

Specimen Label

AMINOPYRALID

GROUP

4

HERBICIDE



Milestone®

HERBICIDE

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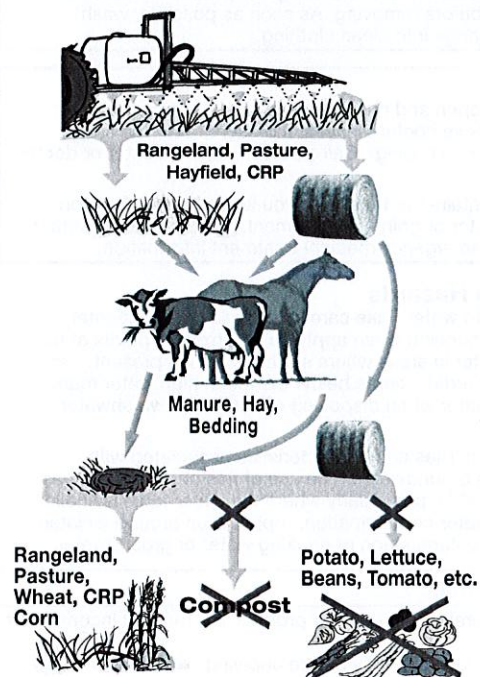
- For control of annual and perennial broadleaf weeds including invasive and noxious weeds, certain annual grasses, and certain woody plants and vines on:
 - rangeland, permanent grass pastures (including grasses grown for hay*), Conservation Reserve Program (CRP);
 - non-crop areas for example, airports, barrow ditches, communication transmission lines, electric power and utility rights-of-way, fencerows, gravel pits, industrial sites, military sites, mining and drilling areas, oil and gas pads, non-irrigation ditch banks, parking lots, petroleum tank farms, pipelines, roadsides, railroads, storage areas, dry storm water retention areas, substations, unimproved rough turf grasses;
 - natural areas (open space) for example, campgrounds, parks, prairie management, trailheads and trails, recreation areas, wildlife openings, and wildlife habitat and management areas including seasonally dry flood plains, deltas, marshes, prairie potholes, or vernal pools;
 - including grazed areas in and around these sites.

*Hay from grass treated with Milestone within the preceding 18 months can only be used on the farm or ranch where the product is applied unless allowed by supplemental labeling.

IMPORTANT USE PRECAUTIONS AND RESTRICTIONS TO PREVENT INJURY TO DESIRABLE PLANTS

- Carefully read the section "**Restrictions in Hay or Manure Use.**"
- It is mandatory to follow the "**Use Precautions and Restrictions**" section of this label.
- Manure and urine from animals consuming grass or hay treated with this product may contain enough aminopyralid to cause injury to sensitive broadleaf plants.
- Hay can only be used on the farm or ranch where product is applied unless allowed by supplemental labeling.
- Consult with a Dow AgroSciences representative if you do not understand the Use Precautions and Use Restrictions. Call 1-800-258-3033 Customer Information Group.

Forage and Manure Management



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Not for Sale, Sale into, Distribution, and/or Use in Nassau and Suffolk counties of New York State.

Active Ingredient:

Triisopropanolammonium salt of 2-pyridine carboxylic acid, 4-amino-3,6-dichloro-.....	40.6%
Other Ingredients	59.4%
Total	100.0%

Acid Equivalent: aminopyralid (2-pyridine carboxylic acid, 4-amino-3,6-dichloro-) - 21.1% - 2 lb/gal

Container Use Directions

1 - Tip  <p>Tilt container to angle as shown and fill head to desired amount - use vertical scale for measuring. Container should be closed.</p>	2 - Level  <p>Hold container up-right and check the amount for accuracy. Add or subtract as needed, using pour-back scale as guide.</p>	3 - Dispense  <p>Remove cap on head and pour into sprayer or other devices. No fluid will pour from the main container. Replace cap for storage in sealed condition.</p>
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Precautionary Statements

Hazards to Humans and Domestic Animals

EPA Reg. No. 62719-519

Keep Out of Reach of Children

CAUTION

Causes Moderate Eye Irritation

Avoid contact with eyes or clothing.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

User Safety Recommendations

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing/PPE immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

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. Call a poison control center or doctor for treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact 1-800-992-5994 for emergency medical treatment information.

Environmental Hazards

Do not apply directly to water. Take care to minimize the incidental overspray along the shoreline when applying to terrestrial plants at the water's edge or to water in areas where surface water is present. Do not apply directly to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwater or rinsate.

This chemical has properties and characteristics associated with chemicals detected in groundwater. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination. Application around a cistern or well may result in contamination of drinking water or groundwater.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

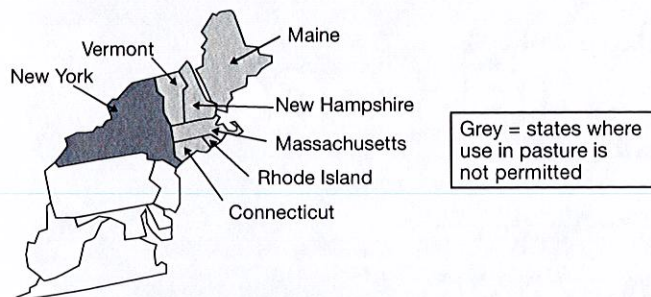
Read all Directions for Use carefully before applying.

This product is not intended for reformulation or repackaging into other end-use products.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Not for Sale, Sale into, Distribution, and/or Use in Nassau and Suffolk counties of New York State.

Not for use on pastures in Connecticut, Maine, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont. All other labeled uses are permitted in these states including grazed areas in and around these sites.



Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about Personal Protective Equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 48 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material as polyethylene or polyvinyl chloride
- Shoes plus socks
- Protective eyewear

Non-Agricultural Use Requirements

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for Agricultural Pesticides (40 CFR Part 170). The WPS does not pertain to non-agricultural use on sites, such as, rangeland, permanent grass pastures, or non-cropland. See the Agricultural Use Requirements section below for information where the WPS applies.

Entry Restrictions for Non-WPS Uses: For applications on rangeland and permanent grass pastures (not harvested for hay) and non-cropland areas, do not enter or allow worker entry into treated areas until sprays have dried.

Storage and Disposal

Do not contaminate water, food, feed, or fertilizer by storage or disposal. Open dumping is prohibited.

Pesticide Storage: If this product is exposed to subfreezing temperatures, the active ingredient may crystallize and settle out of solution. Under these conditions the product should be warmed to at least 40°F and agitated well to dissolve any crystallized active ingredient prior to use.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Nonrefillable containers 5 gallons or less:

Container Handling: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Storage and Disposal (Cont.)

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Refillable containers larger than 5 gallons:

Container Handling: Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or a mix tank. Fill the container about 10% full with water. Agitate vigorously or recirculate water with the pump for two minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

Nonrefillable containers larger than 5 gallons:

Container Handling: Nonrefillable container. Do not reuse or refill this container. Offer for recycling if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures allowed by state and local authorities.

Triple rinse or pressure rinse container (or equivalent) promptly after emptying. **Triple rinse** as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. **Pressure rinse** as follows: Empty the remaining contents into application equipment or a mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank and continue to drain for 10 seconds after the flow begins to drip. Hold container upside down over application equipment or mix tank or collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container, and rinse at about 40 psi for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

Resistance Management Guidelines

This product contains aminopyralid, a Group 4 synthetic auxin.

Appropriate resistance-management strategies should be followed.

- Development of plant populations resistant to this herbicide mode of action is usually not a problem on rangeland, permanent grass pastures, Conservation Reserve Program (CRP), or non-cropland sites since these sites receive infrequent pesticide applications.
- In croplands, use an effective integrated pest management (IPM) program, integrating tillage or other mechanical methods, crop rotation, or other cultural control methods into weed control programs whenever practical.
- Similar looking biotypes of a given weed species occurring in a treated area may vary in their susceptibility to a herbicide. Application of a herbicide below its labeled rate may allow more tolerant weeds to survive and a shift to more tolerant biotypes within the treated area.
- Where identified, spreading of resistant weeds to other fields may be prevented by cleaning harvesting and tillage equipment before moving to other areas and by planting weed-free seed.
- Contact your extension specialist, certified crop consultant, or a Dow AgroSciences customer service representative 1-800-258-3033 for the latest resistance-management information.

Use Precautions

- Applications made during periods of intense rainfall, to soils saturated with water, surfaces paved with materials such as asphalt or concrete, or soils through which rainfall will not readily penetrate may result in runoff and movement of Milestone. Injury to crops may result if treated soil and/or runoff water containing Milestone is washed or moved onto land used to produce crops. Exposure to Milestone may injure or kill

susceptible crops and other plants such as grapes, soybeans, tobacco, sensitive ornamentals.

