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READ THE ENTIRE LABEL BEFORE USING THIS PRODUCT.

USE ONLY IN ACCORDANCE WITH INSTRUCTIONS.

KEEP OUT OF REACH OF CHILDREN

INSTAKIL 150 SC



INGREDIENTS

Glufosinate Ammonium..... 15%
Others..... 85%

INSTAKIL 150 SC is a non selective herbicide which acts mainly by contact but some translaminar movement can occur within aerial plant parts. INSTAKIL 150 SC kills all green tissue but does not harm mature bark.

What is INSTAKIL 150 SC and how does it work?

INSTAKIL 150 SC is a fast acting weed killer herbicide for ornamental trees and shrubs for line marking preparation. This molecule is absorbed by the tissues of the treated plant's green leaves and stem. These results in death by inhibiting glutamine-synthesize an enzyme essential for nitrogen metabolism in plants; accumulating ammonia in the plant's tissues, and stopping its photosynthesis process. The symptoms of this irreversible activity - mainly colour loss and withering before death - appear after 3 to 7 days in warm conditions.

Key Benefits of INSTAKIL 150 SC:

- ❖ Partially systemic knockdown herbicide
- ❖ Controls a wide range of grass and broadleaf weeds
- ❖ Unique chemical make up and activity
- ❖ No significant soil activity
- ❖ Breaks down in the environment to harmless byproducts
- ❖ Safe to use.
- ❖ Planting and sowing can take place without delay.

PRECAUTIONS

INSTAKIL 150 SC is an acetanilide herbicide of low acute toxicity but is considered a possible human carcinogen. It has the potential to be absorbed from the gastrointestinal tract and across intact skin. It is important that contamination be washed from the skin as INSTAKIL 150 SC is a sensitizer following repeated dermal exposure. Avoid contact with skin, eyes or clothing. Avoid breathing dust or vapor. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse. Keep children or pets away from treated area until dry.

SYMPTOMS OF POISONING

No reported cases but symptoms of poisoning would probably include nausea, vomiting, dizziness. Collapse and coma may occur in severe poisoning. Dermal irritancy and allergic dermatitis may be seen in susceptible individuals following exposure to spray-mists, liquids or particulates.

MEDICAL TREATMENT

Treatment is symptomatic.

FIRST AID

IF POISONING OCCURS, IMMEDIATELY CONTACT A DOCTOR OR POSIONS INFORMATION CENTER AND FOLLOW THE ADVICE GIVEN.

Inhalation: If inhaled, remove to fresh air, keep warm and at rest. Seek medical advice if inhale in large quantities.

Skin Contact: Carefully remove contaminated clothing and footwear. Washed affected areas with soap and water. Seek medical aid if at all worried.

Eye Contact: Rinse eyes immediately with clean water for at least 15 minutes and obtain medical aid.

Ingestion: Wash out mouth with water. Do not induce vomiting. Seek immediate medical advice.

First Aid Facilities: Provide eyewash and safety shower facilities in the workplace.

Medical Attention: Glufosinate-ammonium is a glutamine synthetase inhibitor and can interfere with neurotransmitter function.

Symptoms

Local – irritation of eyes, skin, respiratory tract
Systemic – shivering, cramps, gastrointestinal complaints, hyperthermia, dyspnoea, bradycardia/tachycardia, convulsions, respiratory depression, amnesia, drowsiness and/ or loss of consciousness. These symptoms may be delayed from a few hours to up to 48 hours after exposure. Therefore, regardless of the amount ingested, the patient must be admitted to hospital for at least 36 hours and treated immediately as outline below.

Treatment

Emergency measures: Symptomatic treatment and administration of antidotes, decontamination. If ingested, endotracheal intubation and gastric lavage should be performed as soon as possible, followed by administration of charcoal and sodium Sulphate solution.

