# Tower

## Herbicide

For use as a preemergence weed control herbicide in commercial ornamental production, landscape and grounds maintenance, tree plantations, and turfgrass areas

**Active Ingredient\*:** 

dimethenamid-P: (S)-2-chloro-N-(2,4-dimethyl-3-thienyl)-N-(2-methoxy-1-methylethyl)-acetamide	63.9%
Other Ingredients**:	36.1%
Total:	100.0%

EPA Reg. No. 7969-239

**EPA Est. No.** 

## WARNING/AVISO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand the label, find someone to explain it to you in detail.)

See inside for complete First Aid, Precautionary Statements, Directions For Use, Conditions of Sale and Warranty, and state-specific crop and/or use site restrictions.

In case of an emergency endangering life or property involving this product, call day or night 1-800-832-HELP (4357).

#### **Net Contents:**



<sup>\*</sup>Contains 6.0 pounds of active ingredient per gallon

<sup>\*\*</sup> Contains petroleum distillates

FIRST AID		
If in eyes	<ul> <li>Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes; then continue rinsing.</li> <li>Call a poison control center for treatment advice.</li> </ul>	
If swallowed	<ul> <li>Call a poison control center or doctor immediately for treatment advice.</li> <li>DO NOT induce vomiting unless told to do so by a poison control center or doctor.</li> <li>DO NOT give any liquid to the person.</li> <li>DO NOT give anything by mouth to an unconscious person.</li> </ul>	
If on skin	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>	
If inhaled	<ul> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance; then give artificial respiration, preferably by mouth to mouth, if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>	
	HOTLINE NUMBER	

Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact BASF Agricultural Solutions US LLC (hereafter "BASF") for emergency medical treatment information: 1-800-832-HELP (4357).

**NOTE TO PHYSICIAN:** Contains petroleum distillates. Vomiting may cause aspiration pneumonia.

#### **Precautionary Statements**

#### **Hazards to Humans and Domestic Animals**

**WARNING.** Causes substantial but temporary eye injury. Harmful if inhaled, swallowed, or absorbed through the skin. DO NOT get in eyes or on clothing. Avoid contact with skin. Avoid breathing spray mist. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

#### Personal Protective Equipment (PPE)

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. DO NOT reuse them. Follow the manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

#### **Engineering Controls**

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**IMPORTANT:** When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for applicators and other handlers and have such PPE immediately for use in an emergency, such as a spill or equipment breakdown.

#### **USER SAFETY RECOMMENDATIONS**

#### **Users should:**

- 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 clothina.

#### **Environmental Hazards**

**DO NOT** apply directly to water, areas where surface water is present, or intertidal areas below the mean high water mark. **DO NOT** contaminate water when disposing of equipment washwater or rinsate.

Dimethenamid-P has properties that may result in groundwater contamination. Application in areas where soils are permeable or coarse and groundwater is near the surface could result in groundwater contamination.

Dimethenamid-P has properties that may result in surfacewater contamination via dissolved runoff and runoff erosion. Practices should be followed to minimize the potential for dissolved runoff and/or runoff erosion.

**Point-source contamination.** To prevent point-source contamination, **DO NOT** mix or load this or any other pesticide product within 50 feet of wells (including abandoned wells and drainage wells), sinkholes, perennial or intermittent streams and rivers, and natural or impounded lakes and reservoirs. This setback does not apply to properly capped or plugged abandoned wells and does not apply to impervious pad or dike mixing/loading areas as described below.

Mixing, loading, rinsing, or washing operations performed within 50 feet of a well are allowed only when conducted on an impervious pad constructed to withstand the weight of the heaviest load that may be on or move across the pad. The pad must be self-contained to prevent surface water flow over or from the pad. The pad capacity must be maintained at 110% that of the largest pesticide container or application equipment used on the pad and have sufficient capacity to contain all product spills, equipment or container leaks, equipment washwater, and rainwater that may fall on the pad. The containment capacity does not apply to vehicles delivering pesticide shipments to the mixing/loading site. States may have in effect additional requirements regarding wellhead setbacks and operational containment. Care must be taken when using this product to prevent back-siphoning into wells, spills, or improper disposal of excess pesticide, spray mixes, or rinsates.

