surface in warm weather. If Kerb SC T&O is applied when air temperatures exceed 85°F or soil temperatures exceed 55°F the product must be soil incorporated or watered into the soil within 24 hours. The herbicidal activity of Kerb SC T&O is mainly through root absorption in sensitive weed species. Rain or irrigation is **essential** following treatment to move Kerb SC T&O into the root zone of germinating weeds, this is true whether soil temperatures are below or above 55 degrees. Best weed control results occur when Kerb SC T&O is applied preemergence to the weeds and when application is followed by rainfall or irrigation to move the product into the root zone of the germinating weeds.

Mix Kerb SC T&O thoroughly in clean water at the required concentration and apply uniformly as a spray. For ground application, use a conventional low-pressure herbicide sprayer equipped with flat fan nozzles spaced and calibrated to uniformly deliver 20 to 50 gallons of spray per acre. Accurately calibrate spray equipment prior to each use. Be careful not to overlap spray on sensitive sites such as golf course greens.

# **Compatibility with Other Pesticides**

Kerb SC T&O is compatible with most commonly used agricultural pesticides, crop oil concentrates and adjuvants. When preparing tank mixes, user should consult spray compatibility charts or State Cooperative Extension Service Specialists prior to actual use. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use(s). Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

# Effect of Soil Type, Moisture and Temperature

Kerb SC T&O is most active in coarse to medium textured soils of low organic matter and relatively inactive in peat or muck soils or mineral soils high in organic matter content at rates specified in this label. Herbicidal activity is best in soils containing less than 4 percent organic matter. Use in soils with higher organic matter may result in inconsistent or incomplete weed control.

The herbicidal activity of Kerb SC T&O is mainly through root absorption in sensitive weed species. Rain or irrigation is **essential** following treatment to move Kerb SC T&O into the root zone of germinating weeds.

Under field conditions, Kerb SC T&O will remain relatively stable with little loss of herbicidal activity when soil temperatures are less than 55°°F. As soil temperatures increase, degradation of the active ingredient takes place. Kerb SC T&O may degrade rather quickly if left exposed on the soil surface in warm weather. If Kerb SC T&O is applied when air temperatures exceed 85°F, the treatment must be soil incorporated to a shallow depth (top two to three inches) or watered into the soil within 24 hours of application.

# **Cultural Considerations**

For best results apply Kerb SC T&O to a trash-free soil surface or turf. To obtain optimum weed control, the area to be treated must be free of surface litter (dead or decaying weed debris, mowing clippings, etc.). Trash-free areas create ideal conditions for rapid movement of Kerb SC T&O into the weed root zone following rain or irrigation.

# **Rotation Crop Planting Information**

Follow the directions given below if or when rotation crops may be planted to areas previously treated with Kerb SC T&O:

#### Waiting Period in Days before Planting the Crops Indicated (1):

Kerb SC T	coot and Tuber getables	Brassica Leafy Vegetables, Cucurbits, Fruiting Vegetables, and Bulb Vegetables	Leafy Vegetables (except Brassica Vegetables) and Legumes	Cereal Grains	All Other Rotated Crops (1)			

Up to 5.0 pints (2.0 lb ai/acre)         90         45	30	180	365	
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(1) There are no plant back restrictions for Kerb SC T&O when rotating to artichokes, grapes, berry fruits, pome fruits, or stone fruits.

Whether Kerb SC T&O is bed-topped, banded or broadcast, the beds must be knocked down and the field cross-disced before rotation crops other than artichokes, head or leaf lettuce, endive, radicchio or escarole are planted.

Where the Kerb SC T&O treatment is to be followed by a rotation crop within 180 days of application, bed-topped or banded applications are suggested.

# Turfgrass

This product may only be used on turf grown for sod or on nonresidential turf sites, golf courses including greens and tees, industrial and office building sites, stadium fields or professional athletic fields. This product may also be used on non-residential woody ornamentals, ornamental nursery stock, and Christmas trees.

