

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.

Reentry Statement: Do not enter or allow people (or pets) to enter the treated area until sprays have dried.

1. Product Description

Brush Killer For Hard-To-Kill Brush is a post emergent herbicide that enters plants through their leaves, woody stems, and cut surfaces. Once in the plant the product moves throughout the plant's vascular system. Visual symptoms such as wilting and yellowing appear in 1 to 3 weeks depending on environmental conditions and plant species. It is effective in controlling woody plants, vines, and brush in pasture and rangeland including established grass pastures, rangeland, and perennial grasslands, Conservation Reserve Program (CRP) acres, non-crop land areas including fencerows, hedgerows, roadside ditches, rights-of-way, farmsteads, and other non-crop areas.

2. For Best Results

- Within the rate ranges specified on this label, the lower rates can be used for young, actively growing, sensitive weed species. The higher rates can be used for less sensitive species, perennials, and conditions where control is difficult (dense weed stands, larger weeds, stress conditions such as drought or extreme temperatures).
- Spring and fall treatments are preferred to summer treatments.
- Foliar applications should be applied during warm weather when plants are actively growing. Do not apply this product when temperatures are above 85°F as some injury to desirable grasses or turf may be expected.
- Application under low moisture or dry soil conditions may reduce herbicide effectiveness. Wet foliage at the time of application may decrease control.
- Applications of this product are rainfast within 3 hours after application. For best results avoid watering or irrigation for 24 hours after application.
- Extreme growing conditions such as drought or cold temperatures prior to, at the time of, or following an application may reduce or delay control.
- Do not reseed pastures until at least three weeks after treatment.
- Do not use on newly seeded grasses until grass has established a good root system and is tillering.
- Direct spray on target plants and minimize loss of product through spray drift.

3. Precautions

- Do not enter or allow people (or pets) to enter treated area until sprays have dried.
- This product will kill or injure all broadleaf and woody plants contacted. Do not directly spray areas containing desirable broadleaf plant species including legumes (such as clover or alfalfa), unless injury or loss of the plants can be tolerated. Do not allow this product to come into direct contact with cotton, grapes, tobacco, vegetable crops, citrus, flowers, fruit or ornamental trees, or other desirable broadleaf plants.
- For ground application only. Aerial applications are not permitted. Do not apply this product through any type of irrigation system.
- Do not apply to any body of water such as lakes, streams, rivers, ponds, reservoirs, or estuaries (salt water bays). Do not apply to any shorelines (non-cropland sites adjacent to the edges of a body of water) of lakes, streams, rivers, ponds, reservoirs, or estuaries (salt water bays). Do not apply to wetlands (swamps, bogs, potholes, or marshes). Do not apply to agricultural irrigation water or on agricultural irrigation ditchbanks and canals. Do not apply to agricultural drainage water or on agricultural ditchbanks.

4. Spray Preparation

Mixing with Water or Oil: Add one-half the required amount of water or oil to the spray tank, then add this product slowly with agitation, and complete filling the tank with water or oil. Mix thoroughly and continue agitation while spraying. When this product is left standing for extended periods of time (4 to 5 hours), re-agitate to assure uniformity of the spray mixture.

5. Application Rates for Treatment in Pastures, Rangeland, and Non-Cropland

Pastures and rangelands are defined as established grass pastures, rangeland, and perennial grasslands including the Conservation Reserve Program (CRP). Pastures established with these grasses may be treated: bahiagrass, bermudagrass, bluegrass, brome, reed canary-grass, fescue, orchardgrass, ryegrass, timothy, and wheatgrass.

Non-croplands are defined as fencerows, hedgerows, roadside ditches, non-irrigation ditchbanks, rights-of-way, farmsteads, and other non-crop areas.

5.1 Spot Treatment Application Rates for Control of Brush, Woody Plants and Vines

The spot treatment application rate is 2 to 5 fl.oz. per gallon of water. Spray brush, woody plants, and vines until foliage and green stems are thoroughly wet but not dripping. See Tables 1 and 2 for how to choose application rates and species controlled. Adjust sprayer nozzle to a coarse spray (low pressure, big droplet). Spray equipment options include all terrain vehicle (ATV) sprayers fitted with a spray wand or spray gun, backpack sprayers, and hand-operated or hand-held sprayers.



