# JNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460





OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

SEP - 4 2014

Mark D. Gelin Manager, Product Registrations ISK Biosciences Corporation 7470 Auburn Road, Suite A Concord, OH 44077

Subject:

Label Amendment – Adding New Use on Tree Nuts

Product Name: ISK Flazasulfuron Herbicide

EPA Registration Number: 71512-18 Application Date: April 26, 2013

Decision Number: 478041

Dear Mr. Gelin:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). If you have any questions, please contact Emily Schmid by phone at 703-347-0189, or via email at schmid emily@epa.gov.

Sincerely,

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

Office of Pesticide Programs

GROUP | B<sup>(2)</sup> | HERBICIDE | /32

# ISK Flazasulfuron Herbicide

#### **HERBICIDE**

A herbicide for weed control in Citrus, Grapes, Sugarcane, Tree Nuts, Conifer Trees and Industrial Vegetation Management.

ACTIVE INGREDIENT:	By Wt.	
Flazasulfuron*:	25.0%	
OTHER INGREDIENTS:	<u>75.0%</u>	
Total	100.0%	
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<sup>\*</sup> N-[[(4,6-dimethoxy-2-pyrimidinyl) amino]carbonyl]-3-(trifluoromethyl)-2-pyridinesulfonamide

Contains 0.25 pounds active ingredient per pound of formulated product.

# KEEP OUT OF REACH OF CHILDREN

#### CAUTION

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

SEE SIDE PANEL FOR FIRST AID AND ADDITIONAL PRECAUTIONARY STATEMENTS.

READ ENTIRE LABEL CAREFULLY AND USE ONLY AS DIRECTED.

EPA Reg. No. 71512-18 EPA Establishment No. 049036-JPN-001

Net Contents: 309 pounds (140 kilograms)

ACCEPTED SEP - 4 2014

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. ISK Biosciences Corporation 7470 Auburn Road, Suite A Concord, Ohio 44077

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# PRECAUTIONARY STATEMENTS

# HAZARDS TO HUMANS & DOMESTIC ANIMALS CAUTION

Harmful if swallowed or absorbed through skin. Avoid contact with skin, eyes or clothing. Wash thoroughly with soap and water after handling. Remove and wash contaminated clothing before reuse.

	FIRST AID
if swallowed	<ul> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>Have person sip a glass of water if able to swallow.</li> <li>Do not induce vomiting unless told to do so by the poison control center or doctor.</li> <li>Do not give anything by mouth to an unconscious person.</li> </ul>
If on skin or clothing	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15-20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
If in eyes	<ul> <li>Hold eye open and rinse slowly and gently with water for 15-20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
If inhaled	<ul> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration preferably by mouth-to-mouth, if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>
Have the product treatment.	container or label with you when calling a poison control center or doctor, or going for

#### HOT LINE NUMBER

For 24-Hour Medical Emergency Assistance call 1-888-484-7546. [For Chemical Emergency, Spill, Leak, Fire or Accident, call CHEMTREC 1-800-424-9300.]

# PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear: long-sleeved shirt and long pants, shoes plus socks, protective eyewear and waterproof gloves

# USER SAFETY REQUIREMENTS

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

# **USER SAFETY RECOMMENDATIONS**

# Users should:

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

#### **ENVIRONMENTAL HAZARDS**

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

This chemical has properties and characteristics associated with chemicals detected in ground water. This chemical may leach into ground water if used in areas where soils are permeable, particularly where the water table is shallow.

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This product may contaminate water through drift of spray in wind, or drift of soil from treated areas. This product has a high potential for runoff for several weeks after application. Poorly drained soils and soils with shallow water tables are more prone to produce runoff that contains this product. Avoid applying this product to ditches, swales, and drainage ways. Runoff of this product would be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours.

There is potential for injury to sensitive plants irrigated with run-off water containing flazasulfuron.

#### **DIRECTIONS FOR USE**

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

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

# AGRICULTURAL USE REQUIREMENTS

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

Do not enter or allow worker entry into treated areas during the Restricted Entry Interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is: Coveralls, chemical-resistant gloves made of any waterproof materials, and shoes plus socks.

Sod and seed farms are within the scope of the Worker Protection Standard.

# 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. Turf grasses on golf courses and other non-residential turf areas such as industrial parks, tank farms, professionally managed college and professional sports fields and commercial lawns are not within the scope of the Worker Protection Standard. Do not enter or allow others to enter the treated area until sprays have dried.

#### **USE INFORMATION**

Flazasulfuron is a selective herbicide for preemergence and postemergence control of certain broadleaf weeds and grasses in citrus, grape, sugarcane, tree nuts, conifer trees and for use in industrial vegetation management in specified nonagricultural areas.

Flazasulfuron is absorbed through the root and foliage of plants, rapidly inhibiting the growth of susceptible weeds. For preemergence application, rainfall or irrigation is needed for herbicide activation. Length of control is a function of environmental factors such as soil type, soil moisture, temperature and amount of moisture after the application. Existing weeds or crop residue may reduce the length and level of residual control. Weed control may also be reduced due to environmental stress to the weeds at the time of the application.

Weed growth stops within hours after the application, however symptom progress from discoloration or chlorosis to necrosis generally requires from 2 to 4 weeks. Speed of control is generally a function of weather with faster action during warmer weather and actively growing weeds. The best control is obtained when ISK Flazasulfuron Herbicide is applied either to weeds just prior to germination or to young, actively growing weeds.

For optimal herbicidal activity, prior to application, the bed or soil surface should be reasonably even and clear of crop and weed residue. Before herbicide application, crop and weed residue can be mixed into the soil through cultivation, or removed by blowing the area to be treated. Any practices that cause disturbance of the soil surface after herbicide treatment will decrease herbicidal activity. If rainfall does not occur within 2 weeks after a preemergence, application ½ to ½ inch of irrigation water should be applied. Do not apply more than 1 inch of irrigation water.

ISK Flazasulfuron Herbicide controls weeds by inhibiting the acetolactate synthase (ALS) biochemical process. Some weeds may contain naturally occurring populations that are resistant to ALS inhibiting herbicides. Applications of ALS inhibiting herbicides, when used alone, over a period of time may lead to biotypes that are resistant to ALS herbicides. This then leads to a reduction in the level of control obtained through the use of these herbicides. To prevent or delay the build-up of ALS resistant weeds, weed management programs should include the use of appropriate registered herbicides for control of these weeds that have a different mode of action. Applications of herbicides with a different mode of action should be used during the same year or in sequential years.

# **APPLICATION RESTRICTIONS FOR ALL USES**

- Do not apply ISK Flazasulfuron Herbicide aerially.
- Do not apply ISK Flazasulfuron Herbicide through any irrigation system.
- Do not apply to saturated soils.
- Do not apply to plants that are under stress due to drought, standing water, heavy insect and/or disease pressure, low soil fertility, etc.
- Do not mechanically incorporate into the soil.
- Do not apply more than 0.15 lb ai per acre per year.
- A 25 foot buffer for ground applications must be maintained between the point of direct application and the closest downwind edge of sensitive terrestrial habitats (including grasslands, forested areas, shelter belts, woodlots, hedgerows, riparian areas and shrub lands), sensitive freshwater habitats (including lakes, rivers, sloughs, ponds, creeks, marshes, streams, reservoirs and wetlands) and estuarine/marine habitats.

# SPRAY DRIFT MANAGEMENT

- The applicator must be familiar with the effects of temperature inversions.
- Apply as a medium or coarser spray (ASAE Standard 572).

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- AVOIDING SPRAY DRIFT AT THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR AND GROWER. The interaction of many equipment and weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all factors involved in minimizing drift potential. Where states have more stringent regulations, they must be observed.
- Avoid making applications when spray particles may be carried by air currents to areas where sensitive crops and plants are growing. Do not spray near sensitive plants if wind is gusty, below 2 mph, or in excess of 10 mph and moving in the direction of adjacent areas of sensitive crops or plants. Do not apply during temperature inversions. Always make applications when there is some air movement to determine the direction and distance of possible spray drift.
- To avoid injury to desirable plants, equipment used to apply ISK Flazasulfuron Herbicide should be thoroughly cleaned (see PROCEDURE FOR CLEANING SPRAY EQUIPMENT) before reusing to apply any other chemicals.
- Apply using a nozzle height of no more than 2 feet above the ground or crop canopy.

# INFORMATION ON DROPLET SIZE

The best drift management strategy is to apply large droplets and to limit or eliminate small droplets. Applying large droplets reduces drift potential, but will not prevent drift if applications are made improperly or under unfavorable environmental conditions (see sections below).

