

GROUP

9

HERBICIDE

VISION SILVICULTURE HERBICIDE

SOLUTION
COMMERCIAL

CAUTION



IRRITANT

REGISTRATION NO. 19899 PEST CONTROL PRODUCTS ACT

GUARANTEE: Glyphosate, 356 grams acid equivalent per litre, present as isopropylamine salt.

Water soluble herbicide for silvicultural sites

READ THE LABEL AND ATTACHED BROCHURE BEFORE USING.

NET CONTENTS: 10 LITRES

**MONSANTO CANADA INC.
900 – One Research Road
Winnipeg, (Manitoba) R3T 6E3
(204) 985-1000**

2006

PRECAUTIONS

KEEP OUT OF REACH OF CHILDREN.

MAY CAUSE EYE IRRITATION.

HARMFUL IF SWALLOWED.

Avoid contact with eyes or prolonged contact with skin.

FIRST AID

IF IN EYES, hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control centre or doctor for treatment advice.

IF ON SKIN OR CLOTHING, take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control centre or doctor for treatment advice.

IF SWALLOWED, call a poison control centre or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control centre or doctor. Do not give anything by mouth to an unconscious person.

Take container, label or product name and Pest Control Registration Number with you when seeking medical attention.

TOXICOLOGICAL INFORMATION

Treat symptomatically. This product will cause gastro-intestinal irritation.

PHYSICAL OR CHEMICAL HAZARDS

Spray solutions of this product should be mixed, stored and applied only in stainless steel, aluminum, fiberglass, plastic and plastic-lined steel containers.

DO NOT MIX, STORE OR APPLY THIS PRODUCT OR SPRAY SOLUTIONS OF THIS PRODUCT IN GALVANIZED STEEL OR UNLINED STEEL (EXCEPT STAINLESS STEEL) CONTAINERS OR SPRAY TANKS. This product or spray solutions of this product react with such containers and tanks to produce hydrogen gas which may form a highly combustible gas mixture. This gas mixture could flash or explode, causing serious personal injury, if ignited by open flame, spark, welder's torch, lighted cigarette or other ignition source.

STORAGE

Store product in original container only.

Avoid contamination of seed, feed and foodstuffs.

SPILLS

Soak up small amounts with absorbent clays.

Sweep or scoop up spilled materials and dispose of in an approved landfill.

Wash down surfaces (floors, truckbeds, streets, etc.) with detergent and water solution.

ENVIRONMENTAL HAZARDS

Avoid direct applications to any body of water.
Do not contaminate water by disposal of waste or cleaning of equipment.

DISPOSAL

RECYCLABLE CONTAINERS:

Do not reuse this container for any purpose. This is a recyclable container, and is to be disposed of at a container collection site. Contact your local distributor/dealer or municipality for the location of the nearest collection site. Before taking the container to the collection site:

- 1) Triple- or pressure-rinse the empty container. Add the rinsings to the spray mixture in the tank.
- 2) Make the empty, rinsed container unsuitable for further use.

If there is no container collection site in your area, dispose of the container in accordance with provincial requirements.

RETURNABLE CONTAINERS:

Do not reuse this container for any other purpose. For disposal, this empty container may be returned to the point of purchase (distributor/dealer).

REFILLABLE CONTAINERS:

For disposal, this container may be returned to the point of purchase (distributor/dealer). It must be refilled by the distributor/dealer with the same product. Do not reuse this container for any other purpose.

For information on the disposal of unused, unwanted product, contact the manufacturer or the provincial regulatory agency. Contact the manufacturer and the provincial regulatory agency in case of a spill, or for the clean-up of spills.

EMERGENCY NUMBERS

In case of emergency involving this product, Call Monsanto Collect, day or night:

Accidents/Spills/Medical Emergency.....(314) 694-4000
or.....1-800-332-3111
CANUTEC.....(613) 996-6666

For additional information on this or other Monsanto agricultural products, call the Monsanto Canada Custom Care Line at: 1-800-667-4944

NOTICE

Read NOTICE before buying or using. If notice terms are not acceptable, return at once unopened.

Not for reformulation or repackaging

NOTICE TO USER: This pest control product is to be used only in accordance with the directions on the label. It is an offence under the *Pest Control Products Act* to use this product in a way that is inconsistent with the directions on the label. The user assumes the risk to persons or property that arises from any such use of this product.

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(FRANCAIS AU VERSO)

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1.0 PRECAUTIONS

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1.4 PHYSICAL OR CHEMICAL HAZARDS

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1.5 STORAGE

Store product in original container only.
Avoid contamination of seed, feed and foodstuffs.