Anticonvulsant therapy: Phenobarbital-sodium, 1mg/kg intramuscularly or subcutaneously until maximum 5 mg/kg daily; when necessary, 10 mg diazepam slowly intravenously. Repeat as necessary until full sedated. Elimination by dialysis(forced alkaline diuresis) and/ or haemofusion. It is essential that this be done soon after ingestion to be effective.

ECG(EKG) – control (electrocardiogram)

EEG – control (electroencephalogram)

Apply artificial respiration as necessary. If necessary give oxygen. Monitor respiratory, cardiac, central nervous system, electrolyte balance (especially for hypokalemia) and signs of increased intracranial pressure. If a large amount has been ingested, keep under medical supervision for at least 48 hours.

Contraindication: Atropine, as Glufosinate ammonium does not inhibit cholinesterase.

Recovery is normally spontaneous, usually within 48 hours.

DIRECTIONS OF USE

Uses

Controls grasses and broad-leaved weeds. Use for weed control around non-edible ornamental crops including trees and shrubs and in tree nurseries. Use for preparing sports-turf for line-marking.

Weed Control

INSTAKIL 150 SC controls a wide range of annual and perennial weeds including the following:

Established annual broad-leaved weeds at 5.0 l/ha

Annual Mercury	<i>Mercurialis annua</i>
Annual Milk or Sow-thistle	<i>Sonchus asper</i>
Black-bindweed	<i>Bilderdykia convolvulus</i>
Black Nightshade	<i>Solanum nigrum</i>
Charlock	<i>Sinapis arvensis</i>
Cleavers	<i>Galium aparine</i>
Common Chickweed	<i>Stellaria media</i>
Common Hemp-nettle	<i>Galeopsis tetrahit</i>
Common Henbit Dead-nettle	<i>Lamium amplexicaule</i>

Common Orache	<i>Atriplex patula</i>
Corn Buttercup	<i>Ranunculus arvensis</i>
Corn Marigold	<i>Chrysanthemum segetum</i>
Corn Poppy	<i>Papaver rhoeas</i>
Corn Spurrey	<i>Spergula arvensis</i>
Fat Hen	<i>Chenopodium album</i>
Field Penny-cress	<i>Thlaspi arvense</i>
Field Speedwell	<i>Veronica persicae</i>
Forget-me-not	<i>Myosotis arvensis</i>
Fumitory	<i>Fumaria officinalis</i>
Gallant Soldier	<i>Galinsoga parviflora</i>
Groundsel	<i>Senecio vulgaris</i>
Ivy-leaved Speedwell	<i>Veronica hederifolia</i>
Knotgrass	<i>Polygonum aviculare</i>
Pale Persicaria	<i>Polygonum lapathifolium</i>
Parsley-piert	<i>Aphanes arvensis</i>
Pineapple weed	<i>Chamomilla suaveolens</i>
Red Dead-nettle	<i>Lamium purpureum</i>
Redshank	<i>Polygonum persicaria</i>
Scarlet Pimpernel	<i>Anagallis arvensis</i>
Scented Mayweed	<i>Chamomilla recutita</i>
Scentless Mayweed	<i>Matricaria perforata</i>
Shepherd's-purse	<i>Capsella bursa-pastoris</i>
Smooth Hawks-beard	<i>Crepis capillaris</i>
Smooth Sow-thistle	<i>Sonchus oleraceus</i>
Spurge	<i>Euphorbia spp</i>
Stinking Chamomile	<i>Anthemis spp</i>
Tare species	<i>Vicia spp</i>
Wild Radish	<i>Raphanus raphanistrum</i>