# CONTROLLING DROPLET SIZE

- Volume Use sufficient volume to form droplets large enough to avoid drift potential.
- Pressure Pressure and nozzle type and orientation should be carefully managed to avoid formation of fine droplets.
- Number of nozzles Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Type Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Properly designed solid stream nozzles should produce the lowest drift potential. Select nozzles, which do not have a wide discharge profile.

#### CALIBRATION

Equipment should be calibrated regularly according to manufacturer's specifications.

# **WIND**

Applications must not be made when wind exceeds 10 mph. Use caution when applying in wind speeds less than 2-3 mph because a temperature inversion may be present and wind direction may vary. Many factors, including droplet size and equipment type, determine drift potential at any given wind speed. Note: Local terrain can influence wind patterns. The applicator must be familiar with local wind patterns and must monitor wind conditions at the site at the time of application.

# 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)."

# TEMPERATURE AND HUMIDITY

Low humidity and high temperature increase the evaporation rate of droplets and therefore increase spray drift potential. The applicator must compensate for temperature and humidity.

# TEMPERATURE INVERSIONS

Because of high drift potential, applications must not be made when droplets may reach a temperature inversion layer. It is the applicator's responsibility to identify the presence of a temperature inversion at the time of application. Accurate measurements of temperature, relative humidity, and wind speed help determine if an inversion exists. Local sources of weather information may help identify the presence of temperature inversions.

#### MIXING AND LOADING INSTRUCTIONS

Ensure the spray system is clean and free of residues from previous applications. Fill the spray tank 1/2 full with clean water. Ensure the agitation system is operating and sufficient to provide uniform spray mixing during application and until the spray tank has been emptied. Add the appropriate amount of this product to the spray tank. Complete filling the spray tank to the desired level.

Prepare no more spray mixture than is needed for the immediate application. Avoid the overnight storage of ISK Flazasulfuron Herbicide spray mixtures.

#### **Tank Mixtures**

Tank mixes are generally used to broaden or extend control of the weed spectrum present. Tank mix herbicides must be registered for use on the intended crop.

ISK Flazasulfuron Herbicide may be tank mixed with herbicides specified for use on labeled crops. Read and follow all label directions for each tank mix herbicide. Always follow precautions and restrictions on the most restrictive tank mix partner. ISK Flazasulfuron Herbicide is generally compatible with insecticides (non-organophosphate), fungicides, fertilizers and micronutrient products provided sufficient free water is available for dispersion of all the tank mix products. However, the physical compatibility of ISK Flazasulfuron Herbicide with tank mix partners should be evaluated before use. Use tank-mix combinations only when applicator experience indicates that the tank mix will not result in objectionable crop injury.

For tank mixtures, add individual components to the spray tank in the following sequence: water, water dispersible granules (this product), water-soluble bags, dry flowables, emulsifiable concentrates, drift control additives, water-soluble liquids, and nonionic surfactants.

#### **Additive Use Requirements**

The use of a non-ionic surfactant at 0.25 percent by volume (1 qt / 100 gal) provides a maximum performance for all postemergence applications. Surfactant products must contain at least 50% nonionic surfactant (see label of adjuvant). Petroleum crop oil concentrate or methylated seed oil at 1% by volume (1 gal / 100 gal) can also enhance herbicide performance. Oil adjuvants must contain at least 15% surfactant emulsifiers and 80% high quality petroleum or methylated seed oil (see label of crop or seed oil). If another herbicide is tank mixed with ISK Flazasulfuron Herbicide, select additives authorized for use with both products.

#### **Compatibility Test**

Additives and tank mixes should be tested for compatibility by mixing in a small container prior to mixing in spray tank.

In a lidded glass jar (~1 quart size), add all mix partners, in their relative proportions. Invert, shake or mix the jar thoroughly.

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If mixture forms precipitates (flakes or sludge), gels, balls up or forms oily films or layers, this indicates incompatibility. Though signs of incompatibility will typically be seen within 5 minutes of mixing, mixture should be observed for approximately 30 minutes.

Compatibility agents can be used to facilitate mixing. Add ¼ teaspoon of the compatibility agent to the mix (assuming a mixing rate of 2 pints compatibility agent per 100 gallons spray mix).

If compatibility agents to do not facilitate mixing, the mixture is incompatible and should not be used.

# **Spray Equipment Clean Out:**

After spraying ISK Flazasulfuron Herbicide and before using sprayer equipment for any other applications, the sprayer must be thoroughly cleaned using the following procedure.

1. Drain tank; thoroughly rinse inside of spray tanks with clean water (rinse about 1 minute per 25 gallons of tank capacity). Loosen and physically remove any visible deposits with a stiff brush.

- 2. Fill the tank with clean water and add 1 gallon of household ammonia (contains at least 3% active ingredient) for every 100 gallons of water. Circulate the cleaning solution through the tank and hoses for at least 15 minutes. Flush the cleaning solution through the hoses, boom and nozzles (1/4 volume of tank capacity) and then drain the tank.
- 3. Repeat step 1.
- Repeat step 2.
- 5. Remove the nozzles and screen and clean separately in a bucket containing cleaning agent and water
- 6. Rinse the tank, boom and hoses with clean water.
- 7. If only ammonia is used as a cleaner, the rinsate solution from both steps 2 and 4 may be applied back to the crop(s) as specified on the label. Do not exceed the maximum label use rate. If other cleaners are used, consult the cleaner label for rinsate disposal instructions. If no instructions are given, dispose of the rinsate on site or at an approved waste disposal facility. (Attention: Do Not use Chlorine bleach with ammonia as a dangerous gas will form).

#### APPLICATION INFORMATION

#### **Sprayer Preparation**

Apply ISK Flazasulfuron Herbicide with spray equipment that has been cleaned and is free of pesticide deposits from previous pesticide use. Clean spray equipment according to manufacturer's directions, see previous pesticide label for appropriate cleanup directions, or use ISK Flazasulfuron Herbicide Spray Equipment Clean Out procedures.

# **Preemergence Weed Control**

Apply ISK Flazasulfuron Herbicide in a broadcast spray volume of 15 to 50 gallons of water per acre in a uniform application to the soil surface. Soil surfaces should be clean from crop residue and weed-free at the time of the application. If weeds, weeds residue or crop residue is present, these should be removed by light mechanical incorporation or other means. Once the application has been made the soil surface should not be disturbed.

#### **Postemergence Weed Control**

Applications for postemergence weed control should be made in 15 to 50 gallons of water per acre. Use the higher water volumes if vegetation or crop residue is present. For directed sprays a spray volume of 20 or more gallons per acre is recommended. Best results are obtained when weeds are small and actively growing. Broadleaf weeds should be no larger than 2 to 4 inches and grasses should be no taller than 4 inches and prior to first tillering.

# **Ground Applications**

**Broadcast:** Apply ISK Flazasulfuron Herbicide using conventional low-pressure ground spray equipment with flat fan or flood nozzles (preemergence applications only). Follow manufacture's recommendation for spraying pressure and boom height. Check spray equipment daily for proper maintenance and calibration.

**Banded:** ISK Flazasulfuron Herbicide can also be applied as a banded treatment. Banded rate and volume per treated area can be calculated by multiplying broadcast rate and volume per treated acre by the band width in inches divided by the row width in inches.

**Directed Spray:** Apply ISK Flazasulfuron Herbicide as a low-pressure coarse spray in at least 20 gallons of water per acre. Follow manufacturer's recommendations for nozzle spacing and operating pressure. Nozzles should be adjusted to adequately cover the weed foliage but minimize contact with the crop. Do not apply with hollow cone nozzles.

**Spot application:** For spot applications apply sprays uniformly to the soil for preemergence weed control or to weeds for postemergence weed control. Mix the required amount of ISK Flazasulfuron Herbicide with the specified amount of water. For preemergence application use one-half to one gallon of spray per 1000 sq ft. For postemergence application use a minimum of 1 gallon of spray per 1000 sq ft and add a non-ionic surfactant at 0.5 fl oz (1 Tbs) per gallon of spray. If applying within an established crop use coarse low-pressure sprays and direct the spray to the soil beneath the plants. Do not allow spray to contact leaves or green stems of woody plants. Use 0.062 oz/gallon of water. Thoroughly agitate the spray solution thoroughly prior to application.

**Note:** ISK Flazasulfuron Herbicide may be applied in single or sequential applications. Sequential applications are made on a longer term interval such as fall followed by a spring application.

# **Rotational Crop Information**

If rotating to another crop not on the label, allow a 12 month interval between the last application and the planting of the rotational crop.