- **Grass revegetation:**
 - Milestone can be used to control broadleaf plants in grass revegetation programs. Consult Dow AgroSciences literature for more details about Milestone applications and grass stand establishment.
- **Application before seeding grasses**
 - Milestone can be applied to control broadleaf weeds prior to grass planting. Grass seed germination and seedling development can be adversely effected by many factors such as seed viability and seedling vigor, soil condition (sub-optimal soil temperatures or soil water content), weather after planting, seedbed preparation and seed placement, disease, insects, or animals. Milestone applications will help to reduce competition from weeds and improve the chance for successful grass stand establishment. Some grass species are more sensitive to Milestone; consult Dow AgroSciences literature for more details.
- **Postemergence applications on grass:** During the season of establishment, Milestone should be applied only after perennial grasses are well established (have developed a good secondary root system and show good vigor). Most perennial grasses are tolerant to Milestone at this stage of development. Milestone may suppress certain established grasses such as smooth bromegrass (*Bromus inermis*), especially when plants are stressed by adverse environmental conditions. Plants should recover from this transient suppression with the onset of environmental conditions favorable to grass growth and upon release from weed competition.
- **Seeding Broadleaf Plants (Forbs) and Wildflowers**

Milestone can be applied in the summer to control broadleaf weeds prior to forb planting. Forbs can be seeded 90 days after a summer application as a dormant fall planting or the following spring. Consult Dow AgroSciences literature for details.
- **Field Bioassay Instructions:** In fields previously treated with this product, plant short test rows of the intended rotational crop across the original direction of application in a manner to sample variability in field conditions such as soil texture, soil organic matter, soil pH, rainfall pattern, or drainage. The field bioassay can be initiated one year after the last application of aminopyralid in that field. Observe the test crop for symptoms of herbicidal activity such as poor stand (effect on seed germination), chlorosis (yellowing), epinasty, necrosis (dead leaves or shoots), or stunting (reduced growth). If herbicidal symptoms do not occur, the test crop can be grown. If there is apparent herbicidal activity, do not plant the field to the intended rotational crop; plant only to wheat, forage grasses, native grasses, or grasses grown for hay.

Consult with a Dow AgroSciences representative if you do not understand the Use Precautions and Use Restrictions. Call 1-800-258-3033 for more information.

Pasture and Rangeland Restrictions

- **Do not use grasses treated with Milestone in the preceding 18 months for hay intended for export outside the United States.**
- **Hay from areas treated with Milestone in the preceding 18 months CANNOT be distributed or made available for sale off the farm or ranch where harvested unless allowed by supplemental labeling.**
- **Hay from areas treated with Milestone in the preceding 18 months CANNOT be used for silage, haylage, baylage, and green chop unless allowed by supplemental labeling.**
- **Do not move hay made from grass treated with Milestone within the preceding 18 months off farm unless allowed by supplemental labeling.**
- **Do not use hay or straw from areas treated with Milestone within the preceding 18 months or manure from animals feeding on hay treated with Milestone in compost.**
- **Do not use grasses treated with Milestone in the preceding 18 months for seed production.**

Restrictions for All Uses

Maximum Application Rate: On all labeled use sites, do not broadcast apply more than 7 fl oz per acre of Milestone per year. The total amount of Milestone applied broadcast, as a re-treatment, and/or spot treatment cannot exceed 7 fl oz per acre per year. Spot treatments may be applied at an equivalent broadcast rate of up to 0.22 lb acid equivalent (14 fl oz of Milestone) per acre per year; however, not more than 50% of an acre may be treated at that rate. Do not apply more than a total of 0.11 lb acid equivalent (7 fl oz) per acre of Milestone per year as a result of broadcast, spot, or repeat applications.

Obtain Required Permits: Consult with appropriate state or local water authorities before applying this product around public waters. State or local public agencies may require permits.

- **Avoiding Injury to Non-Target Plants:** Do not aerially apply Milestone within 50 feet of a border downwind (in the direction of wind movement), or allow spray drift to come in contact with any broadleaf crop or other desirable broadleaf plants, including, but not limited to, alfalfa, cotton, dry beans, flowers, grapes, lettuce, potatoes, radishes, soybeans, sugar beets, sunflowers, tobacco, tomatoes or other broadleaf or vegetable crop, fruit trees, ornamental plants, or soil where sensitive crops are growing or will be planted. Avoid application under conditions that may allow spray drift because very small quantities of spray may seriously injure susceptible crops. Read and consider the Spray Drift Management and Aerial Drift Reduction Advisory to help minimize the potential for spray drift.
- **Chemigation:** Do not apply this product through any type of irrigation system.
- **Do not contaminate water intended for irrigation or domestic purposes.** Do not treat inside banks or bottoms of irrigation ditches, either dry or containing water, or other channels that carry water that may be used for irrigation or domestic purposes.
- Do not apply this product to lawns, turf, ornamental plantings, urban walkways, driveways, tennis courts, golf courses, athletic fields, commercial sod operations, or other high-maintenance, fine turfgrass areas, or similar areas.
- Trees adjacent to or in a treated area can occasionally be affected by root uptake of Milestone. Do not apply Milestone within the root zone of desirable trees unless such injury can be tolerated. Use special caution near roses and leguminous trees such as locusts, redbud, mimosa, and caragana.
- Do not treat frozen soil where runoff could damage sensitive plants.
- **Grazing and Haying Restrictions:** There are no restrictions on grazing or grass hay harvest following application of Milestone at labeled rates. Cutting hay too soon after spraying weeds will reduce weed control. Wait 14 days after herbicide application to cut grass hay to allow herbicide to work. Do not transfer grazing animals from areas treated with Milestone to areas where sensitive broadleaf crops occur without first allowing 3 days of grazing on an untreated pasture. Otherwise, urine and manure may contain enough aminopyralid to cause injury to sensitive broadleaf plants.
- **Grazing Poisonous Plants:** Herbicide application may increase palatability of certain poisonous plants. Do not allow livestock to graze treated areas until poisonous plants are dry and no longer palatable to livestock.
- **Restrictions in Hay or Manure Use:**
 - ◆ Do not use aminopyralid-treated plant residues, including grass, wood plants, trees, hay, or straw from areas treated within the preceding 18 months, in compost, mulch wood chips, or mushroom spawn.
 - ◆ Do not use manure from animals that have eaten aminopyralid-treated forage or hay within the previous 3 days in compost, mulch, or mushroom spawn. Livestock must have 3 days of eating non-aminopyralid-treated materials in order to clear their system of aminopyralid. Do not use aminopyralid-treated plants in areas where commercially grown mushrooms or susceptible broadleaf plants may be grown.
 - ◆ Do not spread manure from animals that have consumed aminopyralid-treated forage or hay within the previous 3 days on land used for growing susceptible broadleaf crops.
 - ◆ Manure from animals that have consumed aminopyralid-treated forage or hay within the previous 3 days may only be used on areas used for pasture, grass grown for seed, wheat, and corn.
 - ◆ Do not plant a broadleaf crop (including soybeans, sunflower, tobacco, vegetables, field beans, peanuts, and potatoes) in fields or areas treated with aminopyralid or manure from animals that have grazed forage or eaten hay harvested from aminopyralid-treated areas until an adequately sensitive field bioassay is conducted to determine that the aminopyralid concentration in the soil is at level that is not injurious to the crop to be planted.

- ◆ Do not plant a broadleaf crop in fields or areas treated in the previous year with manure from animals that have consumed aminopyralid-treated forage or hay until an adequately sensitive field bioassay is conducted to determine that the aminopyralid concentration in the soil is at level that is not injurious to the crop to be planted.
- ◆ To promote herbicide decomposition, plant residues should be evenly incorporated in the surface soil or burned. Breakdown of aminopyralid in plant residues or manure is more rapid under warm, moist soil conditions and may be enhanced by supplemental irrigation.
- **Crop Rotation:** Do not rotate to any crop from rangeland, permanent pasture, or CRP acres within one year following treatment. Cereals and corn can be planted one year after treatment. Broadleaf crops are sensitive to aminopyralid residues in the soil and prediction of crop safety by field bioassay (see instructions below) is the BEST way to determine planting options. Broadleaf crops such as canola, flax, and alfalfa can require **at least 2 to 3 years** depending on the crop and environmental conditions. More sensitive crops such as soybeans, tobacco, peanuts, potatoes, and peas may require a longer plant-back interval and should not be planted until a field bioassay shows that the level of aminopyralid present in the soil will not adversely affect that broadleaf crop.

Spray Drift Management

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

Avoid application under conditions that may allow spray drift because very small quantities of spray, which may not be visible, may injure susceptible crops. This product should be applied only when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, non-target crops, and other plants) is minimal (e.g., when wind is blowing away from the sensitive areas). A drift control aid may be added to the spray solution to further reduce the potential for drift. If a drift control aid is used, follow the use directions and precautions on the manufacturer's label. Do not use a thickening agent with Microfoil, Thru-Valve booms, or other spray delivery systems that cannot accommodate thickened spray solutions.

Importance of Droplet Size

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Ground Equipment: With ground equipment, spray drift can be lessened by keeping the spray boom as low as possible; by applying 10 gallons or more of spray per acre; by keeping the operating spray pressures at the manufacturer's specified minimum pressures for the specific nozzle type used (low pressure nozzles are available from spray equipment manufacturers); and by spraying when the wind velocity is low (follow state regulations). Avoid calm conditions which may be conducive to thermal inversions. Direct sprays no higher than the tops of target vegetation and keep spray pressures low enough to provide coarse spray droplets to minimize drift.

Aerial Application: Avoid spray drift at the application site. The interaction of many equipment-related and weather-related factors determine the potential for spray drift. Users are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications:

1. The boom length must not exceed 75% of the fixed wing span and must be located at least 8 to 10 inches below the trailing edge of the fixed wing; the boom length must not exceed 85% of the rotary blade.
2. Nozzles should be pointed backward parallel with the air stream or not pointed downward more than 45 degrees.