Spot treatments of brush, woody plants and vines should occur when plants are actively growing, in the full leaf stage in the spring to early summer and growing under favorable environmental conditions. For multiflora rose control and other wild roses, the best time for treatment may be expected during the early

to mid-flowering stage. (Depending on plant growth stage and environmental conditions at the time of application regrowth may occur on hard-to-control species requiring a follow-up treatment.) Delay mowing or clipping 2 days before or until 2 days after the application of this product. See Sections 5.3 and 5.4 for application restrictions.

Table 1. Spot Treatment Application Rates

Amount of product per 1 gallon of water	When to Use, Growing Conditions, Plant Stage
2.0 fl.oz.	Young, actively growing, easy to control species
3.0 fl.oz.	Mid size, actively growing, easy to control species
4.0 fl.oz.	Large plants or stress conditions such as drought or high temperatures
5.0 fl.oz.	Large, dense plant populations or hard to control species

Table 2. Brush, Woody Plants and Vines Controlled

Easy to Control Species:		
alder	hawthorn	sumac (including poison sumac)
ash	hemlock**	sycamore
beech	honeysuckle	tamarack
birch	maples	wax myrtle*
black locust	maples (bigleaf and	wild grape
boneset	vine use basal	wild plum**
cascara	stem treatment*)	wild roses**
Ceanothus spp.	poison ivy	willow
cottonwood	poison oak	
dogwood	sassafras*	
elderberry	scotch broom	
Harder to Control Species:		
Baccharis, eastern**	hackberry**	tropical soda apple
blackberry	hazel	trumpet creeper
buckbrush	honeylucust	(suppression)
(Symphoricarpos spp.)	(suppression)	Virginia creeper
(suppression)	Himalayan blackberry	wax myrtle
buckthorn**	kudzu	white oak
cherry (except black)	multiflora rose	
Chinese tallow tree**	osage orange	For control of blackberry and multiflora rose species consider dormant stem applications or basal bark treatments.
common persimmon	pine (suppression)	
(suppression)	Russian olive	
elm (except winged	salmonberry	
elm)	(suppression)	
gourd, Texas**	sweetgum	

*Top growth control only

**Not for use on these species in California

5.2 Spot Treatment of Individual Plants

Cut-stump or Cut-surface Application for Tree and Brush Control



To prevent or control regrowth from cut stumps, mix 16 fl.oz. of this product with 1 gallon of diesel oil or kerosene. Thoroughly wet the outer 1/3 of the flat cut surface and all of the vertical bark surface of the stump including crown buds and ground sprouts. Apply this to the freshly cut surface of the stump immediately after cutting. Delays in application may reduce the effectiveness. Cut-stump applications can be made at any time of the year except when snow, ice or water prevents spraying to the ground line. Use only one cut-stump or cut-surface application per year. See Sections 5.3 and 5.4 for application restrictions.

Basal Bark Application for Small Tree Control and Brush Control

For control of susceptible brush and small trees less than 6 inches in diameter, mix 16 fl.oz. of this product with 1 gallon of diesel oil or kerosene. Spray to a height of 15 to 20 inches from the ground level (known as the basal part of the brush or trees). Thoroughly wet all the basal bark area including crown buds and ground sprouts. Spray runoff should visibly wet the ground at the base of the stems or trunks. Basal applications can be made at any time of the year except when snow, ice or water prevents spraying to the ground line. Best results may be obtained with winter to early spring applications. Trees larger than 5 to 6 inches in diameter have bark too thick for basal sprays to penetrate and to reach the cambium. For trees larger than 5 to 6 inches in diameter use the cut-stump or cut-surface application. See Sections 5.3 and 5.4 for application restrictions.

Dormant Stem (no leaves or buds) Applications for Brush Control

To control susceptible brush species including locust, multiflora rose and blackberry species, mix 16 fl.oz. of this product to 1 gallon of diesel oil or kerosene. Thoroughly apply mixture to target species wetting upper and lower stems and branches including the root collar and any ground sprouts. Treat at any time when the brush is dormant and the bark is dry. Best results may be obtained with winter to early spring applications. Do not treat when snow, ice or water prevent spraying to the ground level. For brush over 8 feet in height use the basal bark application, cut stump or cut surface application to treat effectively. See Sections 5.3 and 5.4 for application restrictions.

