Dow AgroSciences

Milestone*

Herbicide

FACTS ON MILESTONE*

MILESTONE, a new reduced-risk weed control alternative for vegetation management, is designed to control invasive and tough-to-manage broadleaf weeds.

MILESTONE is a systemic, post emergence, broad-spectrum, broadleaf herbicide that controls noxious and invasive weeds. MILESTONE is a lower cost alternative to other weed control programs.

Aminopyralid, the active ingredient in MILESTONE, is an environmentally easy-to-manage molecule with less residual control. No special use permits will be required and when ground-applied, buffer requirements are significantly reduced.

PRODUCT FEATURES

- Registered for roadside, rights-of-way and other non-crop uses.
- Post emergent control of a broad spectrum of difficult-to-control weeds.
- Very low use rates.
- When used on its own, MILESTONE has no 2,4-D odour.
- Residual control of many weed species.

VEGETATION MANAGEMENT BENEFITS

Time savings

- A single pass to manage difficult-to-control weeds simplifies management and saves time.
- Low use rates mean reduced packaging – fewer containers to ship and recycle.

Cost savings

- Reduces or eliminates weed infestations and extends time between control cycles.

Low environmental impact

- Favourable environmental profile results in a lighter footprint on the environment.
- Low use rates reduce herbicide loading of the environment.
- Pest Management Regulatory Agency (PMRA) Reduced Risk status gives confidence and peace of mind in the management decision.

WEED ACTIVITY

MILESTONE has activity on the following weeds:

- Absinth wormwood
- Canada thistle
- Common tansy
- Dandelion
- Goldenrod
- Knapweed
- Scentless chamomile

When tank-mixed with 2,4-D, MILESTONE has activity on all of the above plus the following weeds:

- Annual sow thistle
- Bluebur
- Blue lettuce
- Bull thistle
- Burdock
- Buttercup
- Cocklebur
- Common plantain
- Common tansy
- Curled dock (< 4 leaf)
- Dandelion
- Flixweed
- Goat's beard
- Goldenrod
- Gumweed
- Hawkweed
- Hoary cress
- Peppergrass
- Perennial sow thistle
- Prickly lettuce
- Ragweeds
- Stinging nettle
- Sweet clover

Further field research indicates that MILESTONE has been shown to also have activity on:

- Russian knapweed
- Sulphur cinqfoil
- Oxe-eye daisy
- Canadian fleebane *(horseweed)*
- Hairy fleebane
- Spiny pigweed *(spiny amaranth)*
- Yellow star-thistle

(Research and efforts to expand the labeled list of target weeds continues. Always follow the label directions.)

APPLICATION

MILESTONE is registered for ground and aerial application. MILESTONE can be applied at rates between 0.3 L/ha and 0.5 L/ha – with or without a tank mix of 2,4-D. Please consult the product label for all application details and restrictions.

BUFFER ZONES

For application to rights-of-way, buffer zones to sensitive terrestrial habitats are not required. However, buffer zones to sensitive aquatic habitats are required. Please consult the product label for more details and comply with all provincial regulations.

ACTIVE INGREDIENTS

Aminopyralid, the active ingredient in MILESTONE, is specifically designed for the management of broadleaf weeds on roadsides and rights-of-way. It is a new, active ingredient – a pyridine Group 4 growth regulator herbicide – that provides an effective tool for managing difficult-to-control weeds using reduced application rates.

Although MILESTONE is primarily a post-emergent herbicide, it can provide residual control which reduces the time until there is a commercial need for re-treatment. This will depend on the rate applied and the target weeds.

ABSORPTION AND TRANSLOCATION

MILESTONE is absorbed by leaves and roots, translocating throughout the plant and accumulating in meristematic tissues. This results in uneven cell division and growth, causing the plant to die.

HERBICIDAL ACTIVITY

Depending on the weed species, symptoms can appear within hours or days. Plant growth will stop within 24-48 hours after treatment. Most annual, susceptible weeds will be controlled within four weeks following application. Symptoms include:

- Thickened, curved and twisted stems.
- Cupping and crinkling of leaves.
- Enlarged roots.
- Proliferated growth.

REDUCED RISK CLASSIFICATION

MILESTONE is a "Reduced-Risk" designated compound. This determination was made by the Pest Management Regulatory Agency (Health Canada) and the U.S. Environmental Protection Agency based on a favourable review of the properties of MILESTONE. Improved toxicological, ecotoxicological, and environmental fate effects make it a unique compound compared to the current industry standards.