#### **Product Information**

Kerb SC T&O is a selective herbicide for the preemergence and postemergence control of annual bluegrass (*Poa annua*) from warm season grasses and the removal of perennial rye grass (*Lolium perenne*) from warm season grasses during spring transition. Warm season grasses that can tolerate Kerb SC T&O include bermudagrass, Seashore paspalum, Zoysiagrass, St. Augustinegrass, and Centipedegrass.

#### Application

Mix the specified amount of Kerb SC T&O in clean water and apply uniformly with a low pressure ground sprayer in 20 to 50 gallons of water per acre or 0.5 to 1 gallon of water per 1000 sq ft. The sprayer should be equipped with flat fan nozzles, spaced to provide uniform distribution without skips or excessive overlapping of spray patterns.

# Important Note: Avoid spraying on fairways, hillsides, or approaches that may drain onto bentgrass greens or to areas overseeded with sensitive cool season grasses.

**Do not make an application of a wetting agent** for the purpose of frost protection or soil penetration to greens or tees 14 days prior to or after a Kerb SC T&O application as injury may result.

#### **Moisture Requirements**

Kerb SC T&O acts mainly through root absorption in sensitive weed species. If no rainfall occurs within a day of the application, a light overhead irrigation **must be** made to move the chemical into the weed root zone. It is best to irrigate with 0.25 to 0.5 inch of irrigation within 24 hours of application. Avoid heavy irrigations of more than 1 inch to reduce the possibility of excess washing or leaching of the chemical from the area of application.

#### Kerb Deactivation for Overseeding

Where it is desirable to reseed sooner than 90 days following the application of Kerb SC T&O, an application of an activated charcoal such as Gro-Safe, is needed. Apply the activated charcoal at the rate of 10 lb per 1000 sq ft. Allow at least 14 days between the application of Kerb SC T&O and the application of charcoal for control of emerged annual bluegrass. Reseed no sooner than 7 days following charcoal application.

# Annual Bluegrass (Poa annua) Control

Kerb SC T&O will control annual bluegrass from pre-germination and seedling stages through tillering, heading, and seed formation. Kerb SC T&O acts slowly on seedling to mature annual bluegrass. Following application of Kerb SC T&O annual bluegrass may first become dark green and then gradually turn yellow and die over a 3- to 5-week period.

For effective control of annual bluegrass in turfgrass and sod, moisture is necessary to move Kerb SC T&O in the weed root zone. Refer to the Moisture Requirements section of this label for details.

#### **Dosage and Timing for Annual Bluegrass Control**

For annual bluegrass control Kerb SC T&O is applied at the rate of 1.25 to 3.5 pints of product (0.5 to 1.5 lb active ingredient) per acre broadcast application. The dosage rate required is dependent on the growth stage of annual bluegrass at time of application and the use site.

For application onto golf course greens, do not apply more than 2.5 pt/A (1 lb active ingredient) per application and ensure there is no overlap of the spray or turfgrass injury may occur. Split applications of the rate can be made but the total amount on greens should not exceed 1.5 lbs active ingredient. For most effective *Poa annua* control, particularly on golf course greens, make applications from early fall through December.

Annual Bluegrass Growth Stage	Kerb SC T&O pt/Acre <sup>1</sup> Broadcast Application	
Preemergence or early postemergence	1.25 – 2.5 <sup>2</sup>	
Postemergence – at early tillering to heading	2.0 – 2.5	
Postemergence – at seed forming stages	2.5 – 3.5 <sup>3</sup>	

Follow the dosage rate and timing instructions given below:

<sup>1</sup> One acre equals 43,560 sq. ft.

- <sup>2</sup> Use the higher rate when longer preemergence residual control is desired.
- <sup>3</sup> On golf course greens, do not apply more than 2.5 pts/acre (1 lb ai/acre) per application and be careful not to overlap spray patterns or turfgrass injury may occur.

# **Removal of Perennial Ryegrass from Warm Season Grasses**

Kerb SC T&O will remove perennial ryegrass from warm season grasses with post emergent applications during the spring to control the transition from cool season overseed to warm season grasses. Kerb SC T&O works slowly to control mature perennial ryegrass. After an application of Kerb SC T&O, perennial ryegrass will gradually die over a 4- to 6-week period. The length of this transition is dependent upon environmental factors such as temperature, rainfall and mowing height of the turf.