1.6 SPILLS

Soak up small amounts with absorbent clays.
Sweep or scoop up spilled materials and dispose of in an approved landfill.
Wash down surfaces (floors, truckbeds, streets, etc.) with detergent and water solution.

1.7 ENVIRONMENTAL HAZARDS

Avoid direct applications to any body of water.
Do not contaminate water by disposal of waste or cleaning of equipment.

1.8 DISPOSAL

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2.0 GENERAL INFORMATION

When applied as directed under conditions described, this product controls undesirable vegetation listed on this label. This product also suppresses or controls undesirable vegetation listed on this label, when applied at recommended rates for release of established coniferous or deciduous species listed in the "**Conifer Release**" and "**Deciduous Release**" sections of this label.

This product may be applied using aerial and ground spray or wiper equipment for silvicultural site preparation, rights of ways, and conifer release, and ground spray or wiper equipment for deciduous release, forest road-side vegetation management and forest tree planting nurseries. Woody vegetation may be controlled by injection application of this product. See the "**Mixing**", "**Application Instructions**" and "**Selective Equipment**" sections of this label for information on how to properly apply this product.

For herbaceous weeds, woody brush, and trees controlled, see the "**Vegetation Controlled**" section of this label.

For specific site preparation instructions, see the "**Site Preparation, Forest Roadside and Rights of Way Vegetation Management**" section of the label.

For specific conifer or deciduous release instructions see the "**Conifer Release**" or "**Deciduous Release**" sections of this label.

Treatments should not be made to trees or brush after fall leaf drop has begun.

For specific forest tree planting nursery instructions, see the "**Forest Tree Planting Nurseries**" section of this label.

For specific injection application instructions, see the "**Injection Applications**" section of this label.

For specific instructions on use of wick or wiper applicators for vegetation control, see the "**Selective Equipment**" section of this label.

This product moves through the plant from the point of foliage contact to and into the root system. Visible effects on most annual weeds occur within 2 to 4 days, but on most susceptible perennial weeds, trees and woody brush, may not occur until 7 to 14 days. Extremely cool or cloudy weather at treatment time may slow down activity of this product and delay visual effects or control. Visible effects are a gradual wilting and yellowing of the plant which advance to complete browning of above-ground growth and deterioration of underground plant parts.

Delay application until vegetation has emerged to the stages described for control of such vegetation under the "**Vegetation Controlled**" section of this label to provide adequate leaf surface to receive the spray. Unemerged plants arising from underground rhizomes or root stocks of perennials will not be affected by the spray and will continue to grow. For this reason best control of most perennial herbaceous vegetation is obtained when treatment is made at late growth stages approaching maturity.

Always use the higher rate of this product per hectare within the recommended range on hard to control species or when vegetation growth is heavy or dense.

Do not treat vegetation under poor growing conditions such as drought stress, disease or insect damage as reduced vegetation control may result. Reduced results may also occur when treating vegetation heavily covered with dust.

Rainfall occurring soon after application may reduce effectiveness. Heavy rainfall within 2 hours after application may wash the product off the foliage and a repeat treatment may be required.

Do not mix with any surfactant, pesticide, herbicide oils or any other material other than water unless specified in this label.

For best results spray coverage should be uniform and complete. Do not spray weed foliage to the point of runoff.

RESISTANCE-MANAGEMENT RECOMMENDATIONS

For resistance management, Vision Silviculture Herbicide is a Group 9 herbicide. Any weed population may contain or develop plants naturally resistant to Vision Silviculture Herbicide and other Group 9 herbicides. The resistant biotypes may dominate the weed population if these herbicides are used repeatedly in the same field. Other resistance mechanisms that are not linked to site of action, but specific for individual chemicals, such as enhanced metabolism, may also exist. Appropriate resistance-management strategies should be followed.

To delay herbicide resistance:

- Where possible, rotate the use of Vision Silviculture Herbicide or other Group 9 herbicides with different herbicide groups that control the same weeds in a field.
- Use tank mixtures with herbicides from a different group when such use is permitted.
- Herbicide use should be based on an IPM program that includes scouting, historical information related to herbicide use and crop rotation, and considers tillage (or other mechanical), cultural, biological and other chemical control practices.
- Monitor treated weed populations for resistance development.
- Prevent movement of resistant weed seeds to other fields by cleaning harvesting and tillage equipment and planting clean seed.
- Contact your local extension specialist or Monsanto Canada representative for any additional pesticide resistance-management and/or integrated management recommendations for specific target vegetation and weed biotypes.
- For further information or to report suspected resistance, contact Monsanto Canada at 1-800-667-4944 or at www.Monsanto.ca.