Check valves or antisiphoning devices must be used on all mixing equipment.

Movement Dissolved in Runoff or Through Soil DO NOT apply under conditions which favor runoff. DO NOT apply to impervious substrates such as paved or highly compacted surfaces or frozen soils. Groundwater contamination may occur in areas where soils are permeable or coarse and groundwater is near the surface. To minimize the possibility of groundwater contamination, carefully follow application rates as affected by soil type in the Use Information section of this label.

**DO NOT** apply if all three criteria exist:

- 1. Coarse soils classified as sand (does not include loamy sand or sandy loam)
- 2. Less than 3% organic matter (as determined by soil tests, if not known)
- 3. Where depth to groundwater is 30 feet or less

#### **Endangered Species Protection**

This product may have effects on federally listed threatened or endangered plant species or their critical habitat. When using this product, you must follow the measures contained in the Endangered Species Protection Bulletin for the county or parish in which you are applying the pesticide. To determine whether your county or parish has a Bulletin, and to obtain that Bulletin, consult http://www.epa.gov/espp/, or call 1-844-447-3813 no more than 6 months before using this product. Applicators must use Bulletins that are in effect in the month in which the pesticide will be applied. New Bulletins will generally be available from the above sources 6 months prior to their effective dates.

To avoid adverse effects on endangered plant species, applicators in ornamentals production must comply with the following mitigation measures where and when endangered plant species are known to occur in proximity to the application site:

#### **Ground Application**

Use low-pressure nozzles according to the manufacturer's specifications that produce only medium-to-coarse or very coarse droplets **AND** leave a 35-foot untreated buffer between treatment area and known endangered plant populations.

#### **Directions For Use**

It is a violation of federal law to use this product in a manner inconsistent with its labeling. This labeling must be in the possession of the user at time of herbicide application. Use of **Tower® herbicide** not consistent with this label can result in injury to plants, animals, or persons.

**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.

BASF does not recommend or authorize the use of this product in manufacturing, processing, or preparing custom blends with other products for application to ornamentals and turfgrass.

**DO NOT** contaminate irrigation ditches or water used for domestic purposes.

**Tower** is not for sale, distribution, or use in Nassau and Suffolk counties in New York State.

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN POOR WEED CONTROL OR PLANT INJURY.

#### 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 **12 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
- Waterproof gloves
- Shoes plus socks
- Protective eyewear

#### NONAGRICULTURAL 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 applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

**DO NOT** enter treated areas without protective clothing until sprays have dried. Only protected applicator shall be in the treatment area during application.

#### STORAGE AND DISPOSAL

**DO NOT** contaminate water, food, or feed by storage or disposal. Open dumping is prohibited.

#### **Pesticide Storage**

**DO NOT** use or store near heat or open flame. Store in original container in a well-ventilated area separately from fertilizer, feed, or foodstuffs and away from other pesticides. Avoid cross-contamination with other pesticides. Ground water contamination may be reduced by diking and flooring of permanent liquid bulk storage sites with an impermeable material.

(continued)

#### STORAGE AND DISPOSAL (continued)

#### **Pesticide Disposal**

Wastes resulting from this product must be disposed of on-site or at a waste disposal facility. Improper disposal of excess pesticide, spray mix, or rinsate is a violation of federal law. If these wastes cannot be disposed of according to label instructions, contact the state agency responsible for pesticide regulation or the Hazardous Waste representative at the nearest EPA Regional Office for guidance. Keep containers closed to avoid spills and contamination.

#### **Container Handling**

Nonrefillable Container. DO NOT reuse or refill this container. Triple rinse or pressure rinse container (or equivalent) promptly after emptying; then offer for recycling, if available, or reconditioning, if appropriate, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Triple rinse containers small enough to shake (capacity ≤ 5 gallons) 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.

Triple rinse containers too large to shake (capacity > 5 gallons) 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 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 rin sate 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.

#### In Case of Emergency

In case of large-scale spill of this product, call:

• CHEMTREC 1-800-424-9300

• BASF 1-800-832-HELP (4357)

In case of medical emergency regarding this product, call:

- Your local doctor for immediate treatment
- Your local poison control center (hospital)
- BASF 1-800-832-HELP (4357)

#### Steps to take if material is released or spilled:

- Dike and contain the spill with inert material (sand, earth, etc.) and transfer liquid and solid diking material to separate containers for disposal.
- Remove contaminated clothing and wash affected skin areas with soap and water.
- Wash clothing before reuse.
- Keep the spill out of all sewers and open bodies of water.