# **CITRUS**

Directions for use in Citrus.

ISK Flazasulfuron Herbicide may be applied only to Navel Orange, Valencia Orange, Lemon, Mandarin, and Tangerine orchards.

Weed Control	Rate (oz/acre)	Specific Use Directions	
Preemergence	2.14 - 2.85 oz		
Dormant Season (Preemergence control only)	2.14 - 2.85 oz	Make one application during the dormant season (November, December, January).	
Postemergence	2.14 - 2.85 oz	Apply to broadleaf weeds and less than 4 inches tall and before tillering of grasses. Use sufficient spray volume to obtain complete and uniform coverage. Use higher water volumes on larger weeds. Adjuvant use recommended.	

Apply only to 5th year planted trees and older. Apply only as a directed spray to the soil beneath the trees to prevent injury to the foliage and bark. Do not apply to areas where roots are exposed. Multiple applications of ISK Flazasulfuron Herbicide can be made, but maximum yearly amounts must be followed (see Crop Restrictions). Rates listed above are for broadcast application. If making a banded application, see Product Information section of the label for calculating appropriate use rate. Do not apply to stony soils or sandy soils (greater than 85% sand). For postemergence applications, use an adjuvant (refer to Additive Use Requirements section on Page 6).

**Tank Mixes:** For postemergence weed control, consider tank mixing ISK Flazasulfuron Herbicide with a burndown herbicide, such as glyphosate, or glufosinate. For longer residual control of annual weeds, consider tank mixing ISK Flazasulfuron Herbicide with oxyfluorfen, oryzalin, diuron, norflurazon, simazine, pendimethalin or other registered residual herbicides. Follow all label instructions, restrictions and precautions on both labels. Refer to Tank Mixtures section for additional information regarding tank mixes.

**Crop Restrictions:** Do not apply more than 2 applications at 2.85 oz/acre per acre per year. The Pre-Harvest Interval (PHI) for these crops is one (1) day. The minimum retreatment interval (RTI) is 3 months.

# WEEDS CONTROLLED

# WEEDS CONTROLLED PREEMERGENCE

Grasses	
Bluegrass, annual	Poa annua
Barley, hare	Hordeum leporinum
Bentgrass, creeping	Agrostis stolonifera
Brome, downy	Bromus tectorum
Fescue, rough	Festuca scabrella
Fescue, sheep	Festuca ovina
Fescue, tall	Festuca arundinacea
Foxtail, giant	Setaria faberi
Foxtail, green	Setaria viridis
Foxtail, yellow	Setaria glauca
Ryegrass, Italian	Lolium multiflorum
Sandbur, Coastal	Cenchrus spinifex
Sandbur, field	Cenchrus incertus
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**Broadleaves** 

Burclover, California Chickweed, common Chickweed, mouse-ear Clover, crimson

Clover, hop

Medicago polymorpha Stellaria media Cerastium vulgatum Trifolium incarnatum

Trifolium aureum

Dandelion, cat's-ear Filaree, broadleaf Filaree, redstem Fleabane, hairy

Geranium Carolina Groundsel

Groundsel, common Henbit Lambsquarters, common

Mallow, common Mallow, little Mustard

Mustard, Indian Mustard, wild Pigweed, prostrate Pigweed, redroot Pigweed, tumble Purslane, common Ragweed, common

Shepherd's-purse Sowthistle, annual Speedwell, corn Spurge, creeping Spurge, prostrate Spurge, spotted

Willoweed, panicle

Rockpurslane, redmaids

Hypochoeris radicata Erodium botrys . Erodium cicutarium Convza bonariensis Geranium carolinianum

Senecio sp. Senecio vulgaris Lamium amplexicaule Chenopodium album Malva neglecta

Malva parviflora Sinapsis sp. Brasica iuncea Brassica kaber Amaranthus litoides Amaranthus retroflexus Amaranthus albus Portulaca oleracea Ambrosia artemisiifolia

Calandrinia ciliata Capsella bursa-pastoris Sonchus oleraceus Veronica arvensis Euphorbia serpens, Euphorbia humistrata Euphorbia maculata

Epilobium brachycarpum

Sedges

Kyllinga Yellow Nutsedge Kyllinga spp. Cyperus esculentus

# WEEDS PARTIALLY CONTROLLED PREEMERGENCE

Grasses

Crabgrass, large Digitaria sanguinalis Needlegrass, California Nassella cernua Watergrass, early Echinochloa oryzoides Witchgrass Panicum calillare

**Broadleaves** 

Dandelion Horseweed, Canada/Mare's tail Taraxacum officinale

Erigeron canadensis / Conyza canadensis

Hawksbeard, bristly Oxtongue, bristly

Crepis setosa Picris echioides

Sedges

Purple Nutsedge

Cyperus rotundus

<sup>\*</sup> Partial control means significant activity but not always at a level considered acceptable for commercial weed control. Repeat applications may be necessary.

# WEEDS CONTROLLED POSTEMERGENCE

Grasses

Bluegrass, annual

Bentgrass, creeping Brome, downy Crabgrass, large Crabgrass, smooth Fescue, rough Fescue, sheep Fescue, tall

Fescue, tall
Foxtail, giant
Foxtail, green
Foxtail, yellow
Ryegrass, Italian
Needlegrass, California
Sandbur, Coastal
Sandbur, field

Poa annua

Agrostis stolonifera
Bromus tectorum
Digitaria sanguinalis
Digitaria ischaemum
Festuca scabrella
Festuca ovina
Festuca arundinacea

Setaria faberi
Setaria viridis
Setaria glauca
Lolium multiflorum
Nassella cernua
Cenchrus spinifex
Cenchrus incertus

**Broadleaves** 

Bedstraw, catchweed

Burclover, California Carrot, wild

Carrot, wild Chamomile, mayweed Chickweed, common Chickweed, mouse-ear Clover, crimson Clover, hop

Dandelion, cat's-ear Dropwart, parsley water Falsedandelion, Carolina

Filaree, broadleaf Filaree, redstem Fleabane, hairy Geranium Carolina

Clover, large hop

Groundsel

Groundsel, common

Henbit

Horseweed, Canada/Mare's tail

Lambsquarters, common Mallow, common Mallow, little Mustard

Mustard, Indian Mustard, tumble

Pansy, field
Pepperweed, field
Pigweed, prostrate
Pigweed, redroot
Pigweed, tumble
Purslane, common
Ragweed, common
Rockpurslane, redmaids

Shepherd's-purse Sowthistle, annual Speedwell, corn

Galium aparine

Medicago polymorpha

Daucus carota
Anthemis cotula
Stellaria media
Cerastium vulgatum
Trifolium incarnatum
Trifolium aureum
Trifolium campestre
Hypochoeris radicata
Oenanthe lachenalii

Pyrrhopappus carolinianus Erodium botrys Erodium cicutarium

Conyza bonariensis Geranium carolinianum

Senecio sp. Senecio vulgaris Lamium amplexicaule

Erigeron canadensis / Conyza canadensis

Chenopodium album Malva neglecta Malva parviflora Sinapsis sp. Brasica juncea

Sisymbrium altissimum

Viola rafinesquil
Lepidium campestre
Amaranthus litoides
Amaranthus retroflexus
Amaranthus albus
Portulaca oleracea
Ambrosia artemisiifolia
Calandrinia ciliata
Capsella bursa-pastoris
Sonchus oleraceus
Veronica arvensis

Spurge, creeping
Spurge, prostrate
Spurge, spotted
Thistle, bull
Thistle, Canada
Willoweed, panicle
Wintergreen, chickweed

Euphorbia humistrata
Euphorbia maculata
Cirsium vulgare
Cirsium arvense
Epilobium brachycarpum
Trientalis europaea

SedgesKyllingaKyllinga spp.Yellow NutsedgeCyperus esculentus

# WEEDS PARTIALLY CONTROLLED POSTEMERGENCE

Grasses	
Polypogon, rabbitfoot	Polypogon monspeliensis
Watergrass, early	Echinochloa otyzoides
Witchgrass	Panicum caplillare
Barley, hare	Hordeum leporinum

Broadleaves	
Dandelion	Taraxacum officinale
Fleabane, rough	Erigeron strigosus
Hawksbeard, bristly	Crepis setosa
Oxtongue, bristly	Picris echioides

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Sedges	
Purple Nutsedge	Cyperus rotundus

<sup>\*</sup> Partial control means significant activity but not always at a level considered acceptable for commercial weed control. Repeat applications may be necessary.

# **GRAPE**

Directions for use in grape.

ISK Flazasulfuron Herbicide may be applied to all grape varieties (including wine, table and raisin).