# Dosage and Timing for Removal of Perennial Ryegrass

For removal of perennial rye grass from warm season grasses, Kerb SC T&O may be applied at a rate of 1.25 to 2.5 pints of product (0.5 to 1 lb active ingredient) per broadcast acre. It is best to apply Kerb SC T&O to warm season grasses at 50% greenup for ryegrass removal. Application of Kerb SC T&O to dormant warm season grasses may slow greenup but typically the delay in green-up is not significantly longer than the turf that has not been treated. See section above for specific directions regarding deactivation for overseeding.

# **Turfgrass - Specific Use Restrictions**

- Do not apply by air.
- This product may be used on non-residential seeded, sodded, or sprigged turf that is well established. Use of this product on turf that has been weakened by weather-, pest-, disease-, chemical-, or mechanical-related stress may increase the chances of turf injury.
- This product must only be applied to turf areas that are composed of the following turfgrass species:
  - Bermudagrass (Cynodon dactylon)
  - Centipedegrass (*Eremochloa ophiuroides*)

- Seashore paspalum (*Paspalum vaginatum*)
- St. Augustinegrass (Stenotaphrum secundatum)
- Zoysiagrass (Zoysia japonica)
- Apply no more than 3.5 pint/acre of Kerb SC T&O (1.5 lbs active ingredient/acre) per application. Make no more than 3 applications of Kerb SC T&O per year or exceed 4.5 lbs ai/acre per year.
- On golf course greens do not exceed 2.5 pint/acre (1 lb ai/acre) per application. Ensure there is no overlap of the spray pattern or turf grass injury may occur. Split applications of the rate can be made but the total amount on greens should not exceed 3.5 pt/acre (1.5 lbs ai/A).
- Dow AgroSciences has not screened Kerb SC T&O on all the new Ultra dwarf bermudagrass turf varieties. Before using on these new ultra dwarf varieties test on nursery greens prior to application on golf course greens. Observe response for 30 days to insure any potential injury would be acceptable.
- Avoid spraying on hill sides, fairways, or approaches that may drain onto bentgrass greens or to areas overseeded with sensitive cool season grasses.
- Do not make an application of a wetting agent for the purpose of frost protection or soil penetration to greens 14 days prior to or after a Kerb SC T&O application as injury may result.
- Do not apply Kerb SC T&O herbicide to areas that are to be overseeded with susceptible cool season grasses within 90 days of treatment unless deactivation is planned.
- Do not apply Kerb SC T&O to desirable dichondra, perennial bluegrass, annual and perennial ryegrasses, fescues, and bentgrasses.
- Do not graze treated areas and do not feed clippings to livestock.

# Woody Ornamentals, Ornamental Nursery Stock, and Christmas Trees

#### **Product Information**

Kerb SC T&O is a selective herbicide for fall applications to established, non-residential woody ornamentals, ornamental nursery stock, and Christmas trees for the control of winter annual and perennial grasses and certain broadleaf weeds.

# **Crop Sensitivity**

At specified rates of Kerb SC T&O the following trees and shrubs can tolerate topical applications made in the fall:

Arborvitae	firethorn	mountain ash
ash	flowering cherry	mountain laurel
azalea	flowering crabapple	oak
barberry	flowering quince	Ohio buckeye
basswood	forsythia	pine
beech	ginkgo	poplar
birch	hawthorn	privet
boxwood	hemlock	rhododendron
Bradford pear	holly	spirea
cedar	honey locust	spruce
cotoneaster	juniper	sweetgum
dogwood	lilac	sycamore
Douglas-fir	linden	tuliptree
eastern redbud	London plane	viburnum
elm	magnolia	walnut
euonymus	maple	willow
fir	mock orange	yew

Kerb SC T&O may be used on established trees and woody ornamentals. Kerb SC T&O may not be used on seedling trees or shrubs less than one year old or to fall transplanted stock transplanted less than one year or to spring transplanted stock transplanted less than six months.