State and local regulations must be followed.

The applicator should be familiar with, and take into account, the information covered in the following **Aerial Drift Reduction Advisory**. This information is advisory in nature and does not supersede mandatory label requirements.

Aerial Drift Reduction Advisory

Information on Droplet Size: The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversions).

Controlling Droplet Size:

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- **Pressure** - Do not exceed the nozzle manufacturer's specified pressures. For many nozzle types lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.
- **Number of Nozzles** - Use the minimum number of nozzles that will provide uniform coverage.
- **Nozzle Orientation** - Orient nozzles so that the spray is released parallel to the airstream to produce larger droplets than other orientations. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Boom Length: The distance of the outer most operating nozzles on the boom must not exceed 75% of wingspan for airplanes or 85% of rotor blade diameter for helicopters.

Application Height: Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment: When applications are made with a crosswind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.).

Wind: Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors including droplet size and equipment type determine drift potential at any given speed. Application should be avoided when wind speeds are below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain such as valleys and ravines can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity: When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions: Applications should not occur during a local, low-level temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of the smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sprayer Clean-Out Instructions

It is recommended to use separate spray equipment on highly sensitive crops such as tobacco, soybeans, potatoes, peanuts, and tomatoes.

Do not use spray equipment used to apply Milestone for other applications to land planted to, or to be planted to, broadleaf plants unless it has been determined that all residues of this herbicide have been removed by thorough cleaning of equipment.

Equipment used to apply Milestone should be thoroughly cleaned before reusing to apply any other chemicals as follows:

1. Rinse and flush application equipment thoroughly after use. Dispose of rinse water in non-cropland area away from water supplies.
2. Rinse a second time, adding 1 quart of household ammonia or tank cleaning agent for every 25 gallons of water. Circulate the solution through the entire system so that all internal surfaces are contacted (15 to 20 minutes). Let the solution stand for several hours, preferably overnight.
3. Flush the solution out of the spray tank through the boom.
4. Rinse the system twice with clean water, recirculating and draining each time.
5. Spray nozzles and screens should be removed and cleaned separately.

- Do not apply this product with mist blower systems that deliver very fine spray droplets. Use of mist blower equipment can reduce control achieved with the herbicide and increase spray drift potential.

Use Information

Apply the specified rate of Milestone as a coarse low-pressure spray. Do not apply this product with mist blower systems that deliver very fine spray droplets. Spray volume should be sufficient to uniformly cover foliage or intended application site. Increase the spray volume to ensure thorough and uniform coverage when target vegetation is tall and/or dense. To enhance foliage wetting and coverage, a non-ionic agricultural surfactant or other adjuvant may be added to the spray mixture as specified by the adjuvant label.

Milestone may be applied by ground or aerial application equipment on any registered use site specified on this label.

Ground Broadcast Application: Higher spray volumes (greater than 10 gallons per acre) generally provide better coverage and better control, particularly in dense and/or tall foliage.

Aerial Broadcast Application: Do not apply less than 2 gallons per acre total spray volume. Five gallons per acre or greater will generally provide better coverage and better control, particularly in dense and/or tall foliage.

High-Volume Foliar Application: High volume foliar treatments may be applied at rates equivalent to a maximum of 7 fl oz per acre per year. Use sufficient spray volume to thoroughly and uniformly wet foliage and stems.

For basal bark and cut stubble and all types of cut surface applications, see woody plant section.

Low-Volume Foliar Treatment

To control susceptible woody plants, use Milestone alone or in tank mixes with other herbicides in water. The spray concentration of Milestone tank mixes and total spray volume per acre should be adjusted according to the size and density of target woody plants and type of spray equipment used. With low-volume application, use sufficient spray volume to obtain uniform coverage of target plants including the surfaces of all foliage, stems, and root collars.

For best results, an adjuvant should be added to all spray mixtures. Match equipment and delivery rate of spray nozzles to height and density of woody plants. When treating tall, dense brush, a truck-mounted spray gun with spray tips that deliver up to 2 gallons per minute at 40 to 60 psi may be required. Backpack or other types of specialized spray equipment with spray tips that deliver less than 1 gallon of spray per minute may be appropriate for short, low to moderate density brush.

Spot Application: Spot treatments may be applied at an equivalent broadcast rate of up to 0.22 lb acid equivalent (14 fl oz of Milestone) per acre per year; however, not more than 50% of an acre may be treated at that rate. Do not apply more than a total of 0.11 lb acid equivalent (7 fl oz) per acre of Milestone per year as a result of broadcast, spot, or repeat applications. Spray volume should be sufficient to thoroughly and uniformly wet the weed foliage, but not to the point of runoff. Repeat treatments may be made, but the total amount of Milestone applied must not exceed 7 fl oz per acre per year. To prevent misapplication, spot treatments should be applied with a calibrated sprayer with a known volume per acre. Table 1 shows Milestone amount to mix for various sprayer outputs in gallons per acre (GPA).

Table 1: Amount of Milestone (in mL) to mix in 1 gallon of water

Gallons per acre	Milestone amount (in mL) to mix to achieve target application rates			Use a syringe to measure cc
	5 fl oz/a	7 fl oz/a	14 fl oz/a	
20	7.5	10.5	21.0	
30	5.0	7.0	14.0	
40	3.8	5.3	10.5	
50	3.0	4.2	8.4	
60	2.5	3.5	7.0	
70	2.1	3.0	6.0	
80	1.9	2.6	5.3	
90	1.7	2.3	4.7	
100	1.5	2.1	4.2	

Note: Table 1 above shows mixes for various sprayer outputs in gallons per acre (GPA).

Conversions:

1 tsp = 5 mL 30 ml = 1 fluid ounce 1 cc = 1 mL
 3 tsp = 1 Tbsp 2 Tbsp = 1 fluid ounce

Mixing Instructions

Mixing with Water: To prepare the spray, add about half the required amount of water in the spray tank. Then, with agitation, add the specified amount of Milestone and other herbicides (if tank mixing). Finally, with continued agitation, add the rest of the water and additives such as adjuvants, surfactants, or drift control and deposition aids.

Addition of Surfactants or Adjuvants on All Labeled Use Sites: The addition of a high quality non-ionic surfactant (of at least 80% active principal) or adjuvant at 0.25 to 0.5% volume per volume (1 to 2 quarts per 100 gallons of spray) is recommended to enhance herbicide activity under adverse environmental conditions (such as, high temperature, low relative humidity, drought conditions, dusty plant surfaces) or when weeds are heavily pubescent or more mature.

Tank Mixing with Other Herbicides: Milestone may be applied in tank mix combination with labeled rates of other herbicides provided: (1) the tank mix product is labeled for the timing and method of application for the use site to be treated, (2) mixing is not prohibited by the label of the tank mix product(s), and (3) that the tank mix combination is physically compatible (see tank mix compatibility testing below). When tank mixing, use only in accordance with the restrictions, precautions, and limitations on the respective product labels.

- It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.
- Do not exceed specified application rates. If products containing the same active ingredient are mixed, do not exceed the maximum allowable active ingredient use rates.
- For direct injection or other spray equipment where the product formulations will be mixed in undiluted form, special care should be taken to ensure tank mix compatibility.
- Always perform a compatibility test (jar test) to ensure the compatibility of products to be used in tank mixture.

Tank Mix Compatibility Testing: Perform a jar test prior to mixing in a spray tank to ensure compatibility of Milestone and other pesticides or carriers. Use a clear glass jar with lid and mix ingredients in the same order and proportions as will be used in the spray tank. The mixture is compatible if the materials mix readily when the jar is inverted several times. The mixture should remain stable after standing for 30 minutes or, if separation occurs, should readily remix if agitated. An incompatible mixture is indicated by separation into distinct layers that do not readily remix when agitated, and/or the presence of flakes, precipitates, gels, or heavy oily film in the jar. Use of an appropriate compatibility aid may resolve mix incompatibility. If the mixture is incompatible do not use that tank mix partner in tank mixtures.

Invert Emulsion Spray Mixtures

Milestone can be applied in an invert emulsion using oil and an appropriate inverting agent. Follow label directions of the inverting agent.

Mixing with Sprayable Liquid Fertilizer Solutions: Milestone is usually compatible with liquid fertilizer solutions. It is anticipated that Milestone will not require a compatibility agent for mixing with fertilizers; however, a compatibility test (jar test) should be made prior to mixing. Jar tests are particularly important when a new batch of fertilizer or pesticide is used, when water sources change, or when tank mixture ingredients or concentrations are changed. Compatibility may be determined by mixing the spray components in the desired order and proportions in a clear glass jar before large scale mixing of spray components in the spray tank.

Note: The lower the temperature of the liquid fertilizer, the greater the likelihood of mixing problems. Use of a compatibility aid may be required if Milestone is mixed with a 2,4-D-containing product and liquid fertilizer. **Mixing Milestone and 2,4-D in N-P or N-P-K liquid fertilizer solutions is more difficult than mixing with straight nitrogen fertilizer and should not be attempted without first conducting a successful compatibility jar test.** Agitation in the spray tank must be vigorous to be comparable with jar test agitation. Apply the spray mixture the same day it is prepared while maintaining continuous agitation. Rinse the spray tank thoroughly after use.

Note: Foliar-applied liquid fertilizers themselves can cause yellowing of the foliage of forage grasses and other vegetation.