Weed Control	Rate (oz/acre)	Specific Use Directions
Preemergence	2.14 - 2.85 oz	
Post emergence	2.14 - 2.85 oz	Apply to broadleaf weeds and grasses less than 4 inches tall and before tillering of grasses. Use sufficient spray volume to obtain complete and uniform coverage. Use higher water volumes on larger weeds. Adjuvant use recommended.

Apply only to 3rd year planted vines and older. Apply only as a directed spray to the soil beneath the vines to prevent injury to the foliage and bark of young vines. Use of a protective sleeve is required for third year vines to minimize injury potential. Do not apply to areas where roots are exposed. Multiple applications of ISK Flazasulfuron Herbicide can be made, but maximum yearly amounts must be followed (see Crop Restrictions). Rates listed above are for broadcast application. If making a banded application, see Product Information section of the label for calculating appropriate use rate. Do not apply to stony soils. For postemergence application, use an adjuvant (refer to Additive Use Requirements section on Page 6).

**Tank Mixes:** For postemergence weed control, consider tank mixing ISK Flazasulfuron Herbicide with a burndown herbicide, such as glyphosate or glufosinate. For longer residual control of annual weeds, consider tank mixing ISK Flazasulfuron Herbicide with oxyfluorfen, oryzalin, diuron, norflurazon, simazine or pendimethalin. Follow all label instructions, restrictions and precautions on both labels. Refer to Tank Mixtures section for additional information regarding tank mixes.

**Crop Restrictions:** Do not apply more than 2 applications at 2.85 oz/acre per acre per year. The Pre-Harvest Interval (PHI) for this crop is 75 days. The minimum retreatment interval (RTI) is 3 months.

# WEEDS CONTROLLED

#### WEEDS CONTROLLED PREEMERGENCE

Grasses	,
Bluegrass, annual	Poa annua
Barley, hare	Hordeum leporinum
Bentgrass, creeping	Agrostis stolonifera
Brome, downy	Bromus tectorum
Fescue, rough	Festuca scabrella
Fescue, sheep .	Festuca ovina
Fescue, tall	Festuca arundinacea
Foxtail, giant	Setaria faberi
Foxtail, green	Setaria viridis
Foxtail, yellow	Setaria glauca
Ryegrass, Italian	Lolium multiflorum
Sandbur, Coastal	Cenchrus spinifex
Sandbur, field	Cenchrus incertus

Broadleaves	
Burclover, California	Medicago polymorpha
Chickweed, common	Stellaria media
Chickweed, mouse-ear	Cerastium vulgatum
Clover, crimson	Trifolium incarnatum
Clover, hop	Trifolium aureum

Dandelion Taraxacum officinale Dandelion, cat's-ear Hypochoeris radicata Erodium botrys Filaree broadleaf Erodium cicutarium Filaree, redstem Conyza bonariensis Fleabane, hairy Geranium Carolina Geranium carolinianum Senecio sp. Groundsel Senecio vulgaris Lamium amplexicaule

Groundsel, common Henbit Chenopodium album Lambsquarters, common Malva neglecta Mallow, common Malva parviflora Mallow, little Mustard Sinapsis sp. Brasica juncea Mustard, Indian Mustard, wild Brassica kaber Pigweed, prostrate Amaranthus litoides Pigweed, redroot Amaranthus retroflexus Pigweed, tumble Amaranthus albus Purslane, common Portulaca oleracea

Ragweed, common Ambrosia artemisiifolia Rockpurslane, redmaids Calandrinia ciliata Shepherd's-purse Capsella bursa-pastoris Sonchus oleraceus Sowthistle, annual Speedwell, corn Veronica arvensis Spurge, creeping Euphorbia serpens Euphorbia humistrata Spurge, prostrate Spurge, spotted Euphorbia maculata

Willoweed, panicle Epilobium brachycarpum

Sedges

•

WEEDS PARTIALLY CONTROLLED PREEMERGENCE

GrassesCrabgrass, largeDigitaria sanguinalisNeedlegrass, CaliforniaNassella cernuaWatergrass, earlyEchinochloa otyzoidesWitchgrassPanicum caplillare

Broadleaves
Horseweed, Canada/Mare's tail Erigeron canadensis / Conyza canadensis

Kyllinga spp. Cyperus esculentus

Hawksbeard, bristly
Oxtongue, bristly

Crepis setosa
Picris echioides

Sedges
Purple Nutsedge Cyperus rotundus

\* Partial control means significant activity but not always at a level considered acceptable for commercial weed control. Repeat applications may be necessary.

# WEEDS CONTROLLED POSTEMERGENCE

**Grasses** 

Kyllinga

Yellow Nutsedge

Bluegrass, annual Poa annua

Bentgrass, creeping Agrostis stolonifera
Brome, downy Bromus tectorum
Crabgrass, large Digitaria sanguinalis

Digitaria ischaemum Crabgrass, smooth Festuca scabrella Fescue, rough Festuca ovina Fescue, sheep Festuca arundinacea Fescue, tall Foxtail, giant Setaria faberi Foxtail, green Setaria viridis Foxtail, yellow Setaria glauca Ryegrass, Italian Lolium multiflorum Needlegrass, California Nassella cernua Sandbur, Coastal Cenchrus spinifex Sandbur, field Cenchrus incertus

**Broadleaves** 

Bedstraw, catchweed

Burclover, California

Carrot, wild

Chamomile, mayweed Chickweed, common Chickweed, mouse-ear Clover, crimson

Clover, hop Clover, large hop Dandelion, cat's-ear Dropwart, parsley water Falsedandelion, Carolina

Filaree, broadleaf Filaree, redstem Fleabane, hairy Geranium, Carolina

Groundsel

Groundsel, common Henbit

Horseweed, Canada/Mare's tail

Lambsquarters, common Mallow, common

Mallow, little Mustard

Mustard, Indian Mustard, tumble

Pansy, field Pepperweed, field Pigweed, prostrate Pigweed, redroot

Pigweed, tumble

Purslane, common Ragweed, common Rockpurslane, redmaids

Shepherd's-purse Sowthistle, annual Speedwell, corn Spurge, creeping Spurge, prostrate Spurge, spotted

Thistle, bull

Thistle, Canada Willoweed, panicle Wintergreen, chickweed Galium aparine

Medicago polymorpha

Daucus carota Anthemis cotula Stellaria media Cerastium vulgatum Trifolium incarnatum Trifolium aureum

Trifolium campestre
Hypochoeris radicata
Oenanthe lachenalii
Pyrrhopannus carolini

Pyrrhopappus carolinianus

Erodium botrys Erodium cicutarium Conyza bonariensis Geranium carolinianum

Senecio sp. Senecio vulgaris Lamium amplexicaule

Erigeron canadensis / Conyza canadensis Chenopodium album

Malva neglecta
Malva parviflora
Sinapsis sp.
Brasica juncea

Sisymbrium altissimum

Viola rafinesquil
Lepidium campestre
Amaranthus litoides
Amaranthus retroflexus
Amaranthus albus
Portulaca oleracea
Ambrosia artemisiifolia
Calandrinia ciliata
Capsella bursa-pastoris
Sonchus oleraceus

Calandrinia ciliata
Capsella bursa-pastoris
Sonchus oleraceus
Veronica arvensis
Euphorbia serpens
Euphorbia humistrata
Euphorbia maculata
Cirsium vulgare
Cirsium arvense

Epilobium brachycarpum Trientalis europaea Sedges

Kyllinga

Kyllinga spp.

Yellow Nutsedge

Cyperus esculentus

# WEEDS PARTIALLY CONTROLLED POSTEMERGENCE

Grasses

Polypogon, rabbitfoot Watergrass, early Witchgrass Polypogon monspeliensis Echinochloa otyzoides Panicum caplillare Hordeum leporinum

Broadleaves

Barley, hare

Dandelion Fleabane, rough Hawksbeard, bristly Oxtongue, bristly Taraxacum officinale Erigeron strigosus Crepis setosa Picris echioides

Sedges

Purple Nutsedge

Cyperus rotundus

<sup>\*</sup> Partial control means significant activity but not always at a level considered acceptable for commercial weed control. Repeat applications may be necessary.

# SUGARCANE

Directions for use in sugarcane

ISK Flazasulfuron Herbicide may be applied to plant or ratoon sugarcane.

Weed Control	Rate (oz/acre)	Specific Use Directions
Over-the-Top	0.9 oz	Apply prior to spiking or on ratoon sugarcane up to 24 inches tall.
Post-Directed	0.9 – 2.85 oz.	Apply to sugarcane that is at least18 inches tall up through layby. The application should minimize contact to the whorl of the sugarcane and maximize contact with the weeds. Weeds should be small $(1-2 \text{ inches})$ at the time of the application. Use the higher rate for larger weeds.