#### Weed Control

Kerb SC T&O may be applied in fall applications at the rate of 2.5 to 5.0 pints of product (1 to 2 lb active ingredient) per broadcast acre for the preemergence and postemergence control of susceptible winter annual and perennial grasses, and chickweed, and for preemergence control only of other broadleaf weeds listed on this label. Refer to chart in Dosage and Timing section below for specific weeds controlled.

#### **Dosage and Timing**

Kerb SC T&O may be applied in a single, fall application, either directed or topically applied, to woody ornamentals, ornamental nursery stock, or Christmas trees at the rate of 2.5 to 5.0 pints of product (1 to 2 lb active ingredient) per broadcast acre. Apply Kerb SC T&O in the fall prior to leaf drop and soil freezeup. For control of winter annual or perennial grasses or chickweed, applications can be made either preemergence or postemergence to the weeds. For control of other labeled broadleaf weeds, preemergence applications must be used to achieve control.

The dosage rate required will depend on the weed species present in the area to be treated. Follow the weed control instructions given in the chart below:

Weeds Controlled	Kerb SC T&O Per Acre Broadcast Application (pints)
barley, foxtail	2.5
bluegrass, annual	
brome, downy (cheatgrass)	
chickweed	
grain, volunteer	
ryegrass, Italian	
sorrel, red (from seed)	
mustard, wild	3.5
rocket, London	
shepherdspurse	
bluegrass, Kentucky	5.0
orchardgrass	
quackgrass	
ryegrass, perennial	

#### Application

Mix the specified amount of Kerb SC T&O in clean water and apply uniformly in 20 to 50 gallons per acre. Use a low pressure ground sprayer equipped with flat fan nozzles spaced to provide uniform distribution. Dosages listed on this label are for surface broadcast application. For banded treatments down the row, reduce the amount of Kerb SC T&O used per acre according to the following formula:

<u>Band Width (in inches)</u>		Rate per		Amount Needed per Acre
Row Width (in inches)	Х	Acre Broadcast	=	for Band Application

Kerb SC T&O must not be soil incorporated.

**Note**: Most ornamental turf grass species and ground covers are sensitive to Kerb SC T&O. Avoid contact of Kerb SC T&O with these plants from either direct application, spray drift or from applications to areas that may drain onto established ornamental turf and ground cover.

#### Soil and Moisture Requirements

Kerb SC T&O is most active in coarse to medium textured soils of low organic matter and is relatively inactive in peat or muck soils or mineral soils high in organic matter content at rates specified in this label. Herbicidal activity is best in soils containing less than 4 percent organic matter. Use in soils of higher organic matter content may result in inconsistent or incomplete weed control.

Kerb SC T&O acts mainly through root absorption in sensitive weed species. Dependable rainfall or overhead irrigation is essential following application for effective weed control.

# Woody Ornamentals, Ornamental Nursery Stock, and Christmas Trees - Specific Use Restrictions

- Apply Kerb SC T&O in the fall prior to soil freeze-up.
- Do not apply by air.
- Do not soil incorporate Kerb SC T&O.
- Do not harvest plants for food or feed for at least one year after treatment.
- Do not apply more than 2 lb/acre active ingredient (5.0 pints/acre Kerb SC T&O) or make more than one application per year.

# ATTENTION: This product contains propyzamide (pronamide) a chemical known to the State of California to cause cancer.

# Terms and Conditions of Use

If terms of the following Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. Otherwise, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies.

# Warranty Disclaimer

Dow AgroSciences 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 permitted by law, Dow AgroSciences 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. Plant 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 temperature, 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 Dow AgroSciences or the seller. All such risks shall be assumed by buyer.

# **Limitation of Remedies**

To the extent permitted by 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 Dow AgroSciences' 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 permitted by law, Dow AgroSciences shall not be liable for losses or damages resulting from handling or use of this product unless Dow AgroSciences is promptly notified of such loss or damage in writing. To the extent permitted by law, in no case shall Dow AgroSciences be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer, Inherent Risks of Use, and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Dow

AgroSciences 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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