Use Rates and Timing

Milestone may be applied as a broadcast spray by ground or aerial equipment or as a spot application to control weeds including, but not limited to, those listed on this label. When a rate range is given, use the higher rate to control weeds at advanced growth stages or when under less-than-favorable growing conditions. For optimum uptake and translocation of Milestone, avoid mowing, haying, shredding, burning, or soil disturbance in treated areas for at least 14 days following application.

Milestone provides post emergence control and preemergence control of emerging seedlings of susceptible weeds and re-growth of certain perennial weeds following application. Preventing establishment of weeds will depend upon application rate, season of application, and environmental conditions after application.

Milestone can provide long-term control of susceptible weeds. The length of control is dependent upon the application rate, condition and growth stage of target weeds, environmental conditions at and following application, and the density and vigor of competing desirable vegetation. Long-term weed control is most effective where grass vegetation is allowed to recover from overgrazing, drought, etc., and compete with weeds.

Milestone can be an important component of integrated vegetation management programs designed to renovate or restore desired plant communities. To maximize and extend the benefits of weed control provided by Milestone, it is important that other vegetation management practices, including proper grazing management, biological control agents, replanting, fertilization, prescribed fire, etc., be used in appropriate sequences and combinations to further alleviate the adverse effects of weeds on desirable plant species and to promote development of desired plant communities. Agricultural and natural resources specialists with federal and state government agencies can provide guidance on best management practices and development of integrated vegetation management programs.

Plants Controlled

The following weeds and woody plants will be controlled with the rates of Milestone indicated below in Table 2. For best results, most weeds and woody plants should be treated when they are actively growing and under conditions favorable for growth. Use a higher rate in the rate range when growing conditions are less than favorable or when weed foliage is tall and dense, or when optimal longer term residual control is desired. Milestone also provides preemergence control of germinating seeds or seedlings of susceptible weeds following application.

Table 2: Weeds and Woody Plants Controlled

Note: Numbers in parentheses (-) refer to specific use directions for a particular weed species.

Common Name	Scientific Name	Rate Range (fl oz/acre)	Life Cycle	Plant Family
amaranth, spiny	<i>Amaranthus spinosus</i>	4 to 7	annual	Amaranthaceae
bedstraw	<i>Galium spp.</i>	4 to 7	perennial	Rubiaceae
beggarticks	<i>Bidens spp.</i>	4 to 7	annual	Asteraceae
broomweed, annual	<i>Amphiachyris dracunculoides</i>	4 to 7	annual	Asteraceae
burdock, common	<i>Arctium minus</i>	4 to 7	biennial	Asteraceae
buttercup, hairy	<i>Ranunculus sardous</i>	4 to 7	annual	Ranunculaceae
buttercup, tall	<i>Ranunculus acris</i>	4 to 7	perennial	Ranunculaceae
buttercup spp	<i>Ranunculus spp</i>	4 to 7	various	Ranunculaceae

Table 2: Weeds and Woody Plants Controlled (Cont.)

Note: Numbers in parentheses (-) refer to specific use directions for a particular weeds species.

Common Name	Scientific Name	Rate Range (fl oz/acre)	Life Cycle	Plant Family
camelthorn	<i>Alhagi pseudalhagi</i>	5 to 7	perennial	Fabaceae
cat's ear, common	<i>Hypochaeris radicata</i>	5 to 7	perennial	Asteraceae
cat's ear	<i>Hypochaeris spp</i>	5 to 7	perennial	Asteraceae
chamomile, scentless	<i>Matricaria inodora</i>	4 to 7	annual	Asteraceae
chicory	<i>Cichorium intybus</i>	4 to 6	perennial	Asteraceae
chickweed	<i>Stellaria media</i>	7	annual	Caryophyllaceae
cinquefoil, sulfur (1)	<i>Potentilla recta</i>	4 to 7	perennial	Rosaceae
cocklebur	<i>Xanthium strumarium</i>	3 to 5	annual	Asteraceae
clover	<i>Trifolium spp.</i>	5 to 7	perennial	Fabaceae
crazyweed	<i>Oxytropis</i>	5 to 7	perennial	Fabaceae
croton, tropic	<i>Croton glandulosus</i>	3 to 5	annual	Euphorbiaceae
crownvetch	<i>Securigera varia</i>	5 to 7	perennial	Fabaceae
cudweed, purple	<i>Gamochaeta purpurea</i>	4 to 7	annual	Asteraceae
daisy, oxeye (1)	<i>Leucanthemum vulgare</i>	4 to 7	perennial	Asteraceae
dock, curly	<i>Rumex crispus</i>	4 to 7	perennial	Polygonaceae
evening primrose, cutleaf	<i>Oenothera laciniata</i>	4 to 7	annual	Onagraceae
fiddleneck	<i>Amsinckia spp</i>	4 to 7	annual	Boraginaceae
fireweed	<i>Epilobium angustifolium</i>	5 to 7	perennial	Onagraceae
fleabane, flax-leaf	<i>Conyza bonariensis</i>	4 to 7	annual	Asteraceae
fleabane, hairy	<i>Conyza bonariensis</i>	5 to 7	annual/biennial	Asteraceae
hawkweed, orange (2)	<i>Hieracium aurantiacum</i>	4 to 7	perennial	Asteraceae
hawkweed, yellow (2)	<i>Hieracium caespitosum</i>	4 to 7	perennial	Asteraceae
henbane, black	<i>Hyoscyamus niger</i>	5 to 7	annual/biennial	Solanaceae
henbit	<i>Lamium amplexicaule</i>	5 to 7	annual/biennial	Lamiaceae
hogweed, giant	<i>Heracleum mantegazzianum</i>	7	perennial	Apiaceae
horsenettle, Carolina	<i>Solanum carolinense</i>	4 to 7	perennial	Solanaceae
horseweed (marestail)	<i>Conyza canadensis</i>	4 to 7	annual	Asteraceae
ironweed, tall	<i>Vernonia gigantea</i>	5 to 7	perennial	Asteraceae
ironweed, western	<i>Vernonia baldwinii</i>	7	perennial	Asteraceae
knapweed, diffuse (3)	<i>Centaurea diffusa</i>	5 to 7	biennial/perennial	Asteraceae
knapweed, meadow	<i>Centaurea debeauxii</i>	5 to 7	perennial	Asteraceae
knapweed, Russian (4)	<i>Acroptilon repens</i>	5 to 7	perennial	Asteraceae
knapweed, spotted (3)	<i>Centaurea stoebe</i>	5 to 7	biennial/perennial	Asteraceae
knapweed, squarrose	<i>Centaurea virgata</i>	5 to 7	biennial/perennial	Asteraceae
knapweeds	<i>Centaurea spp.</i>	5 to 7	biennial/perennial	Asteraceae
knotweeds, Japanese, bohemian (11)	<i>Reynoutria japonica</i>	7 to 14	perennial	Polygonaceae
kudzu	<i>Pueraria montana</i>	7	perennial	Fabaceae
lady's thumb	<i>Polygonum persicaria</i>	3 to 5	annual	Polygonaceae
lambsquarters	<i>Chenopodium album</i>	5 to 7	annual	Chenopodiaceae
lespedeza, annual	<i>Lespedeza striata</i>	5 to 7	annual	Fabaceae
licorice, wild	<i>Glycyrrhiza lepidota</i>	7	perennial	Fabaceae
locoweed	<i>Astragalus spp.</i>	5 to 7	perennial	Fabaceae
locust, black	<i>Robinia pseudoacacia</i>	7	woody perennial	Fabaceae
locust, honey	<i>Gleditsia triacanthos</i>	7	woody perennial	Fabaceae
loosestrife, purple (12)	<i>Lythrum salicaria</i>	7 to 14	perennial	Lythraceae
mayweed, scentless	<i>Tripleurospermum perforate</i>	4 to 7	annual	Asteraceae
mayweed, stinking	<i>Anthemis cotula</i>	7	annual	Asteraceae
medic, black	<i>Medicago lupulina</i>	4 to 7	perennial	Fabaceae
mimosa	<i>Albizia julibrissin</i>	7	woody perennial	Fabaceae
mullein (5)	<i>Verbascum spp.</i>	7	biennial	Scrophulariaceae
nightshade, silverleaf	<i>Solanum elaeagnifolium</i>	4 to 7	perennial	Solanaceae
ox tongue, bristly	<i>Picris echioides</i>	5 to 7	biennial	Asteraceae
pea, Swainson	<i>Sphaerophysa salsula</i>	5 to 7	perennial	Fabaceae

Table 2: Weeds and Woody Plants Controlled (Cont.)

Note: Numbers in parentheses (-) refer to specific use directions for a particular weeds species.