Over-the-top applications may cause some vellowing of the sugarcane with occasional stunting. Symptoms may persist for a short period but have no effect on yield. For both over-the-top and postdirected applications an adjuvant should be used, refer to Additive Use Requirements page 6 Multiple applications of ISK Flazasulfuron Herbicide can be made, but maximum yearly amounts must be followed (see Crop Restrictions). Rates listed above are for broadcast application. If making a banded application, see Banded Application Information (page 8) of the label for calculating appropriate use rate.

Tank Mixes: ISK Flazasulfuron Herbicide may be tank mixed with atrazine, asulam, dicamba or diuron for both over-the-top and post-directed applications. A tank mix with ametryn should be used only for post-directed applications. Follow all label instructions, restrictions and precautions on both labels. Refer to Tank Mixtures section for additional information regarding tank mixes.

Crop Restrictions: Do not apply more than 9.6 ounces per acre per year (0.15 lb ai per acre per year). The Pre-Harvest Interval (PHI) for this crop is 180 days. Sequential applications must be made at least 14 days apart. If sugarcane is to be rotated to another crop not on the label allow a 12 month interval between the last application and the planting of the rotational crop.

# WEEDS CONTROLLED

Weeds Controlled Preemergence at 0.9 to 1.8 oz/acre

Grasses		•
Chickweed, common	Stellaria media	•
Henbit	Lamium amplexicaule	
Lambsquarters, common	Chenopodium album	
Purslane, common	Portulaca oleracea	

weeds Controlled Freemergence	e at 2.14 to 2.05 02/acre	 	
Grasses		,	
Bluegrass, annual	Poa annua	 	

Broadleaves			•		
Chickweed, common	,	Stellaria media		٠.	
Dandelion		Taraxacum officinale		٠	
Filaree, redstem		Erodium cicutarium			
Henbit		Lamium amplexicaule			
Lambsquarters, common	,	Chenopodium album			
Purslane, common		Portulaca oleracea			•

# Weeds Partially Controlled Preemergence

Broadleaves

Horseweed, Canada/Mare's tail

Erigeron canadensis / Conyza canadensis

Partial control means significant activity but not always at a level considered acceptable for commercial weed control. Repeat applications may be necessary.

Weeds Controlled Postemergence at 0.9 to 1.8 oz/acre

**Grasses** 

Bluegrass, annual

Crabgrass, large Crabgrass, smooth Poa annua

Digitaria sanguinalis Digitaria ischaemum

Broadleaves

Chickweed, common

Henbit Lambsquarters, common

Purslane, common Spurge, prostrate

Stellaria media

Lamium amplexicaule Chenopodium album Portulaca oleracea Euphorbia humistrata

Weeds Controlled Postemergence at 2.14 to 2.85 oz/acre

Grasses

Bluegrass, annual

Crabgrass, large Crabgrass, smooth Poa annua

Digitaria sanguinalis Digitaria ischaemum

**Broadleaves** 

Chickweed, common Filaree, redstem

Henbit Lambsquarters, common Pigweed, redroot Purslane, common

Spurge, prostrate Thistle, Canada†

Stellaria media

Erodium cicutarium Lamium amplexicaule

Chenopodium album Amaranthus retroflexus Portulaca oleracea

Euphorbia humistrata Cirsium arvense

**Weeds Partially Controlled Postemergence** 

Grasses

Johnsongrass†

Sorghum halepense

**Broadleaves** 

Cutleaf, eveningprimrose

Dandelion

Horseweed, Canada/Mare's tail

Oenothera laciniata Taraxacum officinale

Erigeron Canadensis / Conyza canadensis

Sedges

Nutsedge, yellow

Cyperus esculentus

Partial control means significant activity but not always at a level considered acceptable for commercial weed control. Repeat applications may be necessary.

†Seedling only

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TREE NUTS including: Hazelnut; Pecan; Pistachio; Black Walnut; English Walnut [African nut-tree; Beechnut; Brazil nut; Brazilian pine; Bunya; Bur oak; Butternut; Cajou nut; Candlenut; Cashew; Chestnut; Chinquapin; Coconut; Coquito nut; Dika nut; Ginkgo; Guiana chestnut; Heartnut; Hickory nut; Japanese horse-chestnut; Macadamia nut; Mongongo nut; Monkey-pot; Monkey puzzle nut; Okari nut; Pachira nut; Peach palm nut; Pequi; Pili nut; Pine nut; Sapucaia nut; Tropical almond; Yellowhorn]

Directions for use on Hazelnut, Pecan, Pistachio, Black Walnut and English Walnut

Weed Control	Rate (oz/acre)	Specific Use Directions
Preemergence	2.14 - 2.85 oz	
Postemergence	2.14 - 2.85 oz	Apply to broadleaf weeds less than 4 inches tall and before tillering of grasses. Use sufficient spray volume to obtain complete and uniform coverage. Use higher water volumes on larger weeds. Adjuvant use recommended.

Apply only to 3rd year planted trees and older. Apply only as a directed spray to the soil beneath the trees to prevent injury to the foliage and bark of young trees. Use of a protective sleeve is required for third year trees to minimize injury potential. Do not apply to areas where roots are exposed. Multiple applications of ISK Flazasulfuron Herbicide can be made, but maximum yearly amounts must be followed (see Crop Restrictions). Rates listed above are for broadcast application. If making a banded application, see Product Information section of the label for calculating appropriate use rate. Do not apply to stony soils. For postemergence applications, use an adjuvant (refer to Additive Use Requirements section on Page 6).

**Tank Mixes:** For postemergence weed control, consider tank mixing ISK Flazasulfuron Herbicide with a burndown herbicide, such as glyphosate, or glufosinate. For longer residual control of annual weeds, consider tank mixing ISK Flazasulfuron Herbicide with oxyfluorfen, oryzalin, or pendimethalin. Follow all label instructions, restrictions and precautions on both labels. Refer to Tank Mixtures section for additional information regarding tank mixes.

**Crop Restrictions:** Do not apply more than 2 applications at 2.85 oz/acre per acre per year. The Pre-Harvest Interval (PHI) for these crops is 130 days. The minimum retreatment interval (RTI) is 3 months.

Directions for use on Almond in California

Weed Control	Rate (oz/acre)	Specific Use Directions
Preemergence	1.5 - 2.85 oz	Apply as a preemergence application only during the months of October, November, December or January. Make only one (1) application each year.
Postemergence	1.5 - 2.85 oz	Apply as a postemergence application only during the months of October, November, December or January. Make only one (1) application each year. Apply to broadleaf weeds less than 4 inches tall and before tillering of grasses. Use sufficient spray volume to obtain complete and uniform coverage. Use higher water volumes on larger weeds. Adjuvant use recommended.

Apply only to 5<sup>th</sup> year planted trees and older. Apply only as a directed spray to the soil beneath the trees to prevent injury to any remaining foliage and bark of young trees. Do not apply to areas where roots are exposed. Rates listed are for broadcast application. If making a banded application, see Product Information section of the label for calculating appropriate use rate. Do not apply to stony soils or soils with 90% or greater sand concentration.

Tank Mixes: For postemergence weed control, consider tank mixing ISK Flazasulfuron Herbicide with a

burndown herbicide, such as glyphosate, or glufosinate. For longer residual control of annual weeds, consider tank mixing ISK Flazasulfuron Herbicide with oxyfluorfen, oryzalin, or pendimethalin. Follow all label instructions, restrictions and precautions on both labels. Refer to Tank Mixtures section for additional information regarding tank mixes.

Crop Restrictions: Do not apply more than 1 application at 1.5 - 2.85 oz/acre per acre per year.