ATTENTION

AVOID DRIFT. EXTREME CARE MUST BE USED WHEN APPLYING THIS PRODUCT TO PREVENT INJURING DESIRABLE PLANTS AND CROPS. Do not allow spray mist to drift, since even minute quantities of spray can cause severe damage or destruction to nearby crops, plants or other areas on which treatment is not intended, or may cause other unintended consequences. Apply only in wind conditions in compliance with local and/or provincial regulations. Do not apply when other climatic conditions, including lesser wind velocities, will allow significant drift to occur. When spraying, avoid combinations of pressure and nozzle type that will result in fine particles (mist) which are more likely to drift.

NOTE: Use of this product in any manner not consistent with this label may result in injury to persons, animals or crops, or other unintended consequences. Keep container closed to prevent spills and contamination.

Clean sprayer parts immediately after using this product by thoroughly flushing with water. Do not contaminate water sources by disposal of wastes or cleaning of equipment.

3.0 MIXING & APPLICATION INSTRUCTIONS

3.1 MIXING

This product mixes readily with water.

For ground, aerial or industrial type sprayers, fill the spray tank with one half the required amount of water. Add the proper amount of herbicide (see "**Application Instructions**" section of the label) and mix well before adding the remaining portion of water. Placing the filling hose below the surface of the liquid solution will prevent excessive foaming. Removing hose from tank

immediately will avoid back siphoning into to water source. Use of mechanical agitators may cause excessive foaming. By-pass lines should terminate at the bottom of the tank. For use in knapsack sprayers, it is suggested that the proper amount of this herbicide be mixed with water in a larger container. Fill sprayer with the mixed solution.

NOTE: REDUCED RESULTS MAY OCCUR IF WATER CONTAINING SOIL IS USED, SUCH AS WATER FROM PONDS AND UNLINED DITCHES.

3.2 APPLICATION INSTRUCTIONS

APPLY THESE SPRAY SOLUTIONS IN PROPERLY MAINTAINED AND CALIBRATED EQUIPMENT CAPABLE OF DELIVERING DESIRED VOLUMES. HAND GUN APPLICATIONS SHOULD BE PROPERLY DIRECTED TO AVOID SPRAYING DESIRABLE PLANTS.

AVOID DRIFT--Drift may cause damage to any vegetation contacted for which treatment is not intended. Applications in wind conditions in excess of local and/or provincial aerial spray regulations are not recommended.

To prevent injury to adjacent vegetation, appropriate buffer zones must be maintained.

Do not apply directly to any body of water populated with fish or used for domestic purposes. Do not use in areas where adverse impact on domestic water or aquatic species is likely.

3.2.1 APPLICATION RATES

To control or suppress herbaceous weeds, woody brush and trees, apply 3 to 6 litres of this product per hectare using aerial, ground boom or boomless, or mist blower equipment, or apply as a 1 to 2 percent solution using hand-held high volume equipment. Use the 6 litres rate for control of maple, alder or willow species. For control of perennial herbaceous weeds in site preparation applications using aerial, ground boom or boomless, or mist blower equipment, apply 7 to 12 litres of this product per hectare as directed in the recommended volume of clean water to the foliage of actively growing vegetation.

For specific rates for wick or wiper applicators, see the "Selective Equipment" section of this label.

3.2.2 AERIAL EQUIPMENT

Apply only by fixed-wing or rotary aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label. Label rates, conditions and precautions are product specific. Read and understand the entire label before opening this product. Apply only at the rate(s) recommended for aerial application on this label in 20 to 100 litres of water per hectare. For control of perennial weeds in site preparation applications using 7 to 12 litres per hectare of this product, use 50 to 100 litres of water per hectare. Where no rate for aerial application appears for the specific use, this product

cannot be applied by any type of aerial equipment. As density of vegetation increases, spray volume should be increased within the recommended range to ensure complete coverage.

Ensure uniform application. To avoid streaked, uneven or overlapped application, use appropriate marking devices, or equivalent electronic positioning systems (GPS).

Thoroughly wash aircraft, especially landing gear, after each day of spraying to remove residues of this product accumulated during spraying or from spills. **PROLONGED EXPOSURE OF THIS PRODUCT TO UNCOATED STEEL SURFACES MAY RESULT IN CORROSION AND POSSIBLE FAILURE OF THE PART. LANDING GEAR ARE MOST SUSCEPTIBLE.** The maintenance of an organic coating (paint) which meets aerospace specification MIL-C-38412 may prevent corrosion.

Use Precautions

Apply only when meteorological conditions at the treatment site allow for complete and even crop coverage. Apply only under conditions of good practice specific to aerial application as outlined in the *National Aerial Pesticide Application Manual*, developed by the Federal/Provincial/Territorial Committee on Pest Management and Pesticides.

