

# CAUTION

KEEP OUT OF REACH OF CHILDREN

READ SAFETY DIRECTIONS BEFORE OPENING OR USING



**ACTIVE CONSTITUENT: 250 g/kg FLAZASULFURON**

<b>GROUP</b>	<b>2</b>	<b>HERBICIDE</b>
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*For control of various grass and broadleaved weeds in vineyards, olive groves and citrus orchards and in non-crop situations as specified in the Directions for Use table.*

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An American Vanguard Company

**Net Contents 1 kg**

**DIRECTIONS FOR USE****RESTRAINTS**

**DO NOT** apply by aircraft.

**DO NOT** apply KATANA® to olive trees or grape vines less than 3 years old, or citrus trees that are less than 5 years old. Avoid direct or indirect spray contact with crop foliage, bark, roots or fruit.

**DO NOT** use KATANA on trees or vines that are stressed, exhibit low vigour or poor health.

**DO NOT** apply KATANA more than once per year.

**DO NOT** apply KATANA on soils that have open channels or cracks.

**DO NOT** apply KATANA to areas where soil erosion or runoff is likely to occur.

**DO NOT** apply if heavy rains or storms are forecast within 3 days.

**DO NOT** irrigate to the point of runoff for at least 3 days after application.

**DO NOT** replant trees or vines within 12 months of an application.

**DO NOT** rotate to another crop not on the label within 12 months of an application.

**SPRAY DRIFT RESTRAINTS**

Specific definitions for terms used in this section of the label can be found at [apvma.gov.au/spraydrift](http://apvma.gov.au/spraydrift)

**DO NOT** allow bystanders to come into contact with the spray cloud.

**DO NOT** apply in a manner that may cause an unacceptable impact to native vegetation, agricultural crops, landscaped gardens and aquaculture production, or cause contamination of plant or livestock commodities, outside the application site from spray drift. The buffer zones in the buffer zone tables below provide guidance but may not be sufficient in all situations. Wherever possible, correctly use application equipment designed to reduce spray drift and apply when the wind direction is away from these sensitive areas.

**DO NOT** apply unless the wind speed is between 3 and 20 kilometres per hour as measured at the application site during the time of application.

**DO NOT** apply if there are hazardous surface temperature inversion conditions at the application site during the time of application. Surface temperature inversion conditions exist most evenings one to two hours before sunset and persist until one to two hours after sunrise.

**DO NOT** apply by a boom sprayer unless the following requirements are met:

- spray droplets not smaller than a COARSE spray droplet size category
- minimum distances between the application site and downwind sensitive areas (see the following table titled 'Buffer Zones for Boom Sprayers') are observed.

**BUFFER ZONES FOR BOOM SPRAYERS IN NON-CROP AREAS ONLY**

Application Rate	Boom Height above the Target Canopy	Mandatory downwind buffer zone				
		Bystander Areas	Natural Aquatic Areas	Pollinator Areas	Vegetation Areas	Livestock Areas
Up to 200 g/ha	0.5 m or lower	0 metres	0 metres	0 metres	10 metres	0 metres
	1.0 m or lower	0 metres	20 metres	0 metres	30 metres	0 metres