# WEEDS CONTROLLED

#### WEEDS CONTROLLED PREEMERGENCE

Grasses	
Bluegrass, annual	Poa annua
Barley, hare	Hordeum leporinum
Bentgrass, creeping	Agrostis stolonifera
Brome, downy	Bromus tectorum
Fescue, rough	Festuca scabrella
Fescue, sheep	Festuca ovina
Fescue, tall	Festuca arundinacea
Foxtail, giant	Setaria faberi
Foxtail, green	Setaria viridis
Foxtail, yellow	Setaria glauca
Ryegrass, Italian	Lolium multiflorum
Sandbur, Coastal	Cenchrus spinifex
Sandbur field	Cenchrus incertus

R	roa	dle	2	20

Burclover, California Medicago polymorpha Stellaria media Chickweed, common Cerastium vulgatum Chickweed, mouse-ear Trifolium incarnatum Clover, crimson Clover, hop Trifolium aureum Dandelion Taraxacum officinale Dandelion, cat's-ear Hypochoeris radicata Filaree, broadleaf Erodium botrys Filaree, redstem Erodium cicutarium Fleabane, hairy Convza bonariensis Geranium Carolina Geranium carolinianum Senecio sp. Groundsel Groundsel, common Senecio vulgaris Lamium amplexicaule Henbit Lambsquarters, common Chenopodium album Mallow, common Malva neglecta Mallow, little Malva parviflora Sinapsis sp. Mustard Brasica juncea Mustard, Indian Mustard, wild Brassica kaber Pigweed, prostrate Amaranthus litoides Amaranthus retroflexus Piaweed, redroot Pigweed, tumble Amaranthus albus Purslane, common Portulaca oleracea Ragweed, common Ambrosia artemisiifolia Rockpurslane, redmaids Calandrinia ciliata Capsella bursa-pastoris Shepherd's-purse Sowthistle, annual Sonchus oleraceus Speedwell, corn Veronica arvensis Spurge, creeping Euphorbia serpens Euphorbia humistrata Spurge, prostrate

Spurge, spotted Euphorbia maculata
Willoweed, panicle Epilobium brachycarpum

Sedges

Kyllinga Kyllinga spp.

Yellow Nutsedge Cyperus esculentus

# WEEDS PARTIALLY CONTROLLED PREEMERGENCE

Grasses

Crabgrass, large Digitaria sanguinalis
Needlegrass, California Nassella cernua
Watergrass, early Echinochloa otyzoides
Witchgrass Panicum caplillare

**Broadleaves** 

Horseweed, Canada/Mare's tail Erigeron canadensis / Conyza canadensis

Hawksbeard, bristly Crepis setosa

Nightshade, silverleaf Solanum elaeagnifolium

Oxtongue, bristly Picris echioides

Sedges

Purple Nutsedge Cyperus rotundus

# WEEDS CONTROLLED POSTEMERGENCE

Grasses

Bluegrass, annual Poa annua

Bentgrass, creeping Agrostis stolonifera
Brome, downy Bromus tectorum
Crabgrass, large Digitaria sanguinalis
Crabgrass, smooth Digitaria ischaemum
Fescue, rough Festuca scabrella
Fescue, sheep Festuca ovina
Fescue, tall Festuca arundinacea

Fescue, tall
Foxtail, giant
Foxtail, green
Foxtail, yellow
Ryegrass, Italian
Needlegrass, California
Sandbur, Coastal
Sandbur, field
Festuca arundinaces
Setaria faberi
Setaria qlauca
Lolium multiflorum
Nassella cernua
Cenchrus spinifex
Cenchrus incertus

**Broadleaves** 

Bedstraw, catchweed Galium aparine

Burclover, California Medicago polymorpha

Carrot, wild Daucus carota

Chamomile, mayweed
Chickweed, common
Chickweed, mouse-ear
Clover, crimson
Clover, hop
Chickweed, mouse-ear
Clover, crimson
Clover, hop
Clover, crimson
Clover, hop

Clover, hop
Clover, large hop
Dandelion, cat's-ear
Dropwart, parsley water

Trifolium aureum
Trifolium campestre
Hypochoeris radicata
Oenanthe lachenalii

Falsedandelion, Carolina Pyrrhopappus carolinianus

<sup>\*</sup> Partial control means significant activity but not always at a level considered acceptable for commercial weed control. Repeat applications may be necessary.

Filaree, broadleaf Erodium botrys
Filaree, redstem Erodium cicutarium
Fleabane, hairy Conyza bonariensis
Geranium, Carolina Geranium carolinianum

Groundsel Senecio sp.
Groundsel, common Senecio vulgaris
Henbit Lamium amplexicaule

Mallow, common
Malva neglecta
Mallow, little
Mustard
Mustard
Mustard, Indian
Mustard, Indian
Mustard, tumble
Sisymphrium altissi

Sisvmbrium altissimum Mustard tumble Viola rafinesquil Pansy, field Lepidium campestre Pepperweed, field Pigweed, prostrate Amaranthus litoides Pigweed, redroot Amaranthus retroflexus Amaranthus albus Piaweed, tumble Purslane, common Portulaca oleracea Ragweed, common Ambrosia artemisiifolia Rockpurslane, redmaids Calandrinia ciliata Shepherd's-purse Capsella bursa-pastoris Sowthistle, annual Sonchus oleraceus Speedwell, corn. Veronica arvensis

Speedwell, corn
Spurge, creeping
Spurge, prostrate
Spurge, spotted
Thistle, bull

Veronica arvensis
Euphorbia serpens
Euphorbia humistrata
Euphorbia maculata
Cirsium vulgare

Thistle, bull Cirsium vulgare
Thistle, Canada Cirsium arvense

Willoweed, panicle Epilobium brachycarpum Wintergreen, chickweed Trientalis europaea

Sedges

Kyllinga Kyllinga spp.
Yellow Nutsedge Cyperus esculentus

WEEDS PARTIALLY CONTROLLED POSTEMERGENCE

Grasses
Polypogon, rabbitfoot
Polypogon monspeliensis
Watergrass, early
Echinochloa otyzoides
Vitchgrass
Panicum caplillare
Barley, hare
Hordeum leporinum

**Broadleaves** 

Dandelion Taraxacum officinale
Fleabane, rough Erigeron strigosus
Hawksbeard, bristly Crepis setosa
Oxtongue, bristly Picris echioides

Sedges
Purple Nutsedge Cyperus rotundus

<sup>\*</sup> Partial control means significant activity but not always at a level considered acceptable for commercial weed control. Repeat applications may be necessary.

# **CONIFER TREES**

Directions for use on Conifer Trees.

ISK Flazasulfuron Herbicide may be applied to container and field grown conifers. See table below for list of tolerant conifers.

Weed Control	Rate (oz/acre)	Specific Use Directions
Preemergence	2.14 - 2.85 oz	
Postemergence	2 14 - 2 85 oz	Apply to broadleaf weeds and grasses less than 4 inches tall and before tillering of grasses. Use sufficient spray volume to obtain complete and uniform coverage. Use higher water volumes on larger weeds. Adjuvant use recommended.

For postemergence application, use an adjuvant (refer to Additive Use Requirements section on Page 6). ISK Flazasulfuron Herbicide may be applied over-the-top to conifers prior to spring bud break or when conifers are sufficiently hardened off. Some needle burn may be seen on a new flush if plants are actively growing at the time of application but typically there is no effect on subsequent growth. Directed applications are preferred and recommended to reduce phytotoxicity potential. Rates listed above are for broadcast application. If making a banded application, see Banded Application Information (page 8) section of the label for calculating appropriate use rate.

**Tank Mixes:** Recommended tank mix partners include clethodim, glyphosate, napropamide, oryazlin, prodiamine, pronamide and simazine. Multiple applications of ISK Flazasulfuron Herbicide can be made, but maximum yearly amounts must be followed (see Crop Restrictions). Follow all label instructions, restrictions and precautions on both labels. Refer to Tank Mixtures section for additional information regarding tank mixes.

**Crop Restrictions:** Do not apply more than 9.6 ounces per acre per year (0.15 lb ai per acre per year). Do not apply to conifer seedbeds. Do not apply to trees within 1 year of seeding. Directed sprays must be made to conifers that have new growth or are not sufficiently hardened off. The minimum retreatment interval (RTI) is 3 months.