Established annual broad-leaved weeds at 8.0 l/ha

Small Nettle	<i>Urtica ureus</i>
Volunteer Oilseed Rape	<i>Brassica napus</i>

Established perennial broad-leaved weeds at 8.0 l/ha

Colt's-foot	<i>Tussilago farfara</i>
Common Dandelion	<i>Taraxacum officianale</i>
Corn Mint	<i>Mentha arvensis</i>
Cow Parsley	<i>Anthriscus sylvestris</i>
Creeping Thistle	<i>Cirsium arvense</i>
Curled Dock	<i>Rumex crispus</i>
Field Bindweed	<i>Convolvulus arvensis</i>
Greater Plantain	<i>Plantago major</i>
Hoary Cress	<i>Cardaria draba</i>
Meadow Buttercup	<i>Ranunculus acris</i>
Perennial Nettle	<i>Urtica dioica</i>
Perennial Sow-thistle	<i>Sonchus arvensis</i>
White Clover	<i>Trifolium repens</i>

Established annual grassweeds at 5.0 l/ha

Annual Meadow-grass	<i>Poa annua</i>
Black-grass	<i>Alopecurus myosuroides</i>
Loose Silky-bent	<i>Apera specia-venti</i>
Sterile Brome	<i>Bromus sterilis</i>
Wild oats	<i>Avena fatua</i>

Established annual grassweeds at 8.0 l/ha

Italian Rye-grass	<i>Lolium multiflorum</i>
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Established perennial grassweeds at 8.0 l/ha

Black Bent	<i>Agrostis gigantea</i>
Common Couch	<i>Elymus repens</i>
Perennial Rye-grass	<i>Lolium perenne</i>
Rough Meadow-grass	<i>Poa trivialis</i>

Other established weeds at 8.0 l/ha

Field Horsetail	<i>Equisetum arvense</i>
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Time of Spraying

Apply when weeds are actively growing between 1 March and 30 September.

Application

Mix the recommended amount of INSTAKIL 150 SC with clean water in the spray tank. Use higher volume of water when weeds are dense. Ensure adequate wetting of foliage, but avoid excessive run-off.

Rates of use				
Weed Control				
Application Equipment B	Vehicle-mounted Hydraulic Sprayer	Knapsack Sprayer		
WEED PROBLEM	RATE PER HECTARE	WATER PER HECTARE	Rate per 100 m ²	Water per 100 m ²
Seedlings of all species. Established annual weeds and grasses as specified in the 'Weeds Controlled' section.	5 litres	200 - 500 litres	50 ml	4.5 litres
Established annual and perennial weeds and grasses as specified in the 'Weeds Controlled' section	8 litres	200 - 500 litres	80 ml	4.5 litres

Refer to 'Weeds Controlled' section for susceptibility of individual grass species. The reduced dose on existing lines (5 L/ha) may not give complete kill if re-establishing grasses are beyond the seedling stage.

Compatibilities

INSTAKIL 150 SC is compatible with Freeway (contains diuron) for non-selective total weed control. When applying a tank mixture always consult and comply with the recommendations of the partner product.

Tank Mixing

1. Half fill the sprayer with water.
2. Add the partner product as directed on its own label,

Notes for Guidance

Avoid spray drift. Do not spray buds, green bark or green bark or green parts of any desirable plant. Spray areas containing bulbs growing in sandy soil at least 3 days before emergence. Only spray at end of the season if all foliage is detached from the bulbs and they are covered with soil. Do not spray at end of season on sandy soil. A period of at least 6 hours rain-free must follow spraying.

DISPOSAL METHODS

Triple or preferably pressure rinse containers before disposal. Add rinsings to spray tank. Do not dispose of undiluted chemical on site. If recycling, replace cap and return clean containers to recycler or designated collection point. If not recycling, break, crush, or puncture and bury empty containers in a local authority landfill. If no landfill is available, bury the containers below 500mm in a disposal pit specifically marked and set up for this purpose clear of waterways, desirable vegetation and tree roots. Empty containers and product should not be burnt. Dispose of waste product through a reputable waste contractor.