Do not apply to any body of water. Avoid drifting of spray onto any body of water or other non-target areas. Specified buffer zones should be observed.

Coarse sprays are less likely to drift. Therefore, avoid combinations of pressure and nozzle type that will result in the production of fine particles (mist). Do not angle nozzles forward into the airstream and do not increase spray volume by increasing nozzle pressure. Do not spray during periods of dead calm or when wind velocity and direction pose a risk of spray drift. Do not spray when the wind is blowing towards a nearby sensitive crop, garden, terrestrial habitat (such as a shelter belt) or aquatic habitat.

Operator Precautions

Do not allow the pilot to mix chemicals to be loaded onto the aircraft. Loading of premixed chemicals with a closed system is permitted.

It is desirable that the pilot have communication capabilities at each treatment site at the time of application.

The field crew and mixer/loaders must wear chemical resistant gloves, coveralls and goggles or face shield during mixing/loading, cleanup and repair. Follow the more stringent label precautions in cases where the operator precautions exceed the generic label recommendations on the existing ground boom label.

All personnel on the job site must wash hands and face thoroughly before eating or drinking. Protective clothing, aircraft cockpit and vehicle cabs must be decontaminated regularly.

3.2.3 BOOM EQUIPMENT

For control of herbaceous weeds and woody brush and trees listed in the "Vegetation Controlled" section of this label using conventional boom equipment--Apply this product in 100 to 300 litres of clean water per hectare as a broadcast spray using no more pressure than 275 kPa.

3.2.4 BOOMLESS EQUIPMENT

For control of herbaceous weeds, woody brush and trees listed in the "Vegetation Controlled" section of this label using boomless equipment such as cluster nozzles--Apply this product in 100-350 litres of clean water per hectare as a broadcast spray using no more pressure than 275 kPa.

3.2.5 HAND HELD AND HIGH VOLUME EQUIPMENT (USE COARSE SPRAYS ONLY)

For control of herbaceous weeds, woody brush and trees listed in the "Vegetation Controlled" section of this label using knapsack sprayers or high volume spraying equipment utilizing handguns or other suitable nozzle arrangements.

Applications should be made on a spray-to-wet basis. Spray coverage should be uniform and complete. Do not spray to point of runoff.

3.2.6 MIST BLOWER EQUIPMENT

For control of herbaceous weeds, woody brush and trees listed in the "Vegetation Controlled" section of this label--Use the recommended rate of this product in at least 200 litres of water per hectare.

4.0 VEGETATION CONTROLLED

AVOID CONTACT WITH FOLIAGE, GREEN STEMS, OR FRUIT OF NON-TARGET CROPS, SINCE DAMAGE TO THESE PLANTS MAY RESULT.

A PARTIAL LIST OF PERENNIAL HERBACEOUS WEEDS, WOODY BRUSH AND TREE SPECIES CONTROLLED INCLUDES:

4.1 PERENNIAL GRASSES / SEDGES

Blue Grass (Canada)

Poa compressa

Blue Grass (Kentucky)

Poa pratensis

Foxtail Barley

Hordeum jubatum

Quackgrass

Agropyron repens

Brome Grass (smooth)

Bromus inermis

Cattail (common)

Typha latifolia

Yellow Nutsedge

Cyperus esculentus

Cottongrass

Eriophorum chamissonis

4.2 PERENNIAL BROADLEAVED WEEDS

Alfalfa

Medicago spp.

Poison Ivy

Rhus radicans

Curled Dock

Rumex crispus

Dandelion

Taraxacum officinale

Field Bindweed

Convolvulus arvensis

Hemp Dogbane

Apocynum cannabinum

Hoary Cress

Cardaria draba

Knotweed (Japanese)

Polygonum cuspidatum

Milkweed (common)

Asclepias syriaca

Purple Loosestrife

Lythrum salicaria

SowThistle (peren.)

Sonchus arvensis

Thistle (Canada)

Cirsium arvense

Toad Flax

Linaria vulgaris

Wormwood (Absin.)

Artemisia absinthium

4.3 WOODY BRUSH AND TREES

Alder

Alnus spp.

Birch

Betula spp.

Broadleaved meadowsweet* Poplar

Spiraea latifolia

Canadian rhododendron*

Rhododendron canadense

Cedar

Thuja spp.

Cherry

Prunus spp.

Douglas Fir

Pseudotsuga spp.

Ericaceous species ***

Ericaceae spp.

Hemlock

Tsuga spp.

Maple

Acer spp.

Pine

Pinus spp.

Sheep laurel*

Kalmia angustifolia

Sweet fern*

Comptonia peregrina

Willow**

Salix spp.