#### **Use Information**

#### **Mode of Action**

Dimethenamid-P, the active ingredient in **Tower® herbicide**, inhibits shoot growth of germinating seedlings, controlling them before or soon after soil emergence. Dimethenamid-P belongs to the chloroacetamide class of chemistry, designated into the mode of action **Group 15** (mitosis inhibitors).

#### **Use Sites**

**Tower** is a selective preemergence herbicide for the control of certain annual grasses, annual broadleaf weeds, and sedges as they germinate in:

#### • Commercial ornamental production

- container nursery production
- field production
- Residential, commercial or institutional landscape and grounds maintenance
- Tree plantings
  - Christmas tree plantations
  - conifer and hardwood tree seedling nurseries

#### Turfgrass areas

- golf courses
- sod farms
- commercial and/or industrial grounds
- parks and recreation areas
- athletic and sports fields
- lawns and residential settings
- schoolyards and playgrounds

**Tower** may be applied as a soft-residual bareground treatment in the use sites described above.

## Tower will not control emerged and/or established weeds.

#### **Application Information**

#### **Application Mixing Instructions**

#### **Compatibility Test for Mix Components**

Before tank mixing, always perform a simple jar test to ensure compatibility of herbicides.

- For 20 gallons per acre spray volume, use 3.3 cups (800 mL) of water. For other spray volumes, adjust rates accordingly. Only use water from the intended source at the source temperature.
- Add components in the sequence indicated in the Mixing Order for Ground-driven and Backpack Sprayers section using 2 teaspoons for each pound or 1 teaspoon for each pint of label rate per acre.
- 3. Always cap the jar and invert 10 cycles between component additions.
- 4. When the components have all been added to the jar, let the solution stand for 15 minutes.
- 5. Evaluate the solution for uniformity and stability. The spray solution should not have free oil on the surface, nor fine particles that precipitate to the bottom, nor thick (clabbered) texture. If the spray solution is not compatible, repeat the compatibility test with the addition of a suitable compatibility agent. If the solution is then compatible, use the compatibility agent as directed on its label. If the solution is still incompatible, **DO NOT** mix the ingredients in the same tank.

## Mixing Order for Ground-driven and Backpack Sprayers

Maintain continuous and constant agitation throughout mixing and application until spraying is completed.

- 1. **Water** Fill a thoroughly clean sprayer tank 1/2 to 3/4 with clean water and start agitation.
- 2. **Inductor** If an inductor is used, rinse it thoroughly after each component has been added.
- Products in PVA bags Place any product contained in water-soluble PVA bags into the mixing tank. Wait until all water-soluble PVA bags have fully dissolved and the product is evenly mixed in the spray tank before continuing.
- 4. **Water-soluble additives** (such as water-soluble fertilizers when applicable)
- 5. **Water-dispersible products** (dry flowables, wettable powders, suspension concentrates, or suspo-emulsions)
- 6. Water-soluble products (such as Pendulum® AquaCap™ herbicide)
- 7. **Emulsifiable concentrates** (such as **Tower** or oil concentrate when applicable)
- 8. Remaining quantity of water

If the spray mixture is allowed to settle for any period of time, thorough agitation is essential to resuspend the mixture before spraying is resumed. Continue agitation while spraying.

#### **Tank Mixing Information**

**Tower® herbicide** may be tank mixed with one or more registered herbicide products according to the specific tank mixing instructions in this label and respective product labels, provided that the product labels do not prohibit such mixing. The most restrictive labeling applies to tank mixes. Physical incompatibility, reduced weed control, or plant injury may result from mixing **Tower** with other pesticides (fungicides, herbicides, insecticides, or miticides), additives, or fertilizers. Subsequent applications of postemergence herbicides may cause plant injury. Consult your local BASF dealer regarding local tank mix options. Refer to **Plant Safety Restrictions and Limitations** section for more information.

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.

