

KATANA®

Version and date: Version 4 Spring 2017

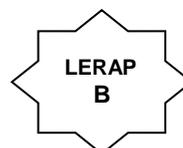
Changes since last version: Other Specific Restrictions amended



This label is compliant with the CPA Voluntary Initiative Guidance

FORMULATION AND ACTIVE INGREDIENT: A water dispersible granule formulation containing 25% w/w flazasulfuron for use as a non-selective residual herbicide on natural surfaces not intended to bear vegetation, permeable surfaces overlying soil and hard surfaces (railway ballast only) and amenity vegetation (around).

PACK SIZE: 50g to 1000g



MAPP No. 16162

UN: 3077

**PROFESSIONAL USE ONLY
PROTECT FROM FROST**

IMPORTANT INFORMATION - For use only as an industrial herbicide				
Crops / Situations	Maximum Individual dose (g product/ha)	Maximum total dose: (g product /ha/year)	Maximum number of treatments: (per year)	Latest time of application
Hard surfaces (railway ballast only), natural surfaces not intended to bear vegetation, permeable surfaces overlying soil and amenity vegetation (around).	150	-	1	-

READ THE LABEL BEFORE USE. USING THIS PRODUCT IN A MANNER THAT IS INCONSISTENT WITH THE LABEL MAY BE AN OFFENCE. FOLLOW THE CODE OF PRACTICE FOR USING PLANT PROTECTION PRODUCTS.

Other specific restrictions:

- This product qualifies for inclusion within the Local Environment Risk Assessment for Pesticides (LERAP) scheme. A LERAP must be carried out in accordance with CRD's published guidance before each spraying operation from a horizontal boom sprayer. The results of the LERAP must be recorded and kept available for 3 years.
- This product must only be used on natural or porous surfaces such as gravel where the user can establish that the underlying surface is soil, and railway ballast surfaces.
- This product must not be applied to any non-porous man made surfaces. Where treated areas are close to non-porous man made surfaces care must be taken not to overspray those surfaces.
- To avoid the build-up of resistance do not apply this or any other product containing an ALS inhibitor herbicide with claims for control of grass-weeds more than once per year.
- Extreme care must be taken to avoid spray drift onto non-target vegetation.

KATANA® is a registered trademark of Ishihara Sangyo Kaisha Ltd, Japan.

	Katana	A water dispersible granule formulation containing 25% w/w flazasulfuron
Warning		
	H410	Very toxic to aquatic life with long lasting effects
	P273	Avoid release to the environment
	P391	Collect spillage
	P501	Dispose of contents/container to a licensed hazardous-waste disposal contractor or collection site except for empty clean triple rinsed containers which can be disposed of as non-hazardous waste.
	EUH210	Safety data sheet available on request
	EUH401	To avoid risks to human health and the environment, comply with the instructions for use.

The (COSHH) Control of Substances Hazardous to Health Regulations may apply to the use of this product at work

SAFETY PRECAUTIONS

Operator Protection

- ENGINEERING CONTROL OF OPERATOR EXPOSURE must be used where reasonably practicable in addition to the following personal protective equipment:
- WEAR SUITABLE PROTECTIVE GLOVES when handling the concentrate and when handling contaminated surfaces.
- WEAR SUITABLE PROTECTIVE CLOTHING (impermeable coveralls), SUITABLE PROTECTIVE GLOVES and RUBBER BOOTS when applying by handheld equipment.
- However, engineering controls may replace personal protective equipment if a COSHH assessment shows they provide an equal or higher standard of protection.
- WASH ANY CONTAMINATION from skin or eyes immediately.
- WASH ALL PROTECTIVE CLOTHING thoroughly after use, especially the inside of gloves.
- WASH CONCENTRATE from skin or eyes immediately.
- WASH HANDS AND EXPOSED SKIN before eating, drinking or smoking and after work.
- WHEN USING DO NOT EAT, DRINK OR SMOKE.