Mesquite Control

Not for use on mesquite in California. For control of mesquite less than 6 inches in diameter, mix 32 to 120 fl. oz. of this product with diesel oil or kerosene to make 1 gallon of spray solution. Spray to a height of 15 to 20 inches from the ground level (known as the basal part of the brush or trees). Thoroughly wet all the basal bark area including crown buds and ground sprouts. Spray runoff should visibly wet the ground at the base of the stems or trunks. Basal applications can be made at any time of the year except when snow, ice or water prevents spraying to the ground line. Best results may be obtained with winter to early spring applications. For mesquite larger than 5 to 6 inches in diameter use the cut-stump or cut-surface application to treat effectively. See Sections 5.3 and 5.4 for application restrictions.

5.3 Restrictions for Applications to Pasture and Rangelands

Pastures and rangelands are defined as established grass pastures, rangeland, and perennial grasslands including the Conservation Reserve Program (CRP). Pastures established with these grasses may be treated: bahiagrass, bermudagrass, bluegrass, brome, reed canary-grass, fescue, orchardgrass, ryegrass, timothy, and wheatgrass.

Maximum Application Rates

Do not apply more than 8 pints of product per acre per application. Use one application per year (season). The maximum seasonal rate is 8 pints of product per acre per season.

Grazing and Slaughter Restrictions: Do not allow lactating dairy animals to graze treated areas until the next growing season following application of this product. Withdraw livestock from grazing treated grass or consumption of treated hay at least 3 days before slaughter. Except for lactating dairy animals and the slaughter restriction, there

are no grazing restrictions for animals (including horses, cows, goats, and sheep).

Haying Restrictions: Do not cut hay for harvest within 14 days following application.

Prohibitions: Postemergent treatments of this product may injure or kill legumes including alfalfa, clovers, lespedezas, sweet clover, trefoils and vetches. Do not spray grass/legume mixtures unless injury or plant loss can be tolerated. Do not use this product on newly seeded grasses including, but not limited to buffalograss, kleingrass, sideoats grama, and switchgrass. Do not use this product on forage sorghum, sudangrass, corn, and cereal grains (wheat). Do not reseed treated areas for three weeks after treatment.

5.4 Restrictions for Applications to Non-Croplands

Non-croplands are defined as fencerows, hedgerows, roadside ditches, non-irrigation ditchbanks, rights-of-way, farmsteads, and other non-crop areas.

Maximum Application Rates

Do not apply more than 8 pints of product per acre per application. Application to woody plants is limited to 1 application per year. The maximum seasonal rate is 16 pints of product per acre per season.

Prohibitions: Postemergent treatments of this product may injure or kill legumes including alfalfa, clovers, lespedezas, sweet clover, trefoils and vetches. Do not spray grass/legume mixtures unless injury or plant loss can be tolerated. Do not use this product on newly seeded grasses including, but not limited to buffalograss, kleingrass, sideoats grama, and switchgrass. Applications to noncropland areas are not applicable to treatment of commercial timber or other plants being grown for sale or other commercial use, or for commercial seed production, or for research purposes. Do not reseed treated areas for three weeks after treatment.

6. Spray Drift Management

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

Droplet Size

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

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

Wind Speed

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

Temperature Inversions

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

Susceptible Plants

Do not apply under circumstances where spray drift may occur to food, forage, or other plantings that might be damaged or crops thereof rendered unfit for sale, use or consumption. Susceptible crops include, but are not limited to, cotton, okra, flowers, grapes (in growing stage), fruit trees (foliage), soybeans (vegetative stage), ornamentals, sunflowers, tomatoes, beans, and other vegetables, or tobacco. Small amounts of spray drift that might not be visible may injure susceptible broadleaf plants.

2,4-D esters may volatilize during conditions of low humidity and high temperatures. Do not apply during conditions of low humidity and high temperatures.

Other State and Local Requirements

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