#### **Additives**

Spray adjuvants are not required when applications of **Tower** are made before weed emergence. However, tank mixtures with **Tower** and other postemergence herbicides could require the use of adjuvants to increase efficacy. In this case, surfactants or crop oil concentrates may be used with **Tower** tank mixes. Follow the adjuvant specifications on the tank-mix partner label.

#### MANAGING OFF-TARGET MOVEMENT

#### Spray Drift

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-related and weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making decisions. Where states have more stringent regulations, they must be observed.

To minimize spray drift, the applicator should be familiar with and take into account the following drift reduction advisory information. Additional information may be available from state enforcement agencies or the Cooperative Extension Service on the application of this product.

#### Information on Droplet Size

The best drift management strategy and most effective way to reduce drift potential is to apply large 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 Inversion**).

#### 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 recommended 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 provide uniform coverage.
- Nozzle Orientation Orienting nozzles so the spray is released parallel to the airstream produces larger droplets than other orientations and is recommended practice. Significant deflection from the horizontal will reduce droplet size and increase drift potential.
- Nozzle Type Use a nozzle type designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. DO NOT use nozzles producing a mist droplet spray.

#### **Application Height**

Making applications at the lowest possible height (grounddriven spray boom) that is safe and practical 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 upwind and downwind edges of the application area, the applicator must compensate for this displacement by adjusting the path of the application equipment (e.g. ground) upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller droplets, etc.).

#### Wind

Drift potential is lowest between wind speeds of 3 to 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application should be avoided below 3 mph because of variable wind direction and high inversion potential.

**NOTE:** Local terrain 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 Inversion**

Applications should not occur during temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud that can move in unpredictable directions because of 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 smoke from a ground source. 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.

#### **Sensitive Areas**

Spray drift from applying this product may result in damage to sensitive plants adjacent to the treatment area. Only apply this product when the potential for drift to these and other adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, or nontarget areas) is minimal. **DO NOT** apply when the following conditions exist that increase the likelihood of spray drift from intended targets: high or gusty winds, high temperatures, low humidity, temperature inversions.

#### Wind Erosion

Avoid treating powdery, dry or light sandy soils when conditions are favorable for wind erosion. Under these conditions, the soil surface should first be settled by rainfall or irrigation. The actual minimum spray volume per acre is determined by the spray equipment used. Use adequate spray volume to provide accurate and uniform distribution of spray particles over the treated area and to avoid spray drift.

### **Application Equipment, Methods, and Rates**

**Tower® herbicide** provides effective weed control when applied by ground equipment and subsequently incorporated into soil by rainfall, sprinkler irrigation, or by mechanical methods before weed seedling emergence from soil.

#### **Spraying Instructions**

Ensure uniform application by using spray equipment properly calibrated to deliver spray pressure of 25 to 50 PSI. Suggested spray volumes are 20 to 200 gallons per acre for landscape and ornamental applications and 10 to 200 gallons per acre for turfgrass and other noncrop applications. Avoid overlaps that will increase rates above those specified. Avoid unintentional contact of spray solution with sidewalks, driveways, stone, wood, or other porous surfaces.

#### **Cleaning Spray Equipment**

Clean application equipment thoroughly by using a strong detergent or commercial sprayer cleaner according to the manufacturer's directions; then triple rinsing the equipment before and after applying this product.

## Application with Backpack or Handheld Spray Equipment

Refer to **Table 1** to determine the rate of **Tower** to treat 1000 square feet. The amount of water used for the application should be sufficient for thorough coverage without runoff. Calibration of backpack sprayers or other handheld spray equipment will vary with each operator. Determine the amount of water needed to treat 1000 square feet before mixing the spray solution. Follow information in **Application Mixing Instructions** section of this label.

#### **Application Rates**

For preemergence control of weeds in **Table 14**, apply **Tower** at use rates in **Table 1**.

**Table 1. Application Rates** 

Rate	Tower (fl ozs/acre)	<b>Tower</b> (fl ozs/1000 sq ft)
Low*	21	0.48 (14 mL)
High	32	0.73 (21 mL)

<sup>\*</sup>Where heavy weed infestations are expected, apply up to 32 fluid ounces of **Tower** per acre.

**Tower** may be applied in a single application or in sequential applications not to exceed 64 fluid ounces per acre per year.