TOXICOLOGY

Environmental Toxicology

MILESTONE is practically non-toxic to birds, fish, honeybees, earthworms and aquatic invertebrates.

Mammalian Toxicity

MILESTONE has low mammalian toxicity. The acute oral LD50 and dermal LD50 in rats were greater than 5,000 mg/kg, respectively. MILESTONE is not carcinogenic or mutagenic. It does not cause birth defects, neurological problems or any endocrine or adverse reproductive effects.

ENVIRONMENTAL FATE

SOIL Aerobic microbial degradation is the primary route of breakdown in soil. The rate of degradation in the field resulted in an average half-life of 35 days. Field experiments have shown limited movement in the soil profile and no degradation metabolites of concern were produced in any studies.

WATER The primary route of degradation in water is photolysis. The photolysis half-life is 0.6 days. There is low potential for groundwater contamination because of low use rates, favourable field degradation rates and limited mobility.

AIR Due to low vapour pressure, the potential for transport of MILESTONE is extremely low. However, as with any herbicide, susceptible non-target plants may be injured from physical spray drift.

QUESTIONS AND ANSWERS ABOUT MILESTONE

WHY A HERBICIDE? WHY NOT JUST MOW THE WEEDS?

Besides being very labour intensive, mowing spreads seed, destroys habitat and can encourage suckering from perennial weeds. This only increases the vegetation problem and requires more frequent and intensive management. MILESTONE selectively controls the problem weeds and eliminates resprouting. Because of this improved control, crews and machinery visit the site less often and have a reduced negative impact on the environment.

WHO WILL BE APPLYING MILESTONE?

A vegetation manager plans herbicide treatments and oversees crew activities. Trained, professional applicators apply MILESTONE in designated areas using approved application techniques. Applicators follow directions on the product label, which is reviewed by Health Canada's Pest Management Regulatory Agency (PMRA).

HOW WILL MILESTONE BE APPLIED?

Options include broadcast and selective foliar applications, depending on the size and severity of the weed infestation. Small amounts of MILESTONE are mixed with water and then applied to the leaves of the weeds which are being targeted. Applicators take special care to ensure wind and temperature conditions are just right before applying.

IS MILESTONE TOXIC?

MILESTONE has a low toxicity when compared to many substances we contact in daily life. For example, MILESTONE is less toxic than common table salt that you use every day. It's very unlikely that anyone, including applicators who handle the concentrated product, could accidentally receive a large enough dose to be harmed.

QUESTIONS AND ANSWERS ABOUT MILESTONE

WILL MILESTONE HURT ANIMALS?

MILESTONE is designed only to affect plants. The herbicide's active ingredient disrupts the growth process within the plant by affecting enzymes unique to plants. MILESTONE is practically non-toxic to birds, fish, honeybees, earthworms and aquatic invertebrates.

HOW CAN I PROTECT MYSELF?

Stay away from the treated area until the spray has dried. You can control your exposure by using common sense and avoiding the treated area for 12 hours.

WHAT IF I ATE TREATED BERRIES?

You should not consume berries treated with MILESTONE. However, due to the extremely low application rates and overall toxicological profile of MILESTONE, the risk of experiencing any adverse effects is extremely low.

WHAT IF I WALK ACROSS A TREATED AREA?

Avoid walking across a treated area for 12 hours after application. Accidental exposure may occur from walking across an area still damp from a foliar treatment. However, due to the extremely low use rates and overall safety of the product (Dermal LD 50 is >5000 mg/kg), the dose you would receive is not likely to cause any harm.

WILL MILESTONE HARM THE SOIL?

MILESTONE is broken down by soil micro organisms (fungi and bacteria) and sunlight. The breakdown rate depends on rainfall, soil temperature and micro organism activity. The average time for 50 percent of the active ingredient to break down is 35 days. MILESTONE has been shown to be practically non-toxic to earthworms.

WILL MILESTONE SEEP INTO GROUNDWATER?

Due to the very low application rates, its favourable breakdown rates and its increased absorption with time to soil particles, the potential for groundwater contamination is low.

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WHAT ELSE DO YOU NEED?

For more information on Dow AgroSciences and our products, visit us at dowagro.ca or contact the Solutions Center at 1.800.667.3852.

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