Environmental Protection

- DO NOT ALLOW DIRECT SPRAY from horizontal boom sprayers to fall within 5m of the top of the bank of any static or flowing water body, unless a Local Environmental Risk Assessment for Pesticides (LERAP) permits a narrower buffer zone, or within 1m of the top of a ditch which is dry at the time of application.
- DO NOT ALLOW DIRECT SPRAY from hand held sprayers to fall within 1m of the top of the bank of any static or flowing water body. Direct spray away from water.
- DO NOT ALLOW DIRECT SPRAY from train sprayers to fall within 5m of the top of the bank of any static or flowing water body. Do not allow direct overspray of static or flowing surface waters.
- DO NOT CONTAMINATE SURFACE WATERS OR DITCHES with chemical or used container.
- Use appropriate containment to avoid environmental contamination.

Storage and Disposal

- KEEP IN ORIGINAL CONTAINER, tightly closed, in a safe place.

- EMPTY CONTAINER COMPLETELY and dispose of safely.
- KEEP OUT OF THE REACH OF CHILDREN.
- KEEP AWAY FROM FOOD, DRINK AND ANIMAL FEEDINGSTUFFS.
- This material and its container must be disposed of in a safe way.

Resistance

KATANA contains flazasulfuron which is an ALS inhibitor, also classified by the Herbicide Resistance Action Committee as 'Group B'. Use only as part of a resistance management strategy that includes cultural methods of control and does not use ALS inhibitors as the sole chemical method of weed control.

Strains of some annual weeds (e.g. black-grass, wild oats, and Italian ryegrass) have developed resistance to herbicides which may lead to poor control. A strategy for preventing and managing such resistance should be adopted. This should include integrating herbicides with a programme of cultural control measures.

Guidelines have been produced by the Weed Resistance Action Group and copies are available from the HGCA, CPA, your distributor, crop advisor or product manufacturer.

The following measures are part of the resistance management strategy:

- Follow label recommendations.
- Adopt complimentary weed control practices.
- Use good spraying practice to maintain effective weed control.
- Use the correct nozzles to maximise coverage.
- Apply under appropriate weather conditions.
- Monitor performance and report any unexpected results to your product manufacturer.
- Rotational use with herbicides with differing modes of action.
- For post-emergence weed control, KATANA must be applied in tank mixture with another herbicide with a different mode of action (e.g. glyphosate).
- Only one application of KATANA may be made per year.

DIRECTIONS FOR USE

Important: This information is approved as part of the product label. All instructions within this section must be read carefully in order to obtain safe and successful use of this product.

SITUATIONS

KATANA can be used on natural surfaces not intended to bear vegetation, permeable surfaces overlying soil, hard surfaces (railway ballast only) and in amenity vegetation (around).

Amenity vegetation (around)

KATANA can be used around amenity plantings for the control of weeds not emerged at the time of spraying. Typical areas for treatment will include landscaped areas, roadsides and parks. Trials have been conducted to evaluate the susceptibility of a large number of trees and shrubs that could be exposed to spray drift particularly during application to parks or amenity shrub beds; when using KATANA amongst amenity plantings, extreme care must be taken to avoid contact with or drift onto desirable plants such as crops, trees or ornamentals. Care should be taken not to spray too close to shallow-rooted species and also to species susceptible to uptake from the soil (see next section SUSCEPTIBILITY OF NON-TARGET SPECIES).

The use of low drift nozzles and/or shrouded/hooded sprayers should be used to avoid any drift.

Note: Treatment should not be made near to species that have been planted for less than 2 years.

Timing of application: Treatment should be made when amenity vegetation is dormant or in the very early stages of growth.