Withrod*

Viburnum cassinoides

Mountain-fly honeysuckle*

Lornica villosa

Raspberry / Salmonberry

Rubus spp.

Snowberry (Western)

Symphoricarpos occidentalis

* Apply as a 1-2 percent solution.

** Suppression only.

*** Used in conjunction with an additional silicon-based surfactant (such as Sylgard 309®)

Sylgard 309 is a registered trademark of Dow AgroSciences.

See "**Mixing & Application Instructions**" and "**Forest-**" or "**Woodland- Management**" sections of this label for additional information.

For perennial broadleaf weeds, apply when most weeds have reached early head or early bud stage of growth. For annual and perennial grasses, apply when most weeds are at least 20 centimetres in height (the 3-4 leaf stage of growth).

If herbaceous weeds have been mowed, tilled, or scarified, do not treat until regrowth has reached the recommended stages, as reduced effectiveness will result. Most herbaceous weeds can be treated after a mild frost, provided the leaves are still green and actively growing at the time of application. Do not apply after the first damaging frost. Allow 7 or more days after application before tillage or other soil disturbance. Repeat treatments may be necessary to control weeds regenerating from underground parts or seed.

5.0 DIRECTIONS FOR USE

Spray coverage should be uniform and complete. Do not spray to the point of runoff.

Do not allow spray drift to contact non-target desirable vegetation as severe damage may occur.

5.1 RESTRICTED USES - FOREST AND WOODLANDS MANAGEMENT

Ground/Aerial Application for Sites greater than 500 hectares (Forestry Use)

Aerial Application for Sites 500 hectares or less (Woodlands Use)

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NATURE OF RESTRICTION: This product is to be used only in the manner authorized; consult local pesticide regulatory authorities about use permits which may be required.

Do not apply to any body of water populated with fish or used for domestic purposes. Do not use in areas where adverse impact on domestic water or aquatic species is likely.

In order to reduce the drift hazard to non-target plants and aquatic species when aerially treating silvicultural sites, ensure that appropriate buffer zones are maintained.

5.1.1 SITE PREPARATION

Use this product as broadcast treatment at recommended rates, as listed in the "**Application Rates**" section, to control herbaceous weeds, woody brush and tree species listed in the "**Vegetation Controlled**" section. Apply when brush and tree species are actively growing and when foliage is full and well-developed. For best results apply in late summer or early fall. Some autumn colours on undesirable deciduous species are acceptable provided no major leaf fall has occurred. Following site preparation application of this product, any silvicultural species may be planted.

For control of vegetation on sites with infestations of ericaceous species (eg. *Kalmia* spp - sheep laurel, lamb kill), use 6 litres per hectare Vision Silviculture Herbicide and an additional silicon-based surfactant (such as Sylgard 309) as per label instructions. Apply between mid-August and mid-September for maximum performance.

5.1.2 CONIFER RELEASE

Use this product as a broadcast spray at recommended rates, as listed in the "**Application Rates**" section, to control herbaceous weeds, woody brush and tree species, as listed in "**Vegetation Controlled**" section of this label, to release from competition the coniferous species listed below:

Douglas Fir

Pseudotsuga spp.

Fir

Abies spp.

Hemlock

Tsuga spp.

Pine

Pinus spp.

Spruce

Picea spp.

For conifer release of spruce seedlings in the year of transplanting, apply 2 to 6 litres of this product per hectare in plantations of summer planted spruce species (*Picea glauca*, *P. engelmannii* and their hybrids). Conifers must be planted in the same year as treatment and in the field for at least 18 days prior to treatment. Seedlings to be treated must clearly show bud set and bud hardening following a dormancy induction regime in the nursery. The need for such early release treatments is expected on sites which are subject to the rapid development of herbaceous and shrub communities.

Most annual and perennial weeds will be controlled or suppressed. Applications must be made after formation of final conifer resting buds. Applications made during period of active conifer growth may result in conifer injury. Avoid application during Lammas or late season conifer

growth. Some autumn colors are acceptable provided no major leaf fall has occurred on undesirable brush and tree species.

For conifer release, apply where conifers have been established for more than a year. Vegetation should not be disturbed immediately prior to treatment or until visual signs appear after treatment. Symptoms of treatment are slow to appear, especially in woody species treated in late fall. Injury may occur to conifers treated for release, especially where spray patterns overlap or the higher rates are applied or when applications are made during periods of active conifer growth.

NOTE : This product is not recommended for use as an over-the-top broadcast spray in forest tree nurseries or in Christmas tree plantations. Applications in such sites should be limited to directed sprays (see section 5.2.2, "**Conifer Release by Directed Spraying**"). DO NOT TREAT Christmas tree plantations in the year of anticipated harvest.