In a single application, **DO NOT** apply more than the equivalent of 32 fluid ounces of **Tower** per acre.

For extended weed control, sequential applications of **Tower** can be made 5 to 8 weeks apart in turfgrass, and 6 to 8 weeks apart in ornamentals. **DO NOT** apply more than 64 fluid ounces of **Tower** per acre per year. **Tower** may be applied in a sequential application program or tank mixed with other herbicides that control emerged weeds.

#### **Ground Application (dry bulk fertilizer)**

**Tower** may be impregnated or coated onto dry bulk granular fertilizer carriers to provide preemergence weed control as a surface application. Impregnation or coating may be conducted by the in-plant bulk system or the on-board system at the fertilizer manufacturer. When impregnated onto some dry fertilizer blends, **Tower** may have a strong odor. Apply **Tower** within 30 days after impregnation on dry bulk fertilizer.

**DO NOT** impregnate **Tower** alone or with mixes on ammonium nitrate, potassium nitrate, or sodium nitrate fertilizers or fertilizer blends. **Tower** can only be impregnated in single super phosphate (0-20-0) and triple super phosphate (0-46-0).

Apply 200 to 750 pounds of the fertilizer and herbicide blend per acre. Application must be made uniformly to the soil to prevent injury to desirable plants and provide acceptable weed control. Apply impregnated fertilizer at 1/2 rate and overlap to ensure uniform distribution and a full rate application. Formula to determine the herbicide rate when using dry bulk fertilizer application:

fluid ounces or pounds fluid ounces of herbicide per acre or pounds of 2000 herbicide per pounds of fertilizer ton of fertilizer per acre

#### Application Restrictions

- **DO NOT** apply more than 1.5 lbs active ingredient dimethenamid-P (32 fluid ounces of Tower® herbicide or 0.73 fluid ounces per 1000 sq ft of **Tower**) per acre per application.
- Maximum annual use rate DO NOT apply more than a total of 3.0 pounds of active ingredient dimethenamid-P (64 fluid ounces per acre or 1.46 fluid ounces per 1000 sq ft of **Tower**) per year.
- To avoid the possibility of plant damage, DO NOT apply **Tower** to turfgrass or ornamental plants growing under stress such as from disease, cold weather, excessive moisture, high soil pH, high soil salt concentration, or drought.
- DO NOT apply Tower to actively growing turfgrass and/or ornamental plants when soil temperature is less than 55° F or as plants are coming out of dormancy.
- DO NOT apply to plants showing symptoms of stress or injury, such as stunting, wilting, leaf burn or drop, or abnormal growth.
- **DO NOT** apply through any type of irrigation system.
- DO NOT apply by air.
- **DO NOT** harvest fruit, nuts, or berries for one year after Tower application.
- DO NOT apply this product over more than 30 acres per day using handheld equipment.
- **DO NOT** tank mix **Tower** with other insecticides, fungicides, herbicides, plant growth regulators, additives, or adjuvants that have not been evaluated for plant tolerance under local conditions. See Plant Tolerance and **Phytotoxicity Notice** for more information.

#### Specific Use Site Information

#### **Commercial Ornamental Production**

Tower can be used in and around field, liner, and container nurseries of commercial ornamental production. Tower sprays are safe around and over the top of established ornamental plants listed in Table 5.

Applications can be made to ornamental plants listed on this label including:

- bedding plants
- · ornamentals grown for cut flowers
- flower bulbs
- ground covers
- herbaceous perennials
- shrubs
- trees
- woody plants

Applications can also be made to:

- seedling juvenile fruit and nut trees:
- tree plantings, including: Christmas tree plantations, conifer and hardwood tree seedling nurseries;
- liner beds within a nursery;
- nonproduction areas in commercial nurseries including storage areas, vegetation filter strips, windbreaks, shelterbelts, cart paths, and graveled areas.

**Tower** may be applied to juvenile fruit and nut trees, vines, brambles, and bushberries grown in commercial ornamental production nurseries. Juvenile trees, vines, brambles, and bushberries are grown in ornamental production nurseries where immature and/or inedible fruits or nuts or berries may appear on the tree, vine, bramble, and bush but are not intended for harvest or consumption.