SUSCEPTIBILITY OF NON-TARGET SPECIES

Trials have been conducted to evaluate the susceptibility of a large number of trees and shrubs that could be exposed to spray drift particularly during application to parks or close to amenity shrub beds. Trees and shrubs can be distributed in 3 categories of susceptibility:

Category	Species	Comment
Tolerant to soil and foliar application	<u>Himalayan Birch (<i>Betula utilis</i>)</u> .	-
Tolerant to soil application but can be susceptible to foliar application	Horse Chestnut (<i>Aesculus hippocastanum</i>), Silver Birch (<i>Betula verrucosa</i>), Butterfly Bush (<i>Buddleia davidii</i>), Common Box (<i>Buxus sempervirens</i>), Indian Bean (<i>Catalpa bignonioides</i>), Lawson Cypress (<i>Chamaecyparis lawsoniana</i>), Common Hazelnut (<i>Corylus avellana</i>), Orange Cotoneaster (<i>Cotoneaster franchetii</i>), Border Forsythia (<i>Forsythia intermedia</i>), London Plane (<i>Platanus acerifolia</i>), Lombardy Poplar (<i>Populus nigra cv.italica</i>), Cherry Laurel (<i>Prunus laurocerasus</i>), Hedge row rose (<i>Rosa rugosa</i>), Northern White Cedar (<i>Thuja occidentalis</i>), Western Red Cedar (<i>Thuja plicata</i>), Small-leaved Lime (<i>Tilia cordata</i>), Honeysuckle (<i>Weigela styriaca</i>).	For these species, foliage must not be exposed to spray drift, particularly during active growth.
Susceptible to both soil and foliar application	Red-barked Dogwood (<i>Cornus alba</i>), Japanese privet (<i>Ligustrum japonicum</i>), Chinese Privet (<i>Ligustrum sinense</i>), Common Privet (<i>Ligustrum vulgare</i>), Common Lilac (<i>Syringa vulgaris</i>).	Treatment close to these species is not recommended.

Note: When applying near other species, large areas should NOT be treated until a small area has been test sprayed to show the variety to be safe for treatment.

TIMING AND WEATHER

KATANA is active on many plant species. For best results, apply KATANA before weeds germinate. If weeds are present, tank mix with a suitable foliar herbicide when the weeds are small and growing actively.

Avoid post-emergence application to weeds which are naturally senescent, or where growth is impaired by drought, high temperatures, a covering of dust, flooding or frost at, or immediately after application, otherwise poor control may result.

It is important, that all weeds are at the correct growth stage when treated, otherwise some re-growth may occur and this will need re-treatment.

Do not apply KATANA in windy conditions or using a high pressure which produces a fine spray prone to drifting.

DO NOT apply within 12 months to soils which may later be used to grow crops or plants.

Avoid overdosing.

Extreme care must be taken to avoid drift onto desirable plants such as crops, trees or ornamentals.

Treatment should not be made near to species that have been planted for less than 2 years

COMPATIBILITY

KATANA may be tank mixed with the following herbicides for the control of emerged weeds.

1. Roundup Pro Biactive (MAPP 10330)
2. Roundup (MAPP 12645)
3. Glyphos Proactive (MAPP 11976)
4. Glyphos Gold (MAPP 10570)

DOSE RATE, WATER VOLUME, TIMING OF SPRAYING

Pre-emergence:

Apply 150g KATANA per hectare to control weeds for up to 5 months. Use in 200 to 600 litres water.

Half fill the spray tank with water. Add the recommended quantity of KATANA to water. Agitate thoroughly and top up the tank with water. Do not store the spray solution overnight in the spray tank.

Best results will be obtained when KATANA is applied in early to late spring before new weeds have germinated.

There are currently no data available on the effectiveness of KATANA used pre-emergence on mallows, broad-leaf dock, ragwort, creeping thistle or common nettle.

KATANA will not control Fat hen (*Chenopodium album*), Horsetail (*Equisetum arvense*), Black nightshade (*Solanum nigrum*), Common field speedwell (*Veronica persica*), Smooth hawksbeard (*Crepis capillaris*), Common sowthistle (*Sonchus oleraceus*, *Sonchus asper*), ribwort plantain (*Plantago lanceolata*), narrow-leaved ragwort (*Senecio inaequidens*) and annual meadow grass (*Poa annua* L.).

Post-emergence:

KATANA has limited post-emergence activity. Tank mix with one of the specified tank-mix partners.

Applying 150g KATANA per hectare will provide weed control for up to 5 months. Apply using a water volume of 200-600 l/ha.