5.1.3 AERIAL STRIP THINNING OF CONIFERS

AERIAL APPLICATION

This product may be applied by aerial application equipment to thin overstocked Jack pine stands and to control herbaceous weeds, woody brush and tree species.

Apply only by fixed-wing or rotary aircraft equipment which has been functionally and operationally calibrated for the atmospheric conditions of the area and the application rates and conditions of this label.

Label rates, conditions and precautions are product specific. Read and understand the entire label before opening this product. Apply only at the rate recommended for aerial application on this label in 50 litres of water per hectare. Make only one application per year.

For aerial strip thinning of conifers (Jack pine), apply 9 - 12 litres of this product per hectare using aerial equipment applied in 50 litres of water per hectare. Add Sylgard 309 surfactant at a rate of 0.375% by volume (375 millilitres per 100 litres of water). Apply the higher rate in situations where the trees are larger and older. Applications outside of the period when shoot elongation is occurring, would also require the higher rate.

The spray boom should be designed with evenly spaced capped and uncapped nozzles in order to deliver defined strip patterns of herbicide while leaving adjacent strips untreated.

Apply when brush and tree species are actively growing and when foliage is full and well-developed. For best results apply in late spring or early summer when shoot elongation is actively occurring.

5.2 WOODLAND MANAGEMENT

Treatment of 500 hectares or less

SITE PREPARATION (Ground Only), FOREST ROADSIDE (Ground Only) and RIGHTS-OF-WAY VEGETATION MANAGEMENT (Ground or Aerial)

Use this product as a broadcast treatment at recommended rates, as listed in the "**Application Rates**" section, to control herbaceous weeds, woody brush and tree species listed in the "**Vegetation Controlled**" section. For control of herbaceous weeds, apply when most perennial broadleaf weeds have reached the early head or early bud stage of growth. For perennial grasses, apply when most weeds are 20 centimetres in height. Apply when brush and tree species are actively growing and when foliage is full and well-developed. For best results apply in late summer or early fall. Some autumn colors on undesirable deciduous species are acceptable provided no major leaf fall has occurred. Following site preparation application of this product, any silvicultural species may be planted.

For control of vegetation on sites with infestations of ericaceous species (eg. *Kalmia spp* - sheep laurel, lamb kill), use 6 litres per hectare Vision Silviculture Herbicide in the recommended water volume and an additional silicon-based surfactant (such as Sylgard 309) as per label instructions. Apply between mid-August and mid-September for maximum performance.

5.2.1 CONIFER RELEASE (Ground Only)

Use this product as a broadcast spray at recommended rates, as listed in the "**Application Rates**" section, to control herbaceous weeds, woody brush and tree species, as listed in "**Vegetation Controlled**" section of this label, to release from competition the coniferous species listed below:

Douglas Fir	Pine
<i>Pseudotsuga spp.</i>	<i>Pinus spp.</i>
Fir	Spruce
<i>Abies spp.</i>	<i>Picea spp.</i>
Hemlock	
<i>Tsuga spp.</i>	

For conifer release of spruce seedlings in the year of transplanting, apply 2 to 6 litres of this product per hectare in plantations of summer planted spruce species (*Picea glauca*, *P. engelmannii* and their hybrids). Conifers must be planted in the same year as treatment and in the field for at least 18 days prior to treatment. Seedlings to be treated must clearly show bud set and bud hardening following a dormancy induction regime in the nursery. The need for such early release treatments is expected on sites which are subject to the rapid development of herbaceous and shrub communities.

Most annual and perennial weeds will be controlled or suppressed. Applications must be made after formation of final conifer resting buds. Applications made during period of active conifer growth may result in conifer injury. Avoid application during Lammas or late season conifer

growth. Some autumn colors are acceptable provided no major leaf fall has occurred on undesirable brush and tree species.

For conifer release, apply where conifers have been established for more than a year. Vegetation should not be disturbed immediately prior to treatment or until visual signs appear after treatment. Symptoms of treatment are slow to appear, especially in woody species treated in late fall. Injury may occur to conifers treated for release, especially where spray patterns overlap or the higher rates are applied or when applications are made during periods of active conifer growth.

NOTE : This product is not recommended for use as an over-the-top broadcast spray in forest tree nurseries or in Christmas tree plantations. Applications in such sites should be limited to directed sprays (see "**Conifer Release by Directed Spraying**" section). DO NOT TREAT Christmas tree plantations in the year of anticipated harvest.

5.2.2 CONIFER RELEASE BY DIRECTED SPRAYING

Use this product to control herbaceous and woody species as listed in the "**Vegetation Controlled**" section of the label.