HANDLING STORAGE CONDITION

Handling: keep out of reach of children. Harmful if absorbed by skin contact or if swallowed. Will irritate the eyes and skin. Avoid contact with eyes and skin. Avoid breathing vapour or spray. If product in eyes, wash it out immediately with water. If product on skin, immediately wash area with soap and water. After use and before eating, drinking or smoking, wash hands, arms and face thoroughly with soap and water.

Storage: store in the closed, original container in a cool, dry, well-ventilated area. Do not store for prolonged periods in direct sunlight. Keep away from all ignition sources. Keep the container tightly closed, and protect from moisture. Do not store in steel or aluminum containers. The product should be stored between 5°C and 30 °C. **Flammability:** Not flammable under condition of use. Not classified as a combustible liquid, as the boiling point (96 °C) is less than the fire point (> 96 °C). The product does not sustain combustion.

TOXICOLOGICAL EFFECTS

Potential Health effects

Inhalation: harmful if inhaled.

Skin contact: harmful if absorbed by skin contact. Will irritate the skin.

Eye contact: will irritate the eyes.

Ingestion: harmful if swallowed. Symptoms of poisoning may include: shivering, cramps, stomach complaints, overheating, breathing difficulty, heart problems, convulsions, respiratory depression, loss of memory, drowsiness and/or loss of consciousness. These symptoms may be delayed from a few hours up to 48 hours after ingestion.

Animal Toxicity Data – Product

Acute:

Oral toxicity: LD₅₀ rat: 2030mg/kg (product)

Dermal toxicity: LD₅₀ rat: 1390mg/kg (product)

Inhalation toxicity: LD₅₀ rat: 3.73mg/L (4 Hr) (product)

Skin irritation: slightly irritating (rabbit) (product)

Eye irritation: slightly to moderately irritating (rabbit) (product)

Sensitization: non-sensitizing (guinea pig) (product)

Chronic:

In animal studies Glufosinate ammonium showed no reproductive, teratogenic, carcinogenic, mutagenic or neurotoxic effects.

ECOLOGICAL EFFECTS

Glufosinate ammonium is practically non-toxic to birds, fish, honeybees, earthworms and beneficial insects. It is practically non toxic to Daphnia, but moderately toxic to sensitive aquatic species. It is expected to be slightly to moderately toxic to wild animals. Do not contaminate streams, rivers or waterways with INSTAKIL 150 SC or the used containers.

Ecotoxicity

Glufosinate ammonium:

Fish toxicity: LC₅₀ (96h) rainbow trout 710 mg/L
LC₅₀ (96h) carp, bluegill sunfish,
golden orfe > 1000 mg/L

Bird toxicity: Eight day dietary LC₅₀ Japanese quail > 5000mg/kg

Daphnia toxicity: Daphnia magna EC₅₀ (48h)
560 – 1000mg/L

Algal toxicity: LD₅₀ for Scenedesmus subspicatus ≥ 1000mg/L
LD₅₀ for Scenedesmus Capricornutum ≥ 37mg/L

Environmental fate, persistence and degradability

Aquatic, air or soil environmental hazards:

Glufosinate ammonium is very soluble in water and is hydrolytically and photolytically stable. It is rapid degraded in surface levels of soils and in water. This product is considered to be readily biodegradable. The potential for groundwater contamination with Glufosinate ammonium is

minimal. Do not allow product to enter wastewater, rivers or creeks. Glufosinate ammonium does not accumulate in the fatty tissues of fish or other animals.

PHYSICAL PROPERTIES AND GUIDELINES

Physical Properties:

- Appearance: Blue to bluish-green liquid
- Odor: Slightly pungent odour
- pH : 4.6 to 6.6 (1% aqueous solution)
- Vapour pressure: Low
- Vapour density: No data
- Boiling point: 96°C
- Freezing/ melting point: Not available
- Solubility: Soluble in water
- Specific gravity: 1.11 at 20°C
- Flash point: 65 °C (Pensky Martens Closed Cup)
- Flammability (explosive) limits: No data
- Fire Point: > 96 °C



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