Common Name	Scientific Name	Rate Range (fl oz/acre)	Life Cycle	Plant Family
povertyweed	<i>Iva axillaris</i>	5 to 7	perennial	Asteraceae
ragweed, common	<i>Ambrosia artemisiifolia</i>	3 to 5	annual	Asteraceae
ragweed, western	<i>Ambrosia psilostachya</i>	4 to 7	perennial	Asteraceae
ragweed, giant	<i>Ambrosia trifida</i>	4 to 7	annual	Asteraceae
ragwort, tansy	<i>Senecio jacobaea</i>	5 to 7	perennial	Asteraceae
redbud	<i>Cercis Canadensis</i>	7	woody perennial	Fabaceae
rush skeletonweed	<i>Chondrilla juncea</i>	5 to 7	perennial	Asteraceae
sicklepod	<i>Cassia obtusifolia</i>	7	perennial	Fabaceae
smartweed, Pennsylvania	<i>Polygonum pensylvanicum</i>	3 to 5	annual	Polygonaceae
sneezeweed, bitter	<i>Helenium amarum</i>	4 to 7	annual	Asteraceae
soda apple, tropical (6)	<i>Solanum viarum</i>	5 to 7	perennial	Solanaceae
sowthistle, annual	<i>Sonchus oleraceae</i>	7	annual	Asteraceae
sowthistle, perennial	<i>Sonchus arvensis</i>	3 to 5	perennial	Asteraceae
spanishneedles	<i>Bidens bipinnata</i>	4 to 7	annual	Asteraceae
St. Johnswort, common	<i>Hypericum perforatum</i>	5 to 7	perennial	Clusiaceae
stiltgrass, Japanese	<i>Microstegium vimineum</i>	5 to 7	annual	Poaceae
starthistle, Malta (7)	<i>Centaurea melitensis</i>	3 to 5	annual	Asteraceae
starthistle, purple (7)	<i>Centaurea calcitrapa</i>	3 to 5	biennial	Asteraceae
starthistle, yellow (7)	<i>Centaurea solstitialis</i>	3 to 5	annual	Asteraceae
sunflower, common	<i>Helianthus annuus</i>	4 to 7	annual	Asteraceae
sweetclover, white	<i>Melilotus albus</i>	5 to 7	biennial	Fabaceae
sweetclover, yellow	<i>Melilotus officinalis</i>	5 to 7	biennial	Fabaceae
teasel	<i>Dipsacus spp.</i>	4 to 7	biennial	Dipsacaceae
thistle, artichoke	<i>Cynara cardunculus</i>	5 to 7	perennial	Asteracea
thistle, blessed milk	<i>Silybum marianum</i>	4 to 7	biennial	Asteraceae
thistle, bull (8)	<i>Cirsium vulgare</i>	3 to 5	biennial	Asteraceae
thistle, Canada (9)	<i>Cirsium arvense</i>	5 to 7	perennial	Asteraceae
thistle, woolly distaff	<i>Carthamus lanatus</i>	4 to 7	annual	Asteraceae
thistle, Italian	<i>Carduus pycnocephalus</i>	7	annual	Asteraceae
thistle, musk (8)	<i>Carduus nutans</i>	3 to 5	biennial	Asteraceae
thistle, plumeless (8)	<i>Carduus acanthoides</i>	3 to 5	biennial	Asteraceae
thistle, Scotch	<i>Onopordum acanthium</i>	5 to 7	biennial	Asteracea
thistle, Russian (preemergence)	<i>Salsola spp</i>	7	annual	Chenopodiaceae
tree of heaven	<i>Ailanthus altissima</i>	7	perennial	Simaroubaceae
vetch	<i>Vicia spp.</i>	3 to 7	perennial	Fabaceae
willoweed, panicle	<i>Epilobium brachycarpum</i>	5 to 7	annual	Onagraceae
wisteria	<i>Wisteria brachybotris</i>	7	woody perennial	Fabaceae
wormwood, absinth(10)	<i>Artemisia absinthium</i>	6 to 7	perennial	Asteraceae
yarrow, common	<i>Achillea millefolium</i>	7	perennial	Asteraceae

- (1) **Sulfur cinquefoil or oxeye daisy:** Apply Milestone at 4 to 6 fl oz per acre to plants in the pre-bud stage of development.
- (2) **Orange or yellow hawkweeds:** Apply Milestone at 4 to 7 fl oz per acre to plants in the bolting stage of development.
- (3) **Diffuse, spotted, and squarrose knapweeds:** Apply Milestone at 5 to 7 fl oz per acre when plants are actively growing with the optimum time of application occurring from rosette to the bolting stages of development or in the fall. Plants will be controlled by mid-summer and fall applications even though plants may not show any changes in form or stature the year of application.
- (4) **Russian knapweed:** Apply Milestone at 5 to 7 fl oz per acre to plants in the spring and summer at early bud to flowering stages and to dormant plants in the fall.
- (5) **Mullein:** Apply to the rosette stage
- (6) **Tropical soda apple:** Apply Milestone at 5 to 7 fl oz per acre at any growth stage, but application by flowering will reduce seed production potential.
- (7) **Malta, purple, and yellow starthistle:** Apply Milestone at 3 to 5 fl oz per acre to plants at the rosette through bolting growth stages.
- (8) **Bull, musk, and plumeless thistles:** Apply Milestone at 3 to 5 fl oz per acre in the spring and early summer to rosette or bolting plants or in the fall to seedlings and rosettes. Apply at 4 to 5 fl oz when plants are at the late bolt through early flowering growth stages. 2,4-D at 1 lb ae per acre should be tank-mixed with Milestone starting at the late bud stages
- (9) **Canada thistle:** Apply Milestone at 5 to 7 fl oz per acre in the spring after all plants have fully emerged (some may be budding) until the oldest plants are in full flower stage. Use the higher rate when applying to the flower stage. Applications are also effective in the fall before a killing frost. Use higher rates for older/dense stands or for longer residual control.

- (10) **Absinth wormwood:** Apply 6 to 7 fl oz per acre before wormwood is 12 inches tall. When applying by air on CRP, coverage is important and a minimum of 3 GPA is specified. Remove old duff and litter by fire or mowing for best results
- (11) **Invasive knotweeds:** Japanese, Bohemian, giant knotweeds: Optimum suppression of invasive knotweeds with Milestone herbicide is obtained when applications are made to plants that are at least 3 to 4 feet tall. Results of field trials conducted in the western U.S. indicate that high volume applications (100 gpa or greater) of Milestone at 7 fl oz per acre or a spot treatment rate up to 14 fl oz per acre applied in summer will provide good control of invasive knotweeds. In the upper Midwest, mowing in summer followed by fall application of Milestone (prior to frost) provided the best control. Infestations of invasive knotweed that are mowed should be allowed to regrow to at least 3 feet in height prior to herbicide treatment. Monitoring and follow-up herbicide treatments on regrowth will be necessary to control resprouts and achieve long-term control.
- (12) **Purple loosestrife:** For optimum control apply Milestone at 7 fl oz per acre plus 1 pint to 1 quart of 2,4-D amine or 1 to 2 quarts of Garlon 3A. Spot treatments may also be made by applying Milestone at 14 fl oz (see Spot treatment section of the label) with or without the addition of 2,4-D or Garlon 3A.
- (13) **Fiddleneck:** For optimum control apply Milestone at 4 to 7 fl oz per acre when the plants are young and before flowering. Use higher rates if the plants are older and larger. In California optimal application timing is November through March.

For Control or Suppression of Medusahead Rye

Milestone applied broadcast at 7 to 14 fl oz per acre can suppress or control medusahead rye (*Taeniatherum caput-medusae*) and downy brome (*Bromus tectorum*, also called cheatgrass). The key to optimum results is the timing of application. Applications should be made in late summer prior to rains and seed germination in order to provide the best possibility of suppression or control. In general, control or suppression will be poor if any of the seeds have germinated prior to application even if they have not yet emerged through the soil surface. Tank mixes with Accord XRT II at 12 fl oz per acre, where a non-selective herbicide can be used or where desired grasses are dormant and will not be harmed, will aid in control. Spot treatment restrictions (see spot treatment section) apply for rates above 7 fl oz per acre for broadcast applications.

Control of Terrestrial Weeds Near and Up to the Water's Edge

Milestone can be used to treat terrestrial weeds that extend up to the water's edge. **Do not apply directly to water.** This product must not be used to treat vegetation standing in the water. When controlling terrestrial weed species near and up to the water's edge, take precautions to minimize incidental overspray to the adjacent water. Consult local public water control authorities before applying this product near public waters. Permits may be required to treat such areas. Apply the specified rate (listed in Table 2) of Milestone as a coarse low-pressure spray as ground broadcast or spot applications. Do not apply aerially for control of weeds growing at or near the water's edge. Spray volume should be sufficient to uniformly cover foliage. Increase the spray volume to ensure thorough and uniform coverage when target vegetation is tall and/or dense. It is also permissible to treat target weeds within dry non-irrigation ditches and seasonally dry transitional areas between upland and lowland sites (such as flood plains, deltas, marshes, prairie potholes, or vernal pools) but only at times when those sites are dry and are forecasted or managed by water control systems to remain dry for at least 2 weeks following application.

Use Rate Restrictions:

Do not broadcast apply more than 7 fl oz per acre of Milestone per year. The total amount of Milestone applied broadcast, as a re-treatment, and/or spot treatment cannot exceed 7 fl oz per acre per year. Spot treatments may be applied at an equivalent broadcast rate of up to 0.22 lb acid equivalent (14 fl oz of Milestone) per acre per year; however, not more than 50% of an acre may be treated at that rate. Do not apply more than a total of 0.11 lb acid equivalent (7 fl oz) per acre of Milestone per year as a result of broadcast, spot, or repeat applications.

Woody Plant Control

Milestone may be applied to control woody plants by any application method listed on the label on any site listed.

Milestone may be applied alone or in tank-mix combinations with labeled rates of other herbicides provided: (1) the tank mix product is labeled for the timing and method of application for the use site to be treated, and (2) mixing is not prohibited by the label of the registered tank mixed products. Use as directed in the Directions For Use section of the tank-mix partner. Follow Mixing Instructions.