Apply when the undesirable species are actively growing and the foliage is full and well-developed. This product does not provide pre-emergent weed control. Repeat treatments may be necessary to control weeds that generate from underground parts or seed.

Undesirable deciduous species may be treated when they already have autumn colours, provided there has been no major leaf fall. For perennial broadleaf species, apply when most weeds have reached early head or early bud stage of growth. For annual and perennial grasses, apply when most weeds are 20 centimetres in height (3-4 leaf stage of growth).

Direct spray so that the foliage of undesired vegetation is thoroughly wetted. Do not spray foliage to the point of run-off. Applying the product to conifers during their period of active growth (before lignification) may cause tree injury. Under such conditions, take the necessary precautions to ensure that spray, mist or spray drift does not come into contact with the foliage or green bark of conifers being cultivated.

The product may be applied on sites regenerated by the following species (partial list): SPRUCE (*Picea spp.*), PINE (*Pinus spp.*), HEMLOCK (*Tsuga spp.*), DOUGLAS FIR (*Pseudotsuga spp.*). No time interval is required between tree planting and application of the product. For specific rates and application instructions, see the "**Mixing**", "**Application Instructions**" and "**Vegetation Controlled**" sections of the product label.

Do not allow spray to come in contact with foliage, green stems or fruit of non-target crops, since they may be killed or severely damaged.

5.2.3 DECIDUOUS RELEASE (Ground Only)

Use this product to control herbaceous weeds and woody brush mentioned in the "**Vegetation Controlled**" section of the label.

Apply when the undesirable species are actively growing, and the foliage is well developed. This product has no pre-emergent activity. Repeat treatments may be required for species which regenerate from underground stems or from seeds. Applications may be made to undesirable deciduous species with some autumn colours, provided that major leaf fall has not yet occurred.

Use a directed spray to thoroughly cover the foliage of the undesirable vegetation. Take all necessary precautions to prevent contact of the spray, spray mist or spray drift with the foliage or green bark of desirable species.

A partial list of species for use with this product on regenerated sites includes: ASH (*Fraxinus spp.*); WALNUT (*Juglans spp.*); LINDEN or BASSWOOD (*Tilia spp.*); CHERRY (*Prunus spp.*); OAK (*Quercus spp.*); ELM (*Ulmus spp.*) and POPLAR (*Populus spp.*). Product may be applied immediately after transplanting.

For use rates and application instructions, refer to the "**Application Rates**" and "**Application Instructions**" sections of this label.

5.2.4 INJECTION APPLICATIONS

Woody vegetation may be controlled by injection application of this product. Apply using suitable equipment, which must penetrate into living tissue, at a rate of at least 0.5 millilitres (either undiluted or 1:1 with water) per 5 centimetres tree diameter at breast height (DBH). The cuts should be spaced evenly around the tree and below all major branches. Application may be made at any time of year, except when cold temperatures prevent adequate penetration of injection equipment, or in the spring during periods of heavy sap flow. Control of tree species with tree diameters greater than 20 centimetres may not be acceptable at this rate.

Total control may not be evident for 1-2 years following treatment.

A partial list of species controlled includes:

Alder <i>Alnus spp.</i>	Maple* <i>Acer spp.</i>
Birch <i>Betula spp.</i>	Pine <i>Pinus spp.</i>
Cedar <i>Thuja spp.</i>	Poplar <i>Populus spp.</i>
Cherry <i>Prunus spp.</i>	Willow <i>Salix spp.</i>
Douglas-fir <i>Pseudotsuga spp.</i>	Hemlock <i>Tsuga spp.</i>

* This treatment may only provide suppression of Big-Leaf Maple. Late fall applications will provide optimum suppression of Big-Leaf Maple

5.2.5 CUT STUMP APPLICATION

Woody vegetation may be controlled by the application of this product to freshly cut stumps to prevent regrowth. Because the treatment uses a concentrated solution, application must be made using low-pressure equipment e.g squirt bottle or similar device. This product must be applied immediately to the surface of the freshly cut stump i.e within 5 minutes, for optimum control at the prescribed rates. Only the cambial tissues of the cut surface should be treated. Apply the herbicide solution at a rate equivalent to at least 0.5 mL Vision Silviculture herbicide for every 5 centimetres of DBH. Do not cover the remaining area nor any exposed roots, as this product does not penetrate bark well. This treatment may be used at any time of year, except during periods of heavy sap flow or when low temperatures prevent solution application due to freezing. A water soluble colourant may be added to the solution as a means of indicating which surfaces have been treated. Total control may not be evident until 1-2 years after treatment.