<b>Situation</b>	<b>Weeds</b>	<b>Rate</b>	<b>Critical Comments</b>
VINEYARDS, OLIVE GROVES (>3 years old)	<b>PRE-EMERGENT</b> Broad Leaf Weeds Grass Weeds Refer to Weeds Controlled Table	150–200 g/ha	<p>Avoid direct or indirect spray contact with crop foliage, bark, roots or fruit as it may cause localised injury.</p> <p>Apply with a directed sprayer along vine or tree row. Apply to bare moist soil free of trash and before the main weed germination period. Excessive weed cover may prevent a uniform distribution of KATANA reaching the soil and consequently reduced residual weed control.</p> <p>Use higher rate where longer residual control of weeds is required, or if there is a low infestation of seedling weeds.</p> <p>Soil moisture is required for the activation of KATANA. Apply KATANA prior to rainfall or irrigation of 10 mm. Dry soil conditions following the application of KATANA may result in reduced weed control.</p> <p>DO NOT apply KATANA on stony soils.</p> <p>DO NOT apply in Tasmania where inter-row areas consist of bare soil.</p> <p>DO NOT apply in olive groves if fruit on the ground is still to be harvested.</p>
	<b>POST-EMERGENT</b> Broad Leaf Weeds Grass Weeds Refer to Weeds Controlled Table	150–200 g/ha + non-ionic surfactant *	<p>Avoid direct or indirect spray contact with crop foliage, bark, roots or fruit as it may cause localised injury.</p> <p>Apply with a directed sprayer along vine or tree row.</p> <p>Application to be made to seedling weeds with 2–6 leaves or before tillering in grasses.</p> <p>It is recommended to tank mix KATANA with a registered knockdown herbicide containing glyphosate or glufosinate-ammonium.</p> <p>Ensure application is made to stress free weeds within a Delta T range of 2–8.</p> <p>If weed coverage is not too dense, this application will also assist in residual weed control.</p> <p>DO NOT apply KATANA on stony soils.</p> <p>DO NOT apply in Tasmania where inter-row areas consist of bare soil.</p> <p>DO NOT apply in olive groves if fruit on the ground is still to be harvested.</p>
CITRUS ORCHARDS (oranges, lemons & mandarins only) (>5 years old)	<b>PRE-EMERGENT</b> Broad Leaf Weeds Grass Weeds Refer to Weeds Controlled Table	150–200 g/ha	<p>Avoid direct or indirect spray contact with crop foliage, bark, roots or fruit as it may cause localised injury.</p> <p>Apply with a directed sprayer along tree row. Apply to bare moist soil free of trash and before the main weed germination period. Excessive weed cover may prevent a uniform distribution of KATANA reaching the soil and consequently reduced residual weed control.</p> <p>Use higher rate where longer residual control of weeds is required, or if there is a low infestation of seedling weeds.</p> <p>Soil moisture is required for the activation of KATANA. Apply KATANA prior to rainfall or irrigation of 10 mm. Dry soil conditions following the application of KATANA may result in reduced weed control.</p> <p>DO NOT apply Katana from the beginning of Spring bud burst until the end of Summer bud burst.</p> <p>DO NOT apply KATANA on stony soils, or on sandy soils with a cation exchange capacity (CEC) of less than 5 meq/100 g.</p>

<b>Situation</b>	<b>Weeds</b>	<b>Rate</b>	<b>Critical Comments</b>
CITRUS ORCHARDS (oranges, lemons & mandarins only) (>5 years old)	<b>POST-EMERGENT</b> Broad Leaf Weeds Grass Weeds Refer to Weeds Controlled Table	150–200 g/ha + non-ionic surfactant *	Avoid direct or indirect spray contact with crop foliage, bark, roots or fruit as it may cause localised injury. Apply with a directed sprayer along tree row. Application to be made to seedling weeds with 2–6 leaves or before tillering in grasses. It is recommended to tank mix KATANA with a registered knockdown herbicide containing glyphosate or glufosinate-ammonium. Ensure application is made to stress free weeds within a Delta T range of 2–8. If weed coverage is not too dense, this application will also assist in residual weed control. DO NOT apply Katana from the beginning of Spring bud burst until the end of Summer bud burst. DO NOT apply KATANA on stony soils, or on sandy soils with a cation exchange capacity (CEC) of less than 5 meq/100 g.
NON-CROP Under electric power transmission lines & towers in stock exclusion zones on public land	<b>PRE-EMERGENT</b> Broad Leaf Weeds Grass Weeds Refer to Weeds Controlled Table	150–200 g/ha	Avoid direct or indirect spray contact with desirable vegetation as it may cause localised plant injury. Apply to bare moist soil free of trash and before the main weed germination period. Excessive weed cover may prevent a uniform distribution of KATANA reaching the soil and consequently reduced residual weed control. Use higher rate where longer residual control of weeds is required, or if there is a low infestation of seedling weeds. Soil moisture is required for the activation of KATANA. Apply KATANA prior to rainfall of 10 mm. Dry soil conditions following the application of KATANA may result in reduced weed control.
	<b>POST-EMERGENT</b> Broad Leaf Weeds Grass Weeds Refer to Weeds Controlled Table	150–200 g/ha + non-ionic surfactant *	Avoid direct or indirect spray contact with desirable vegetation as it may cause localised plant injury. Apply to seedling weeds with 2–6 leaves or before tillering in grasses. It is recommended to tank mix KATANA with a registered knockdown herbicide containing glyphosate or glufosinate-ammonium. Ensure application is made to stress free weeds within a Delta T range of 2–8. If weed coverage is not too dense, this application will also assist in residual weed control.

\* Use with a registered non-ionic surfactant at its recommended use rate for mixing with herbicides.