# WEEDS CONTROLLED

# WEEDS CONTROLLED PREEMERGENCE

WEEDS CONTROLLED PR	REGINERGENCE	·
Grasses		
Bluegrass, annual	∴ Poa annua	
Barley, hare	Hordeum leporinum	
Bentgrass, creeping	Agrostis stolonifera	
Brome, downy	Bromus tectorum	
Fescue, rough	Festuca scabrella	
Fescue, sheep	Festuca ovina	
Fescue, tall	Festuca arundinacea	
Foxtail, giant	Setaria faberi	
Foxtail, green	Setaria viridis	
Foxtail, yellow	Setaria glauca	
Ryegrass, Italian	Lolium multiflorum	
Sandbur, Coastal	Cenchrus spinifex	
Sandbur, field	Cenchrus incertus	

Broadleaves		
Burclover, California	Medicago polymorpha	
Chickweed, common	Stellaria media	
Chickweed, mouse-ear	Cerastium vulgatum	
Clover, crimson	Trifolium incarnatum	
Clover, hop	Trifolium aureum	
Dandelion	Taraxacum officinale	

Hypochoeris radicata Dandelion, cat's-ear Filaree, broadleaf Erodium botrys Filaree, redstem Erodium cicutarium Conyza bonariensis Fleabane, hairy Geranium Carolina Geranium carolinianum

Senecio sp. Groundsel Senecio vulgaris Groundsel, common Lamium amplexicaule Henbit Chenopodium album Lambsquarters, common Malva neglecta Mallow, common Malva parviflora Mallow, little Sinapsis sp. Mustard Mustard, Indian Brasica juncea Mustard, wild Brassica kaber Amaranthus litoides Pigweed, prostrate Pigweed, redroot Amaranthus retroflexus Pigweed, tumble Amaranthus albus

Portulaca oleracea Purslane, common Ragweed, common Ambrosia artemisiifolia Calandrinia ciliata Rockpurslane, redmaids Capsella bursa-pastoris Shepherd's-purse Sonchus oleraceus Sowthistle, annual Veronica arvensis Speedwell, corn Euphorbia serpens Spurge, creeping Euphorbia humistrata Spurge, prostrate Euphorbia maculata Spurge, spotted Epilobium brachycarpum

Sedges

Willoweed, panicle

**Kyllinga** Kyllinga spp.

Yellow Nutsedge Cyperus esculentus

# WEEDS PARTIALLY CONTROLLED PREEMERGENCE

Grasses

Crabgrass, large Digitaria sanguinalis Nassella cernua Needlegrass, California Echinochloa otyzoides Watergrass, early Witchgrass Panicum caplillare

**Broadleaves** 

Horseweed, Canada/Mare's tail Erigeron canadensis / Conyza canadensis

Crepis setosa Hawksbeard, bristly Picris echioides Oxtongue, bristly

Sedges

Purple Nutsedge Cyperus rotundus

# WEEDS CONTROLLED POSTEMERGENCE

Grasses

Bluegrass, annual Poa annua

Bentgrass, creeping Agrostis stolonifera Brome, downy Bromus tectorum Crabgrass, large Digitaria sanguinalis Digitaria ischaemum Crabgrass, smooth

<sup>\*</sup> Partial control means significant activity but not always at a level considered acceptable for commercial weed control. Repeat applications may be necessary.

Festuca scabrella Fescue, rough Fescue, sheep Festuca ovina Fescue, tall Festuca arundinacea Foxtail, giant Setaria faberi Foxtail, green Setaria viridis Foxtail, yellow Setaria glauca Ryegrass, Italian Lolium multiflorum Needlegrass, California Nassella cernua Sandbur, Coastal Cenchrus spinifex

Broadleaves

Sandbur, field

Bedstraw, catchweed Burclover, California

Carrot, wild

Chamomile, mayweed Chickweed, common Chickweed; mouse-ear

Clover, crimson Clover, hop Clover, large hop-Dandelion, cat's-ear Dropwart, parsley water Falsedandelion, Carolina

Filaree, broadleaf Eilaree, redstem Fleabane, hairy Geranium Carolina

Groundsel

Groundsel, common Henbit

Horseweed, Canada/Mare's tail Lambsquarters, common

Mallow, common Mallow, little Mustard Mustard, Indian

Mustard, tumble Pansy, field

Pepperweed, field Pigweed, prostrate Piaweed, redroot Pigweed, tumble Purslane, common Ragweed common Rockpurslane, redmaids

Shepherd's-purse Sowthistle, annual Speedwell, corn Spurge, creeping Spurge, prostrate Spurge, spotted Thistle, bull

Thistle, Canada Willoweed, panicle Wintergreen, chickweed Galium aparine

Cenchrus incertus

Medicago polymorpha

Daucus carota Anthemis cotula Stellaria media Cerastium vulgatum Trifolium incarnatum Trifolium aureum Trifolium campestre Hypochoeris radicata Oenanthe lachenalii Pyrrhopappus carolinianus

Erodium botrvs Erodium cicutarium Conyza bonariensis Geranium carolinianum

Senecio sp. Senecio vulgaris Lamium amplexicaule

Erigeron canadensis / Conyza canadensis

Chenopodium album Malva neglecta Malva parviflora Sinapsis sp. Brasica juncea

Sisymbrium altissimum Viola rafinesquil Lepidium campestre Amaranthus litoides Amaranthus retroflexus

Amaranthus albus Portulaca oleracea Ambrosia artemisiifolia Calandrinia ciliata Capsella bursa-pastoris Sonchus oleraceus Veronica arvensis Euphorbia serpens Euphorbia humistrata Euphorbia maculata Cirsium vulgare Cirsium arvense

Epilobium brachycarpum Trientalis europaea

Sedges		
Kyllinga	,	Kyllinga spp.
Yellow Nutsedge		Cyperus esculentus

#### WEEDS PARTIALLY CONTROLLED POSTEMERGENCE

Grasses		
Polypogon, rabbitfoot	Polypogon monspeliensis	
Watergrass, early	Echinochloa otyzoides	
Witchgrass	Panicum caplillare	
Barley, hare	Hordeum leporinum	,

Broadleaves		
Dandelion	Taraxacum officinale	
Fleabane, rough	Erigeron strigosus	
Hawksbeard, bristly	Crepis setosa	
Oxtongue, bristly	Picris echioides	

Sedges		
Purple Nutsedge	Cyperus rotundus	

<sup>\*</sup> Partial control means significant activity but not always at a level considered acceptable for commercial weed control. Repeat applications may be necessary.

# **Tolerant Conifers**

Common Name	Scientific Name
Balsam fir	Abies balsamea
Fraser fir	Abies fraseri
Grand fir	Abies grandis
Noble fir	Abies procera
Nordman fir	Abies nordmanniana
White fir	Abies concolor
Blue spruce	Picea pungens
Norway spruce	Picea abies
Eastern white pine	Pinus strobes
Red pine	Pinus resinosa
Scotch pine	Pinus sylvestris
Virginia pine	Pinus virginiana
White pine	Pinus strobes
Douglas fir	Pseudotsuga menziesii
Leyland cypress	Cupressocyperis leylandii

Note: Evaluations have shown the above listed conifers to be tolerant to Flazasulfuron. However, it is impossible to evaluate the product under all growing conditions. Until the user is familiar with the results under local conditions, normal judgment and care should be exercised. This product may be used on conifers not listed above provided that the user evaluate the effects of Flazasulfuron on a small number of plants under commercial growing condition at 4 to 6 weeks after the application for phytotoxic effects This will determine if Flazasulfuron can safely be used on a large scale application.

#### INDUSTRIAL VEGETATIVE MANAGEMENT/NON-AGRICULTURAL USES

Directions for use:

ISK Flazasulfuron Herbicide may be applied for weed control on private, public and military lands to the following uncultivated nonagricultural areas: airports, ditch banks, dry canals, highway, railroad and utility rights-of-way, industrial sites, manufacturing sites, storage areas and warehouse areas.

Bermudagrass and Bahiagrass release

Weed Control	Rate (oz/acre)	Specific Use Directions
Postemergence	3.0 oz	Flazasulfuron may be applied after bermudagrass has broken dormancy and is well established and actively growing. Best results are obtained if weeds are small or 1 to 2 weeks after mowing. Follow-up applications may be made at 4 to 6 weeks after the first application. Applications should use sufficient water for thorough coverage and uniform pattern. Applications may be made as either a broadcast or directed spray.

For postemergence application, use an adjuvant (refer to Additive Use Requirements section on Page 6). Do not use on areas or plants not specified above. Do not use near residential properties or near sensitive desired plants. Do not apply where runoff water may flow onto agricultural lands. Multiple applications of ISK Flazasulfuron Herbicide can be made, but maximum yearly amounts must be followed (see Crop Restrictions).

**Tank Mixes:** Follow all label instructions, restrictions and precautions on both labels. Refer to Tank Mixtures section for additional information regarding tank mixes.

**Restrictions:** Do not apply more than 9.6 ounces per acre per year (0.15 lb ai per acre per year). The minimum retreatment interval (RTI) is 45 days.