Areas to be treated with **Tower** should be free of established weeds at the time of treatment.

NOTE: Tower can only be used on established liner beds with well-rooted plants and/or rootstocks.

#### **Plant Tolerance and Phytotoxicity Notice**

Tower has been applied to a wide variety of common ornamental plants without observed plant injury. Refer to Table 5 for the list of plants shown to be tolerant to Tower. Not all species, varieties, and cultivars have been tested for tolerance to Tower, possible tank mix combinations with **Tower**, pesticide treatments before or after those with Tower, and combinations of Tower with surfactants or adjuvants. Local conditions can also influence plant tolerance and may not match those under which BASF has conducted testing. Because many cultivars within a plant species vary in tolerance to chemical applications and growing conditions, the grower must recognize these differences and test the product accordingly. At a minimum, always test a small group of representative plants for tolerance to **Tower** under local growing conditions and before large-scale use. Refer to Table 2 for the list of sensitive ornamental plants and to

**Table 4** for specific ornamental use-site application

8 instructions and restrictions.

Grower assumes responsibility for testing ornamental suitability under local growing conditions by treating a small number of plants at the specified rate. At a minimum, this should include evaluating treated plants for 1 to 2 months following treatment for possible injury or other effects. To the extent consistent with applicable law, by applying Tower® herbicide, the user assumes responsibility for any plant damage or other liability associated with factors beyond the manufacturer's control, such as weather, presence of other materials, and manner or use of application inconsistent with this labeling.

**Table 2. Sensitive Ornamentals Plants** 

**DO NOT** apply **Tower** to these ornamentals as unacceptable phytotoxicity may occur.

Common Name	Scientific Name
African iris	Agapanthus spp.
Begonia	Begonia spp.
Blue fescue	Festuca glauca
California fuchsia	Epilobium canum
Candytuft	Iberis sempervirens
Columbine	Aquilegia spp.
Feather reed grass	Calamagrostis acutiflora
Fountaingrass	Pennisetum spp.
Impatiens	Impatiens spp.
Miscanthus	Miscanthus spp.
Muhly grass	Muhlenbergia spp.
Purple coneflower	Echinacea purpurea
Ribbon grass	Phalaris spp.
Sedum and/or Stonecrop	Sedum spp.
Tufted hair grass	Deschampsia spp.

#### **Ornamental Tank Mixes**

To expand the weed control spectrum, **Tower** can be tank mixed with **Pendulum® AquaCap™ herbicide** or **Pendulum® 3.3 EC herbicide**, or other herbicides labeled for preemergence weed control in ornamentals. Refer to **Table 3. Special Instructions for Control of Weeds in Ornamentals** and the manufacturer's labels for specific instructions and follow the most restrictive.

**Table 3. Special Instructions for Control of Weeds in Ornamentals** 

<b>Target Weeds</b>	Initial Application		Sequenti	al* Application(s)
	Late Winter to Early Spring	<b>Spring</b> (soil temperature at 55° F or higher)	First Application	Second Application
Consult Table 14. Weeds Controlled	Pendulum® AquaCap™ herbicide, Pendulum® 3.3 EC herbicide, or Pendulum® 2G herbicide (or other preemergence herbicide, see product labels for use rates)	Tower® herbicide 21 to 32 fl ozs/A or Tower 21 to 32 fl ozs/A plus Pendulum AquaCap, Pendulum 3.3 EC, or Pendulum 2G (or other preemergence herbicide, see product labels for use rates)	<b>Tower</b> 21 to 32 fl ozs/A	_
	Pendulum AquaCap, Pendulum 3.3 EC, or Pendulum 2G (or other preemergence herbicide, see product labels for use rates)	Pendulum AquaCap, Pendulum 3.3 EC, or Pendulum 2G (or other preemergence herbicide, see product labels for use rates)	<b>Tower</b> 21 to 32 fl ozs/A	Tower 21 to 32 fl ozs/A or Tower 21 to 32 fl ozs/A plus Pendulum AquaCap, Pendulum 3.3 EC, or Pendulum 2G (or other preemergence herbicide, see product labels for use rates)

<sup>\*</sup>Sequential applications should be applied at a 5-week to 8-week interval following the previous application.