**Weeds Controlled**

<b>Timing</b>	<b>Weed Type</b>	<b>Weed Names</b>
<b>PRE-EMERGENT</b>	<b>Broad Leaf Weeds</b>	Dandelion ( <i>Taraxacum officinale</i> ) Fat hen ( <i>Chenopodium album</i> ) Marshmallow ( <i>Malva parviflora</i> & <i>Althaea officinalis</i> ) Soursob ( <i>Oxalis pes-caprae</i> ) Sowthistle ( <i>Sonchus oleraceus</i> ) Staggerweed ( <i>Stachys arvensis</i> ) Stinging nettle ( <i>Urtica dioica</i> ) Subterranean clover ( <i>Trifolium subterraneum</i> ) Turnip weed ( <i>Rapistrum rugosum</i> ) White clover ( <i>Trifolium repens</i> ) Wild radish ( <i>Raphanus raphanistrum</i> ) Wireweed ( <i>Polygonum aviculare</i> )
	<b>Grass Weeds</b>	Barley grass ( <i>Hordeum</i> spp.) Awnless Barnyard grass ( <i>Echinochloa crus-galli</i> ) Common paspalum ( <i>Paspalum dilatatum</i> ) Couch grass ( <i>Cynodon dactylon</i> ) Perennial ryegrass ( <i>Lolium perenne</i> ) Toad rush ( <i>Juncus bufonius</i> ) Winter grass ( <i>Poa annua</i> )
<b>POST-EMERGENT</b>	<b>Broad Leaf Weeds</b>	Capeweed ( <i>Arctotheca calendula</i> ) Dandelion ( <i>Taraxacum officinale</i> ) Flatweed ( <i>Hypochoeris radicata</i> ) Fleabane ( <i>Conzys</i> sp.) Marshmallow ( <i>Malva</i> spp.) Pimpernel ( <i>Anagallis arvensis</i> ) Prickly lettuce ( <i>Lactuca serriola</i> ) Salvation Jane ( <i>Echium plantagineum</i> ) Shepherd's purse ( <i>Capsella bursa-pastoris</i> ) Soursob ( <i>Oxalis pes-caprae</i> ) Storksbill ( <i>Erodium cicutarium</i> ) Subterranean clover ( <i>Trifolium subterraneum</i> ) White clover ( <i>Trifolium repens</i> ) Wild radish ( <i>Raphanus raphanistrum</i> ) Willow herb ( <i>Epilobium</i> spp.)
	<b>Grass Weeds</b>	Annual ryegrass ( <i>Lolium rigidum</i> ) Barley grass ( <i>Hordeum</i> sp.) Awnless Barnyard grass ( <i>Echinochloa crus-galli</i> ) Great brome grass ( <i>Bromus diandrus</i> ) Perennial ryegrass ( <i>Lolium perenne</i> ) Silver grass ( <i>Vulpia</i> sp.) Toad rush ( <i>Juncus bufonius</i> )

**NOT TO BE USED FOR ANY PURPOSE, OR IN ANY MANNER, CONTRARY TO THIS LABEL UNLESS AUTHORISED UNDER APPROPRIATE LEGISLATION.**

**WITHHOLDING PERIODS**

**HARVEST:**

**GRAPES – DO NOT HARVEST FOR 11 WEEKS AFTER APPLICATION**

**OLIVES – DO NOT HARVEST FOR 4 WEEKS AFTER APPLICATION**

**CITRUS – DO NOT HARVEST FOR 1 DAY AFTER APPLICATION**

**GRAZING:**

**VINEYARDS, OLIVE GROVES, CITRUS ORCHARDS AND NON-CROP AREAS** (under electric power transmission lines and towers in stock exclusion zones on public land):

**DO NOT GRAZE OR CUT FOR STOCKFOOD**

## **GENERAL INSTRUCTIONS**

### **Mixing**

Fill minimum 50% of the required water into the spray tank, and agitate when adding the required amount of KATANA. Add surfactant when required for post-emergent applications. Finally add the rest of the required water volume. Keep the spray solution agitated until all product is applied. Never prepare more spray solution than required.

### **Surfactant**

Use with a registered non-ionic surfactant at its recommended use rate for mixing with herbicides.

### **Application**

Apply with a directed sprayer along tree or vine row. Avoid spraying near areas such as irrigation channels and dams. Use a minimum of 200 L water/ha.

### **Compatibility**

For post-emergent use, it is recommended to tank mix KATANA with a registered knockdown herbicide containing glyphosate or glufosinate-ammonium.

Always follow label requirements of mixing partner.

### **Sprayer Clean-Up**

When cleaning spraying equipment, wear cotton overalls buttoned to the neck and wrist and elbow-length chemical resistant gloves. After KATANA is applied the following steps must be taken to clean the spray equipment.

1. Drain tank; thoroughly rinse inside of spray tanks with clean water (rinse about 1 minute per 100 litres of tank capacity). Loosen and physically remove any visible deposits with a stiff brush.
2. Fill the tank with clean water and add 4 litres of household ammonia (contains at least 3% active ingredient) for every 400 litres 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.
4. 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. 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: A dangerous gas will form if chlorine bleach is mixed with ammonia.)