Add Milestone to tank mixes for improved brush control on species such as alder, aspen, blackberry, boxelder, cherry, coyote brush, conifers, cottonwood, elm, maple, poplar, oak, brooms (Scotch, Spanish, French, Portuguese), gorse, hackberry, Russian and Autumn olive, salt-cedar.

Low or High Volume Foliar Applications:

For broad spectrum brush control using a foliar application, Milestone may be added to tank mixes with the following products or other products labeled for use on the intended site:

Tank Mix Product	EPA Reg. No.	Active Ingredient(s)
Accord XRT II	62719-556	Glycine, N-(phosphonomethyl)-, compd. with N-methylmethanamine (1:1)
Arsenal Powerline Herbicide	241-431	Imazapyr, isopropylamine salt
DMA 4 Herbicide	62719-3	2,4-D, dimethylamine salt
Garlon 4 Ultra	62719-527	Triclopyr, butoxyethyl ester
Remedy Ultra	62719-552	Triclopyr, butoxyethyl ester
Tordon 101 Mixture	62719-5	2,4-D triisopropanolamine salt; Picloram triisopropanolamine salt
Tordon 22K	62719-6	Picloram-potassium
Tordon K	62719-17	Picloram-potassium
Transline	62719-259	Clopyralid, monoethanolamine salt
Garlon XRT	62719-553	Triclopyr, butoxyethyl ester
Garlon 3A	62719-37	Triclopyr, triethylamine salt
Rodeo	62719-324	Glyphosate; Glyphosate-isopropylammonium

Low Volume Basal Bark Applications:

To control susceptible woody plants with stems less than 6 inches in basal diameter, apply herbicide mix (see below for rates) with a backpack or knapsack sprayer using low pressure and a solid cone or flat fan nozzle. Spray the basal parts of brush and tree trunks to a height of 12 to 15 inches from the ground in a manner that thoroughly wets the lower stems but not to the point of runoff. The use of a Spraying Systems Y2 nozzle or similar nozzle is recommended, which will narrow the spray pattern to target individual stems. Herbicide concentration should vary with tree diameter, bark thickness, volume used per acre, and susceptibility of species treated. Apply anytime, including the winter months, except when snow or water prevent spraying to the ground line or when stem surfaces are saturated with water.

Milestone may be used as a low volume basal treatment alone, for sensitive woody species in the Fabaceae family (legumes), or in combination with other products such as Garlon 4 Ultra, Garlon XRT, or Remedy Ultra for broader control of other sensitive woody species. Applications should not exceed the maximum use rate per acre for the site.

Mix Milestone at 0.5 to 5% v/v alone or with Garlon 4 Ultra or Garlon XRT in a commercially available basal diluent (or other oils or basal diluents as recommended by the manufacturer). The basal oil should be compatible with a water soluble herbicides such as Milestone. See Table 3 to calculate the amount of Milestone that can be applied per acre at the various volumes and rates. Make a stable tank mixture for basal bark application by first combining each product with a compatibility agent prior to final mixing in the desired ratio. If using a tank mix, mix the oil-based products such as Garlon 4 Ultra thoroughly with basal oil and add any other oil-based products before adding the water-based products. If the mixture stands for more than 30 minutes, reapplication may be required.

Oil and water based mixtures can separate over time. Long-term storage is not recommended without vigorous agitation prior to use or without a recommended compatibility agent.

Use caution when treating areas adjacent to susceptible and desirable species to avoid root uptake and possible injury when using Milestone or other soil active herbicides



Low Volume Stem Bark Band Treatment

To control susceptible woody plants (see Table 2) with stems less than 6 inches in basal diameter, mix 0.5 to 5 gallons of Milestone in enough oil to make 100 gallons of spray mixture. Apply with a backpack or knapsack sprayer using low pressure and a solid cone or flat fan nozzle.

Apply the spray in a 6-inch to 10-inch wide band that completely encircles the stem. Spray in a manner that completely wets the bark, but not to the point of runoff. The treatment band may be positioned at any height up to the first major branch. For best results apply the band as low as possible. Spray mixture concentration should vary with size and susceptibility of species to be treated. Applications may be made anytime, including winter months.

Table 3:

% of Milestone in Basal Mix	Fluid ounces of Milestone by GPA (gallons per acre)						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
1.0	1.3	2.6	3.8	5.1	6.4	7.7	9.0
1.5	1.9	3.8	5.8	7.7	9.6	11.5	13.4
2.0	2.6	5.1	7.7	10.2	12.8		
2.5	3.2	6.4	9.6	12.8			
3.0	3.8	7.7	11.5				
3.5	4.5	9.0	13.4				
4.0	5.1	10.2					
5.0	6.4	12.8					

 within spot treatment labeled rate
 in excess of spot treatment labeled rate

NOTE: Avoid treating high density of stems adjacent to desirable trees with roots in the treatment zone. See Table 4 for guidance on estimated volume per acre by treated stem density. Trees adjacent to or in a treated area can occasionally be affected by root uptake of Milestone. Applications of Milestone within the root zone of desirable trees should not be made unless injury can be tolerated. Severe injury or plant death can occur if used near roses or leguminous trees such as locusts, redbud, mimosa, and caragana.

Table 4:

Estimated gallons of spray solution per acre for basal bark applications on various stem densities per acre		
	Volume Range	Target Spacing
Number of Stems per Acre	(gallons per acre)	(feet between brush/trees)
250	1.0 to 1.7	8.4
500	2.0 to 3.3	5.9
750	3.0 to 5.0	4.9
1000	4.0 to 6.6	4.2
1250	5.0 to 8.3	3.8
1500	5.9 to 9.9	3.4

Cut surface

Apply Milestone in the cut surface applications listed below for control of susceptible tree species such as legumes like albizia, mimosa, locust, etc. Mixtures of Milestone and Garlon 3A or Garlon 4 Ultra may be effective on species other than legumes such as elm, maple, oak and conifers.

Cut surface applications may be used successfully at any season except during periods of heavy sap flow of certain species - for example, maples in the spring.

Cut-Stump Treatment

Apply Milestone as a 10% dilution v/v in water, by spraying or painting all the exposed cambium layer on the freshly cut surface. The cambium area next to the bark is the most vital area to wet.

With Tree Injector Method

Apply by injecting 1 milliliter of 10% v/v Milestone in water through the bark at intervals of 3 to 4 inches between centers of the injector wound. The injections should completely surround the tree at any convenient height. Note: No Worker Protection Standard worker entry restrictions or worker notification requirements apply when this product is injected directly into plants.

With Hack and Squirt Method

Make cuts around the tree trunk at a convenient height with a hatchet or similar equipment so that the cuts overlap slightly and make a continuous circle around the trunk. Spray 1 milliliter of 10% v/v Milestone in water into the pocket created between the bark and the inner stem/trunk by each cut.

With Frill or Girdle Method

Make a single girdle through the bark completely around the tree at a convenient height. The frill should allow for the herbicide to remain next to the inner stem and absorb into the plant. Wet the cut surface with 10% v/v Milestone in water.

For use in Hawaii only:

Incision Point Application (IPA) also known as Tree Injection or Hack and Squirt

For control of susceptible tree species such as albizia and other legumes and susceptible tree species, make cuts around the tree trunk at a convenient height with a machete, hatchet, or similar equipment so that the cuts are about 6 inches apart between centers. Inject 0.5 to 1 milliliter of undiluted Milestone into the pocket created between the bark and the inner stem/trunk by each cut as soon as possible after cutting. The cambium area next to the bark is the most vital area to wet.

Preemergent Weed Control

Typically Milestone is used as a post emergent herbicide but it has preemergent activity on susceptible weeds. Use Milestone as a preemergence spray prior to weed seed germination. Control will depend upon species susceptibility, application timing, and environmental conditions such as precipitation following application. When applied at rates lower than 7 fl oz per acre, Milestone can provide short-term control of some susceptible weeds, but when applied at 7 fl oz (broadcast) or 14 fl oz (spot treatment), weed control is extended.

Best results for use as a preemergent application for total vegetation control are obtained if Milestone at 7 fl oz per acre is tank mixed with other herbicides to broaden the weed spectrum and to control grasses. If grasses and broadleaf weeds tolerant to Milestone are present at the time of application or will germinate on the site, then tank mixtures with other herbicides such as the products listed below, or flumioxazin, diuron, or other herbicides labeled for total vegetation control applications.

Tank Mix Product	EPA Reg. No.	Active Ingredient(s)
Accord XRT II	62719-556	Glycine, N-(phosphonomethyl)-, compd. with N-methylmethanamine (1:1)
Rodeo	62719-324	Glyphosate; Glyphosate-isopropylammonium
Dimension 2EW	62719-542	Dithiopyr
Dimension EC	62719-426	Dithiopyr
Oust X Herbicide	432-1552	Sulfometuron
Esplanade 200 SC	432-1516	Indaziflam

SPOT TREATMENTS FOR AREAS SUCH AS SUBJECT POLES, SUBSTATIONS, AND OTHER SMALL AREAS

Spot treatments may be applied at an equivalent broadcast rate of up to 0.22 lb acid equivalent (14 fl oz of Milestone) per acre per year to small spots for clearing around utility subject poles to help prevent fire damage, on small substations, and other spot areas. To prevent misapplication, spot treatments should be applied with a calibrated sprayer.