Half fill the spray tank with water. Always add the recommended quantity of KATANA to the water first. Agitate thoroughly. Add the recommended quantity of partner herbicide and top up the tank with water maintaining agitation. Do not store the spray solution overnight in the spray tank.

Use the higher water volume where weed populations are dense.

There are currently no data available on the effectiveness of KATANA when used in tank mixture for post-emergence control of mallows, broad-leaf dock or common couch.

There are currently only limited data available on the effectiveness of KATANA when used in tank mixture for post-emergence control of common nettle.

KATANA in tank mix with a specified tank mix partner will give short-term control only (3-4 months) of Creeping Thistle (*Cirsium arvense*), Smooth Hawks Beard (*Crepis capillaries*), Hairy Rocket (*Erucastrum gallicum*), Smooth Cat's Ear (*Hypochoeris glabra*), Scentless Mayweed (*Matricaria inodora*), Common Ragwort (*Senecio jacobaea*), Common Dandelion (*Taraxacum officinalis*), Spear Thistle (*Cirsium vulgare*) and Ribwort Plantain (*Plantago lanceolata*).

APPLICATION EQUIPMENT

Apply using a hydraulic sprayer or a knapsack sprayer, choosing a nozzle type to obtain the stated water volume and giving a MEDIUM spray quality (BCPC definition). Use a spray pattern that enables good coverage of the larger weeds to be achieved. Before spraying it is important to check all hoses, filters and nozzles, and to ensure that the sprayer is clean and correctly set to give an even application at the correct volume.

The use of shrouded/hooded sprayers should be employed to reduce the potential for drift when applying around amenity areas in particular.

Maintain agitation during spraying as well as during mixing.

Avoid spray drift onto non-target plants and desired vegetation and areas where plantings are planned as serious damage to these plants may occur.

PROCEDURE FOR CLEANING APPLICATION EQUIPMENT

Application equipment should be cleaned using a diluted ammonia solution as follows:

1. Immediately after spraying, drain tank completely. Any contamination on the outside of the spraying equipment should be removed by washing with clean water.
2. Rinse inside of tank with clean water and flush through booms and hoses using at least one-tenth of the spray tank volume. Drain tank completely.
3. Depending on the concentration of the ammonia solution the commercial concentrate must be diluted sufficiently to get a 0.25% concentration of ammonia in water and start the cleaning procedure as described. (A commercial concentrate at 1% needs to be diluted by adding water, 3 L of water to each 1L of ammonia commercial liquid. A commercial concentrate at 6% needs to be diluted 24 times: 1L concentrate at 6% + 23L water). Agitate and then flush the boom and hoses with the cleaning solution. Top up with

water making sure the tank is completely full and allow to stand for 15 minutes with agitation. Flush the boom, hoses and drain tank again completely. For disposal of washings, follow the Code of Practice for the Safe Use of Pesticides on Farms and Holdings.

4. Nozzles and filters should be removed and cleaned separately with ammonia solution at the same concentration as used in the sprayer.
5. Rinse the tank with clean water and flush through the boom and hoses using at least one-tenth of the spray tank volume. Drain tank completely.
6. For the disposal of washings, follow Code of Practice for the Safe Use of Pesticides on Farms and Holdings. Do not spray onto a sensitive crop or land intended for cropping with sensitive crop.

NOTE: If it is not possible to drain the tank completely, step 3 must be repeated before going on to step 4.

WARRANTY / DAMAGES

ISK Biosciences Europe S.A. as the Seller, shall be under no liability (except for liability for death or personal injury resulting from the negligence of the seller) whether in contract or in tort for or in respect of any loss or damage resulting from arising out of the mixing or sequential use, of the goods with any other goods (whether the Seller or any third-party) otherwise than in accordance with the Seller's Recommendations for Use, or resulting from or arising out of the use of the goods in or before abnormal weather conditions or in unusual soil conditions notwithstanding that such conditions may be known or may have been known to the Seller or on plant varieties not known to the Seller to be abnormally susceptible to damage by the goods.

TECHNICAL ENQUIRIES:	01480 403333
24 HOUR EMERGENCY NUMBER:	0032 1458 4545

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