### **Herbicide Resistance Warning**

#### **GROUP 2 HERBICIDE**

KATANA is a member of the sulfonyleurea group of herbicides. The product inhibits acetolactate synthase. For weed resistance management, the product is a Group 2 herbicide.

Some naturally occurring weed biotypes resistant to the product and other Group 2 herbicides may exist through normal genetic variability in any weed population. The resistant individuals can eventually dominate the weed population if these herbicides are used repeatedly. These resistant weeds will not be controlled by this product or other Group 2 herbicides.

Since the occurrence of resistant weeds is difficult to detect prior to use, ISK Biosciences Oceania Pty Ltd and AgNova Technologies Pty Ltd accept no liability for any losses that may result from the failure of this product to control resistant weeds.

## **PRECAUTIONS**

### **Re-Entry**

For General Public:

DO NOT allow entry into treated areas until the spray has dried.

For Occupational Users:

DO NOT enter treated areas until spray has dried, unless wearing cotton overalls buttoned to the neck and wrist (or equivalent clothing). Clothing must be laundered after each day's use.

## **PROTECTION OF WILDLIFE, FISH, CRUSTACEANS AND ENVIRONMENT**

Very toxic to aquatic life. DO NOT contaminate streams, rivers or watercourses with this product or used containers.

## STORAGE AND DISPOSAL

Store in the closed, original container in a cool, well-ventilated area, away from children, animals, food, feedstuffs and fertilisers. Do not store for prolonged periods in direct sunlight.

Triple rinse containers before disposal. Add rinsings to the spray tank. Do not dispose of undiluted chemicals on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush or puncture and deliver empty packaging to an approved waste management facility. If an approved waste management facility is not available bury the empty packaging 500 mm below the surface in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots in compliance with relevant local, state or territory government regulations. Do not burn empty containers or product.

## SAFETY DIRECTIONS

Will irritate eyes. Avoid contact with eyes. When opening the container, preparing spray and using the prepared spray, wear cotton overalls buttoned to the neck and wrist (or equivalent clothing). Wash hands after use. After each day's use, wash gloves and contaminated clothing.

## FIRST AID

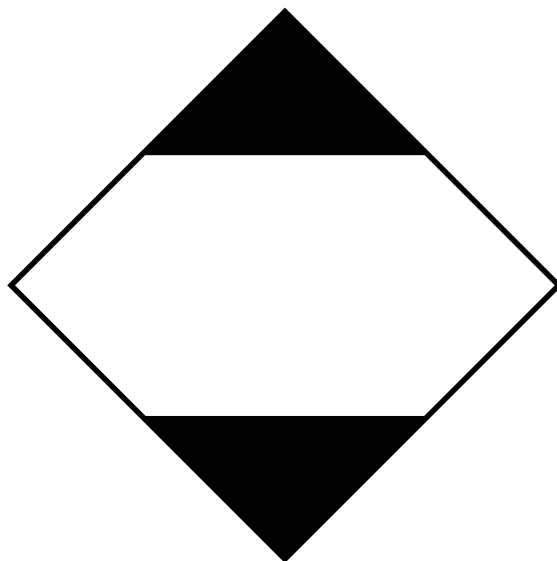
If poisoning occurs contact a doctor or Poisons Information Centre. Phone Australia 13 11 26; New Zealand 0800 764 766.

## SAFETY DATA SHEET

Additional information is listed in the Safety Data Sheet. For a copy visit our website at [agnova.com.au](http://agnova.com.au)

## CONDITIONS OF SALE

ISK Biosciences Oceania Pty Ltd and AgNova Technologies Pty Ltd shall not be liable for any consequential or other loss or damage relating to the supply or subsequent handling or use of this product, unless such liability by law cannot be lawfully excluded or limited. All warranties, conditions or rights implied by statute or other law which may be lawfully excluded are so excluded. Where the liability of ISK Biosciences Oceania Pty Ltd and AgNova Technologies Pty Ltd for breach of any such statutory warranties and conditions cannot be lawfully excluded but may be limited to it re-supplying the product or an equivalent product or the cost of a product or an equivalent product, then the liability of ISK Biosciences Oceania Pty Ltd and AgNova Technologies Pty Ltd for any breach of such statutory warranty or condition is so limited.



\*KATANA is a registered trademark of Ishihara Sangyo Kaisha, Ltd.

This label requires no additional statements in accordance with the Globally Harmonised System of Classification and Labelling (GHS).

In a transport emergency dial 000, Police or Fire Brigade.  
For specialist advice in an emergency only, call 1800 033 111 (24 hours).

**APVMA Approval No: 90560/129298**

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