Terms and Conditions of Use

If terms of the following Warranty Disclaimer, Inherent Risks of Use, and Limitation of Remedies are not acceptable, return unopened package at once to the seller for a full refund of purchase price paid. To the extent permitted by law, otherwise, use by the buyer or any other user constitutes acceptance of the terms under Warranty Disclaimer, Inherent Risks of Use and Limitation of Remedies.

Warranty Disclaimer

Dow AgroSciences warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. To the extent permitted by law, Dow AgroSciences MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Crop injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperatures, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of

other materials, the manner of application, or other factors, all of which are beyond the control of Dow AgroSciences or the seller. To the extent permitted by law, all such risks shall be assumed by buyer.

Limitation of Remedies

To the extent permitted by law, the exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Dow AgroSciences' election, one of the following:

1. Refund of purchase price paid by buyer or user for product bought, or
2. Replacement of amount of product used.

To the extent permitted by law, Dow AgroSciences shall not be liable for losses or damages resulting from handling or use of this product unless Dow AgroSciences is promptly notified of such loss or damage in writing. To the extent permitted by law, in no case shall Dow AgroSciences be liable for consequential or incidental damages or losses.

The terms of the Warranty Disclaimer, Inherent Risks of Use and this Limitation of Remedies cannot be varied by any written or verbal statements or agreements. No employee or sales agent of

Dow AgroSciences or the seller is authorized to vary or exceed the terms of the Warranty Disclaimer or this Limitation of Remedies in any manner.

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**Produced for
Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268**

Label Code: CD02-879-021
Replaced Label: CD02-879-020
EPA accepted 06/02/2020

Revisions:

1. Removed restriction "Not For Sale, Distribution, or Use in the San Luis Valley of Colorado."
2. Updated customer service phone number
3. Updated Spray Drift Management
4. Added tables for tank-mix partner product information

SAFETY DATA SHEET

DOW AGROSCIENCES LLC

Product name: MILESTONE™ Herbicide

Issue Date: 08/29/2019

Print Date: 08/29/2019

DOW AGROSCIENCES LLC encourages you and expects you to read and understand the entire SDS as there is important information throughout the document. This SDS provides users with information relating to the protection of human health and safety at the workplace, protection of the environment and supports emergency response. Product users and applicators should primarily refer to the product label attached to or accompanying the product container.

1. IDENTIFICATION

Product name: MILESTONE™ Herbicide

Recommended use of the chemical and restrictions on use

Identified uses: End use herbicide product

COMPANY IDENTIFICATION

DOW AGROSCIENCES LLC
9330 ZIONSVILLE RD
INDIANAPOLIS IN 46268-1053
UNITED STATES

Customer Information Number:

800-992-5994
info@corteva.com

EMERGENCY TELEPHONE NUMBER

24-Hour Emergency Contact: 800-992-5994

Local Emergency Contact: 352-323-3500

2. HAZARDS IDENTIFICATION

Hazard classification

GHS classification in accordance with 29 CFR 1910.1200
Not a hazardous substance or mixture.

Other hazards

No data available

3. COMPOSITION/INFORMATION ON INGREDIENTS

This product is a mixture.

Component	CASRN	Concentration
Aminopyralid Triisopropanolamine Salt	566191-89-7	40.6%

Triisopropanolamine	122-20-3	1.5%
Balance	Not available	57.9%

4. FIRST AID MEASURES

Description of first aid measures

General advice:

If potential for exposure exists refer to Section 8 for specific personal protective equipment.

Inhalation: Move person to fresh air. If person is not breathing, call an emergency responder or ambulance, then give artificial respiration; if by mouth to mouth use rescuer protection (pocket mask etc). Call a poison control center or doctor for treatment advice.

Skin contact: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

Eye contact: Hold eyes 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 eyes. Call a poison control center or doctor for treatment advice.

Ingestion: No emergency medical treatment necessary.

Most important symptoms and effects, both acute and delayed:

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

Indication of any immediate medical attention and special treatment needed

Notes to physician: No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Have the Safety Data Sheet, and if available, the product container or label with you when calling a poison control center or doctor, or going for treatment.

5. FIREFIGHTING MEASURES

Suitable extinguishing media: To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam.

Unsuitable extinguishing media: None known.

Special hazards arising from the substance or mixture

Hazardous combustion products: Under fire conditions some components of this product may decompose. The smoke may contain unidentified toxic and/or irritating compounds. Combustion products may include and are not limited to: Nitrogen oxides. Hydrogen chloride. Carbon monoxide. Carbon dioxide.

Unusual Fire and Explosion Hazards: Exposure to combustion products may be a hazard to health. Do not allow run-off from fire fighting to enter drains or water courses.

Advice for firefighters

Fire Fighting Procedures: Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Remove undamaged containers from fire area if it is safe to do so. Evacuate area. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Use water spray to cool unopened containers.

Special protective equipment for firefighters: Wear self-contained breathing apparatus for firefighting if necessary. Use personal protective equipment.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures: Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Environmental precautions: Prevent from entering into soil, ditches, sewers, waterways and/or groundwater. See Section 12, Ecological Information.

Methods and materials for containment and cleaning up: Contain spilled material if possible. Small spills: Absorb with materials such as: Clay. Dirt. Sand. Sweep up. Collect in suitable and properly labeled containers. Large spills: Contact Dow AgroSciences for clean-up assistance. See Section 13, Disposal Considerations, for additional information.

7. HANDLING AND STORAGE

Precautions for safe handling: Do not breathe vapours/dust. Handle in accordance with good industrial hygiene and safety practice. Smoking, eating and drinking should be prohibited in the application area. Take care to prevent spills, waste and minimize release to the environment. Use appropriate safety equipment. For additional information, refer to Section 8, Exposure Controls and Personal Protection.

Conditions for safe storage: Store in a closed container. Containers which are opened must be carefully resealed and kept upright to prevent leakage. Keep in properly labelled containers. Store in accordance with the particular national regulations.

Do not store with the following product types: Strong oxidizing agents.
Unsuitable materials for containers: None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

If exposure limits exist, they are listed below. If no exposure limits are displayed, then no values are applicable.

Component	Regulation	Type of listing	Value/Notation
Triisopropanolamine	Dow IHG	TWA	10 mg/m ³

RECOMMENDATIONS IN THIS SECTION ARE FOR MANUFACTURING, COMMERCIAL BLENDING AND PACKAGING WORKERS. APPLICATORS AND HANDLERS SHOULD SEE THE PRODUCT LABEL FOR PROPER PERSONAL PROTECTIVE EQUIPMENT AND CLOTHING.

Exposure controls

Engineering controls: Use local exhaust ventilation, or other engineering controls to maintain airborne levels below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, general ventilation should be sufficient for most operations. Local exhaust ventilation may be necessary for some operations.

Individual protection measures

Eye/face protection: Use safety glasses (with side shields).

Skin protection

Hand protection: Chemical protective gloves should not be needed when handling this material. Consistent with general hygienic practice for any material, skin contact should be minimized.

Other protection: No precautions other than clean body-covering clothing should be needed.

Respiratory protection: Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, wear respiratory protection when adverse effects, such as respiratory irritation or discomfort have been experienced, or where indicated by your risk assessment process. For most conditions no respiratory protection should be needed; however, if discomfort is experienced, use an approved air-purifying respirator.

The following should be effective types of air-purifying respirators: Organic vapor cartridge with a particulate pre-filter.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance

Physical state	Liquid.
Color	Brown
Odor	Mild
Odor Threshold	No data available
pH	7.3 <i>pH Electrode</i>
Melting point/range	No data available
Freezing point	< -10 °C (< 14 °F)
Boiling point (760 mmHg)	No data available
Flash point	closed cup > 100 °C (> 212 °F) <i>Pensky-Martens Closed Cup ASTM D 93</i>
Evaporation Rate (Butyl Acetate = 1)	No data available
Flammability (solid, gas)	Not Applicable
Lower explosion limit	No data available
Upper explosion limit	No data available
Vapor Pressure	No data available
Relative Vapor Density (air = 1)	No data available

Relative Density (water = 1)	No data available
Water solubility	Soluble
Partition coefficient: n-octanol/water	No data available
Auto-ignition temperature	none below 400 degC
Decomposition temperature	No data available
Dynamic Viscosity	12.2 cP at 20 °C (68 °F) <i>EPA OPPTS 830.7100 (Viscosity)</i>
Kinematic Viscosity	No data available
Explosive properties	No data available
Oxidizing properties	No data available
Liquid Density	1.1401 g/mL at 20 °C (68 °F) <i>Digital density meter</i>
Molecular weight	No data available
Surface tension	54.4 mN/m at 20 °C (68 °F)

NOTE: The physical data presented above are typical values and should not be construed as a specification.

10. STABILITY AND REACTIVITY

Reactivity: Not classified as a reactivity hazard.

Chemical stability: No decomposition if stored and applied as directed. Stable under normal conditions.

Possibility of hazardous reactions: None known.
No hazards to be specially mentioned.

Conditions to avoid: None known.

Incompatible materials: Avoid contact with: Strong oxidizers.

Hazardous decomposition products: Decomposition products depend upon temperature, air supply and the presence of other materials. Decomposition products can include and are not limited to: Hydrogen chloride. Nitrogen oxides.

11. TOXICOLOGICAL INFORMATION

Toxicological information appears in this section when such data is available.