# WEEDS CONTROLLED

#### WEEDS CONTROLLED PREEMERGENCE

***************************************	CEMENOLINGE
Grasses	•
Bluegrass, annual	Poa annua
Barley, hare	Hordeum leporinum
Bentgrass, creeping	Agrostis stolonifera
Brome, downy	Bromus tectorum
Fescue, rough	Festuca scabrella
Fescue, sheep	Festuca ovina
Fescue, tall	Festuca arundinacea
Foxtail, giant	Setaria faberi
Foxtail, green	Setaria viridis
Foxtail, yellow	Setaria glauca
Ryegrass, Italian	Lolium multiflorum
Sandbur, Coastal	Cenchrus spinifex
Sandbur, field	Cenchrus incertus

Broadleaves		,
Burclover, California	Medicago polymorpha	
Chickweed, common	Stellaria media	
Chickweed, mouse-ear	Cerastium vulgatum	
Clover, crimson	Trifolium incarnatum	•
Clover, hop	Trifolium aureum	
Dandelion	Taraxacum officinale	
Dandelion, cat's-ear	Hypochoeris radicata	

Filaree, broadleaf Erodium botrvs Filaree, redstem Erodium cicutarium Fleabane, hairy Convza bonariensis Geranium Carolina Geranium carolinianum Groundsel Senecio sp. Senecio vulgaris Groundsel, common Henbit Lamium amplexicaule Lambsquarters, common Chenopodium album Mallow, common Malva neglecta Mallow, little Malva parviflora Mustard Sinapsis sp. Brasica juncea Mustard, Indian Brassica kaber Mustard, wild Pigweed, prostrate Amaranthus litoides Amaranthus retroflexus Pigweed, redroot Pigweed, tumble Amaranthus albus Purslane, common Portulaca oleracea Ragweed, common Ambrosia artemisiifolia Calandrinia ciliata Rockpurslane, redmaids Shepherd's-purse Capsella bursa-pastoris Sowthistle, annual Sonchus oleraceus Veronica arvensis Speedwell, corn Spurge, creeping Euphorbia serpens Spurge, prostrate Euphorbia humistrata Euphorbia maculata Spurge, spotted

Sed	ges
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Willoweed, panicle

Kyllinga . Kyllinga spp.

Yellow Nutsedge Cyperus esculentus

# WEEDS PARTIALLY CONTROLLED PREEMERGENCE

#### Grasses

Crabgrass, large Digitaria sanguinalis
Needlegrass, California Nassella cernua
Watergrass, early Echinochloa otyzoides
Witchgrass Panicum caplillare

# **Broadleaves**

Horseweed, Canada/Mare's tail Erigeron canadensis / Conyza canadensis

Hawksbeard, bristly
Oxtongue, bristly

Crepis setosa
Picris echioides

# Sedges

Purple Nutsedge Cyperus rotundus

\* Partial control means significant activity but not always at a level considered acceptable for commercial weed control. Repeat applications may be necessary.

Epilobium brachycarpum

# WEEDS CONTROLLED POSTEMERGENCE

G	ra	s	s	е	S
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Bluegrass, annual Poa annua

Bentgrass, creeping Agrostis stolonifera
Brome, downy Bromus tectorum
Crabgrass, large Digitaria sanguinalis
Crabgrass, smooth Digitaria ischaemum
Fescue, rough Festuca scabrella

Fescue, sheep Festuca ovina Fescue, tall Festuca arundinacea Setaria faberi Foxtail, giant Foxtail, green Setaria viridis Setaria glauca Foxtail, yellow Ryegrass, Italian Lolium multiflorum Needlegrass, California Nassella cernua Sandbur, Coastal Cenchrus spinifex Sandbur, field Cenchrus incertus

Broadleaves

Bedstraw, catchweed Burclover, California

Carrot, wild

Clover, crimson

Chamomile, mayweed Chickweed, common Chickweed, mouse-ear

Clover, hop Clover, large hop Dandelion, cat's-ear Dropwart, parsley water Falsedandelion, Carolina

Filaree, broadleaf Filaree, redstem Fleabane, hairy Geranium Carolina

Groundsel Groundsel, common

Henbit

Horseweed, Canada/Mare's tail

Lambsquarters, common

Mallow, common Mallow, little Mustard Mustard, Indian

Mustard, tumble

Pansy, field Pepperweed, field Pigweed, prostrate Pigweed, redroot

Pigweed, tumble Purslane, common Ragweed, common Rockpurslane, redmaids Shepherd's-purse

Sowthistle, annual Speedwell, corn Spurge, creeping Spurge, prostrate Spurge, spotted Thistle, bull

Thistle, Canada

Willoweed, panicle Wintergreen, chickweed Galium aparine

Medicago polymorpha

Daucus carota Anthemis cotula Stellaria media Cerastium vulgatum Trifolium incarnatum Trifolium aureum Trifolium campestre Hypochoeris radicata Oenanthe lachenalii Pvrrhopappus carolinianus

Erodium botrys Erodium cicutarium Convza bonariensis Geranium carolinianum

Senecio sp. Senecio vulgaris Lamium amplexicaule

Erigeron canadensis / Conyza canadensis

Chenopodium album Malva neglecta Malva parviflora Sinapsis sp. Brasica juncea

Sisymbrium altissimum

Viola rafinesquil Lepidium campestre Amaranthus litoides Amaranthus retroflexus Amaranthus albus Portulaça oleracea Ambrosia artemisiifolia Calandrinia ciliata Capsella bursa-pastoris Sonchus oleraceus Veronica arvensis Euphorbia serpens Euphorbia humistrata Euphorbia maculata Cirsium vulgare Cirsium arvense

Epilobium brachycarpum Trientalis europaea

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Sedges		
Kyllinga	Kyllinga spp.	
Yellow Nutsedge	Cyperus esculentus	

# WEEDS PARTIALLY CONTROLLED POSTEMERGENCE

Grasses		
Polypogon, rabbitfoot	Polypogon monspeliensis	
Watergrass, early	Echinochloa otyzoides	
Witchgrass	Panicum caplillare	
Barley, hare	Hordeum leporinum	

Broadleaves		
Dandelion	Taraxacum officinale	
Fleabane, rough	Erigeron strigosus	
Hawksbeard, bristly	Crepis setosa	
Oxtongue, bristly	Picris echioides	

Purple Nutsedge Cyperus rotundus
Fulple Nuiseage Cyperus rotandus

<sup>\*</sup> Partial control means significant activity but not always at a level considered acceptable for commercial weed control. Repeat applications may be necessary.

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#### STORAGE AND DISPOSAL

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

#### Pesticide Storage

Keep out of reach of children and animals. Store in original containers only. Store in a cool, dry place and avoid excess heat. Carefully open containers. After partial use, fold and roll back bags, clamp and close tightly. Do not put concentrate or dilute material into food or drink containers. Do not contaminate other pesticides, fertilizers, water, food or feed by storage or disposal.

In case of spill, avoid contact, isolate area and keep out animals and unprotected persons. Confine spills. Call CHEMTREC 1-(800) 424-9300.

To confine spill: Cover to prevent dispersal. Place damaged package in a holding container. Identify contents.

# **Pesticide Disposal**

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

# **Container Disposal**

[if product is in fiber drum with liner]

Nonrefillable container. DO NOT use or refill this container. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into formulation equipment. Then offer for recycling, if available, or dispose of liner in a sanitary landfill or by incineration, or, if allowed by State and Local authorities, by burning. If burned, stay out of smoke. If drum is contaminated and cannot be reused, dispose of it in the manner required for its liner.

# [if product is in plastic containers]

Nonrefillable container. DO NOT reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or dispose of empty container in a sanitary landfill or by incineration, or, if allowed by State and Local authorities, by burning. If burned, stay out of smoke.

# WARRANTY AND LIMITATION OF DAMAGES

Seller warrants to those persons lawfully acquiring title to this product that at the time of first sale of this product by Seller that this product conformed to its chemical description and was reasonably fit for the purposes stated on the label when used in accordance with Seller's directions under normal conditions of use, and Buyers and users of this product assume the risk of any use contrary to such directions. TO THE FULLEST EXTENT PERMITTED BY LAW, EXCEPT AS PROVIDED ELSEWHERE IN WRITING CONTAINING AN EXPRESS REFERENCE TO THIS WARRANTY AND LIMITATION OF DAMAGES. SELLER MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OR GUARANTY, INCLUDING ANY OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR OF MERCHANTABILITY, AND NO AGENT OF SELLER IS AUTHORIZED TO DO SO. To the fullest extent permitted by law, in no event shall Seller's liability for any breach of warranty or guaranty exceed the purchase price of the product as to which a claim is made. To the fullest extent permitted by law, buyers and users of this product are responsible for all loss or damage from use or handling of this product which results from conditions beyond the control of Seller, including, but not limited to, incompatibility with other products unless otherwise expressly provided in Directions for Use of this product, weather conditions, cultural practices, moisture conditions or other environmental conditions outside of the ranges that are generally recognized as being conducive to good agricultural and/or horticultural practices.