See the "INJECTION APPLICATIONS" section of this label for a partial list of species controlled.

5.2.6 FOREST TREE PLANTING NURSERIES (GROUND ONLY)

This product may be used to control most annual and perennial weeds for site preparation prior to establishing plantations, or as a post directed spray in established plantations. Application may be made to established deciduous plantings of ASH, *Fraxinus spp.*; CARAGANA, *Caragan spp.*; CHERRY, *Prunus spp.*; ELM, *Ulmus spp.*; LILAC, *Syringa spp.*; MAPLE, *Acer spp.*; MOUNTAIN ASH, *Sorbus spp.*; POPLAR, *Populus spp.*; RUSSIAN OLIVE, *Elaeagnus spp.*; and WILLOW, *Salix spp.* Applications may be made prior to or in established conifer plantings of FIR, *Abies spp.*; JUNIPER, *Juniperus spp.*; PINE, *Pinus spp.*; SPRUCE, *Picea spp.*; and YEW, *Taxus spp.*. SPRAY MAY CONTACT MATURE BARK ONLY. AVOID SPRAY CONTACT WITH FOLIAGE OR GREEN BARK OF ESTABLISHED PLANTINGS IN POST DIRECTED APPLICATIONS.

For specific rates and applications instructions, see "**Application Rates**" and "**Application Instructions**" section of this booklet. DO NOT APPLY UNDER WIND OR OTHER CONDITIONS WHICH ALLOW DRIFT TO OCCUR. If weeds have been mowed or tilled do not treat until regrowth has reached the recommended stages.

This product does not provide pre-emergence weed control. Repeat treatments may be necessary to control weeds generating from underground parts or seed.

NOTE : This product is not recommended for use as an over-the-top broadcast spray in forest tree nurseries or in Christmas tree plantations. Applications in such sites should be limited to directed sprays (see "**Conifer Release by Directed Spraying**" section). DO NOT TREAT Christmas tree plantations in the year of anticipated harvest.

5.2.7 SELECTIVE EQUIPMENT - WIPER APPLICATORS

This product may be applied with a wiper applicator, after dilution and thorough mixing water, to listed weeds in the “**Vegetation Controlled**” section of this label. It may be used in any forestry site specified in this label.

A wiper applicator applies the herbicide solution onto weeds by rubbing the weed with an absorbent material containing the herbicide solution. Equipment must be designed, maintained and operated to prevent the herbicide solution from contacting desirable vegetation, except in cases of conifer release operations where conifers are well hardened off (see “**Conifer Release**” Section); in these cases, a slight contact between the wiper and the conifer may be acceptable. Performance may be improved by reducing speed in areas of heavy infestations to insure adequate wiper saturation. Best results may be obtained if 2 applications are made in opposite directions.

AVOID CONTACT WITH DESIRABLE VEGETATION. Contact of the herbicide solution with desirable vegetation may result in damage or destruction. Applicators used above desired vegetation should be adjusted so that wiper contact point is at least 5 centimetres above the desirable vegetation. Droplets or foam of the herbicide solution settling on desirable vegetation may result in discoloration, stunting or destruction.

Applications should be made when the weeds are a minimum of 15 centimetres above the desirable vegetation. Best results may be obtained when more of the weed is exposed to the herbicide solution. Weeds not contacted by the herbicide solution will not be affected. This may occur in dense clumps, severe infestations, or when the height of the weeds varies so that not all weeds are contacted. In these instances, repeat treatments may be necessary.

NOTES

- Maintain equipment in good operating condition. Avoid leakage or dripping onto desirable vegetation.
- Adjust height of applicator to insure proper contact with weeds.
- Keep wiping surfaces clean.
- Keep wiper material at proper degree of saturation with herbicide solution.
- DO NOT use wiper equipment when weeds are wet.
- DO NOT operate equipment at ground speeds below 4 and greater than 10 kilometres per hour. Weed control may be affected by speed of application equipment. As weed density increases, reduce equipment ground speed to insure good coverage of weeds.

- Be aware that on sloping ground the herbicide solution may migrate, causing dripping on the lower end and drying on the upper end of the wiper applicator.
- Variation in equipment design may affect weed control. With wiper applicators, the wiping material and its orientation must allow delivery of sufficient quantities of the recommended herbicide solution directly to the weed.
- Care must be taken with all types of wipers to insure that the absorbent material does not become over-saturated, causing the herbicide to drip onto desirable vegetation.
- With all equipment, drain and clean wiper parts immediately after using this product, by thoroughly flushing with water.

For Wick or other Wiper Applicators--Mix 1 litre of this product in 2 litres of water to prepare a 33 percent solution.

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