Acute toxicity

Acute oral toxicity

Very low toxicity if swallowed. Harmful effects not anticipated from swallowing small amounts.

As product:

LD50, Rat, male and female, > 5,000 mg/kg

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

As product:
LD50, Rat, male and female, > 5,000 mg/kg

Acute inhalation toxicity

No adverse effects are anticipated from single exposure to mist. Based on the available data, respiratory irritation was not observed.

As product:
LC50, Rat, male and female, 4 Hour, dust/mist, > 5.79 mg/l

Skin corrosion/irritation

Essentially nonirritating to skin.

Serious eye damage/eye irritation

Essentially nonirritating to eyes.

Sensitization

Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

Specific Target Organ Systemic Toxicity (Single Exposure)

Evaluation of available data suggests that this material is not an STOT-SE toxicant.

Specific Target Organ Systemic Toxicity (Repeated Exposure)

Based on available data, repeated exposures are not anticipated to cause significant adverse effects.

Carcinogenicity

For similar active ingredient(s). Aminopyralid. Did not cause cancer in laboratory animals.

Teratogenicity

Did not cause birth defects or any other fetal effects in laboratory animals.

Reproductive toxicity

For similar active ingredient(s). Aminopyralid. In animal studies, did not interfere with reproduction.

Mutagenicity

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Aspiration Hazard

Based on physical properties, not likely to be an aspiration hazard.

12. ECOLOGICAL INFORMATION

Ecotoxicological information appears in this section when such data is available.

Toxicity

Acute toxicity to fish

LC50, *Oncorhynchus mykiss* (rainbow trout), static test, 96 Hour, 360 mg/l, OECD Test Guideline 203 or Equivalent

LC50, *Cyprinodon variegatus* (sheepshead minnow), static test, 96 Hour, > 100 mg/l

Acute toxicity to aquatic invertebrates

EC50, *Daphnia magna* (Water flea), static test, 48 Hour, > 460 mg/l

LC50, saltwater mysid *Mysidopsis bahia*, static test, 96 Hour, > 104 mg/l

Acute toxicity to algae/aquatic plants

For similar material(s):

Material is very highly toxic to aquatic organisms on an acute basis (LC50/EC50 <0.1 mg/L in the most sensitive species).

For similar material(s):

ErC50, *Myriophyllum spicatum*, 14 d, 0.363 mg/l

For similar material(s):

NOEC, *Myriophyllum spicatum*, 14 d, 0.0639 mg/l

For similar material(s):

ErC50, *Pseudokirchneriella subcapitata* (green algae), 72 Hour, > 1,000 mg/l

Toxicity to Above Ground Organisms

Material is practically non-toxic to birds on an acute basis (LD50 > 2000 mg/kg).

Material is practically non-toxic to birds on a dietary basis (LC50 > 5000 ppm).

dietary LC50, *Colinus virginianus* (Bobwhite quail), > 21422mg/kg diet.

oral LD50, *Colinus virginianus* (Bobwhite quail), > 10,000 ppm

oral LD50, *Apis mellifera* (bees), > 460micrograms/bee

contact LD50, *Apis mellifera* (bees), > 460micrograms/bee

Toxicity to soil-dwelling organisms

LC50, *Eisenia fetida* (earthworms), 14 d, survival, > 10,000 mg/kg

Persistence and degradability

Aminopyralid Triisopropanolamine Salt

Biodegradability: For similar material(s): Aminopyralid. Material is not readily biodegradable according to OECD/EEC guidelines.

Triisopropanolamine

Biodegradability: Biodegradation under aerobic static laboratory conditions is high (BOD20 or BOD28/ThOD > 40%). Biodegradation rate may increase in soil and/or water with acclimation. Material is not readily biodegradable according to OECD/EEC guidelines.

10-day Window: Fail

Biodegradation: 0 %

Exposure time: 28 d

Method: OECD Test Guideline 301F or Equivalent

Theoretical Oxygen Demand: 2.35 mg/mg

Photodegradation

Test Type: Half-life (indirect photolysis)

Sensitization: OH radicals

Atmospheric half-life: 3 Hour

Method: Estimated.

Balance

Biodegradability: No relevant data found.

Bioaccumulative potential

Aminopyralid Triisopropanolamine Salt

Bioaccumulation: For similar active ingredient(s). Aminopyralid. Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Triisopropanolamine

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).

Partition coefficient: n-octanol/water(log Pow): -0.015 at 23 °C Measured

Bioconcentration factor (BCF): < 0.57 Fish 42 d Measured

Balance

Bioaccumulation: No relevant data found.

Mobility in soil

Aminopyralid Triisopropanolamine Salt

For similar active ingredient(s).

Aminopyralid.

Potential for mobility in soil is very high (Koc between 0 and 50).

Triisopropanolamine

Potential for mobility in soil is very high (Koc between 0 and 50).

Partition coefficient (Koc): 10 Estimated.

Balance

No relevant data found.

13. DISPOSAL CONSIDERATIONS

Disposal methods: If wastes and/or containers cannot be disposed of according to the product label directions, disposal of this material must be in accordance with your local or area regulatory authorities. This information presented below only applies to the material as supplied. The identification based on characteristic(s) or listing may not apply if the material has been used or otherwise contaminated. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste identification and disposal methods in compliance with applicable regulations. If the material as supplied becomes a waste, follow all applicable regional, national and local laws.

14. TRANSPORT INFORMATION

DOT

Not regulated for transport

Classification for SEA transport (IMO-IMDG):

Proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.(Aminopyralid Triisopropanolamine Salt)
UN number	UN 3082
Class	9
Packing group	III
Marine pollutant	Aminopyralid Triisopropanolamine Salt
Transport in bulk according to Annex I or II of MARPOL 73/78 and the IBC or IGC Code	Consult IMO regulations before transporting ocean bulk

Classification for AIR transport (IATA/ICAO):

Proper shipping name	Environmentally hazardous substance, liquid, n.o.s.(Aminopyralid Triisopropanolamine Salt)
UN number	UN 3082
Class	9
Packing group	III

This information is not intended to convey all specific regulatory or operational requirements/information relating to this product. Transportation classifications may vary by container volume and may be influenced by regional or country variations in regulations. Additional transportation system information can be obtained through an authorized sales or customer service representative. It is the responsibility of the transporting organization to follow all applicable laws, regulations and rules relating to the transportation of the material.

15. REGULATORY INFORMATION

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Sections 311 and 312

No SARA Hazards

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right-to-Know Act of 1986) Section 313

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

Pennsylvania Right To Know

The following chemicals are listed because of the additional requirements of Pennsylvania law:

Components**CASRN**

Triisopropanolamine

122-20-3

California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

United States TSCA Inventory (TSCA)

This product contains chemical substance(s) exempt from U.S. EPA TSCA Inventory requirements. It is regulated as a pesticide subject to Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) requirements.

Federal Insecticide, Fungicide and Rodenticide Act

EPA Registration Number: 62719-519

This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

CAUTION

Causes moderate eye irritation

16. OTHER INFORMATION**Hazard Rating System****NFPA**

Health	Flammability	Instability
1	1	0

Revision

Identification Number: 266154 / A211 / Issue Date: 08/29/2019 / Version: 9.1

DAS Code: GF-871

Most recent revision(s) are noted by the bold, double bars in left-hand margin throughout this document.

Legend

Dow IHG	Dow Industrial Hygiene Guideline
TWA	Time weighted average

Full text of other abbreviations

AICS - Australian Inventory of Chemical Substances; ASTM - American Society for the Testing of Materials; bw - Body weight; CERCLA - Comprehensive Environmental Response, Compensation, and Liability Act; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DOT - Department of Transportation; DSL - Domestic Substances List (Canada); ECx - Concentration associated with x% response; EHS - Extremely Hazardous Substance; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; ERG - Emergency Response Guide; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; HMIS - Hazardous Materials Identification System; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International

Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; MSHA - Mine Safety and Health Administration; n.o.s. - Not Otherwise Specified; NFPA - National Fire Protection Association; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NTP - National Toxicology Program; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; RCRA - Resource Conservation and Recovery Act; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RQ - Reportable Quantity; SADT - Self-Accelerating Decomposition Temperature; SARA - Superfund Amendments and Reauthorization Act; SDS - Safety Data Sheet; TCSI - Taiwan Chemical Substance Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Information Source and References

This SDS is prepared by Product Regulatory Services and Hazard Communications Groups from information supplied by internal references within our company.

DOW AGROSCIENCES LLC urges each customer or recipient of this (M)SDS to study it carefully and consult appropriate expertise, as necessary or appropriate, to become aware of and understand the data contained in this (M)SDS and any hazards associated with the product. The information herein is provided in good faith and believed to be accurate as of the effective date shown above. However, no warranty, express or implied, is given. Regulatory requirements are subject to change and may differ between various locations. It is the buyer's/user's responsibility to ensure that his activities comply with all federal, state, provincial or local laws. The information presented here pertains only to the product as shipped. Since conditions for use of the product are not under the control of the manufacturer, it is the buyer's/user's duty to determine the conditions necessary for the safe use of this product. Due to the proliferation of sources for information such as manufacturer-specific (M)SDSs, we are not and cannot be responsible for (M)SDSs obtained from any source other than ourselves. If you have obtained an (M)SDS from another source or if you are not sure that the (M)SDS you have is current, please contact us for the most current version.

US