**Table 4. Specific Ornamental Use Site Instructions** 

Site	Application Instructions and Restrictions
	Direct spray away from grafted or budded tissue on transplants at all times.
Newly transplanted field-grown nursery stock	<ul> <li>Application Restrictions</li> <li>DO NOT apply over the top at time of field transplanting. Use shielded sprayer until plantings have been established for 1 year or more in the field.</li> <li>DO NOT apply until transplants have been watered and soil has been thoroughly packed and settled around transplants. Ensure there are no cracks in the soil where Tower® herbicide could come into contact with the roots.</li> <li>DO NOT use on bareroot liner production beds until liners are well-rooted.</li> <li>DO NOT apply during bud swell, bud break, or at time of first flush of new growth.</li> </ul>
	<ul> <li>Direct spray away from grafted or budded tissue on transplants at all times.</li> <li>For container-grown ornamentals, delay first application of the product to bareroot liners or young seedlings (e.g. plugs) for 2 weeks after transplanting.</li> </ul>
Newly transplanted container- grown nursery stock	<ul> <li>Application Restrictions</li> <li>DO NOT apply until transplants have been watered and soil has been thoroughly packed and settled around transplants. Ensure there are no cracks in the soil where Tower could come into contact with the roots.</li> <li>DO NOT apply to unrooted liners or to plugs. Liners must be well-rooted and soil settled in pot with previous irrigation events before use in container.</li> <li>DO NOT apply during bud swell, bud break, or at time of first flush of new growth.</li> </ul>
Established container or field- grown nursery stock or ornamentals grown for cut flowers	<ul> <li>Apply as a directed or over-the-top spray and follow application with irrigation.</li> <li>If newly budded or grafted rootstock, apply using a shielded sprayer.</li> <li>Ensure there are no cracks in the soil where Tower could come into contact with the roots.</li> <li>Application Restrictions</li> <li>DO NOT use on bareroot liner production beds until liners are well-rooted.</li> <li>DO NOT apply during bud swell, bud break, or at time of first flush of new growth.</li> </ul>
Field-grown or container-grown production bulbs or bulbs grown for cut flowers	<ul> <li>For use in ornamental bulbous-like plants: caladium, calla lily, daffodil (narcissus or jonquil), iris, and lily.</li> <li>In field production, apply <b>Tower</b> to the soil surface only after planting and the soil has been settled by several irrigations but before weed seed germination.</li> <li>In fall-planted daffodil, iris, or lily, make an initial application of <b>Tower</b> following planting establishment; then make a sequential application of <b>Tower</b> in late winter or early spring before weed seed germination.</li> <li>In container production, apply <b>Tower</b> to a weed-free surface before bulb emergence or after leaf emergence from an established plant crown.</li> <li>Not for use on bulbs grown in California</li> </ul>
Bareground for container placement Gravel or ground floors of opensided lathhouses (shadehouses) or other polyhouse structures that allow polycovers to be removed on a seasonal basis	<ul> <li>When used for weed control on bareground areas used for plant storage or outside of certain structures, apply Tower as described below:</li> <li>1. Apply to soil (including mulch, gravel, wood chips, or other permeable base).</li> <li>2. Water in.</li> <li>3. Place containerized ornamentals on pad.</li> </ul>
Greenhouses, polyhouses, or other enclosed structures	<b>DO NOT</b> apply in greenhouses, polyhouses, or other fully enclosed greenhouse-type structures.

**Table 4. Specific Ornamental Use Site Instructions** (continued)

Site	Application Instructions and Restrictions		
<b>SENSITIVE Ornament</b>	als		
Herbaceous perennials or annuals not listed on this label	If the ornamental plant is not listed on this label, the user assumes responsibility for testing under local conditions before any application. See <b>Table 2</b> for list of sensitive ornamental plants.		
Conifers	<b>DO NOT</b> apply <b>Tower® herbicide</b> during spring growth or injury to terminals may occur, in particular to <i>Pinus</i> and <i>Taxus</i> species.		
Bedding plants	Apply the <b>Low</b> rate of <b>Tower</b> 4 or more weeks after transplanting. Application less than 4 weeks after transplanting may result in phytotoxicity for the following annuals:		
	<ul> <li>Catmint</li> <li>Gomphrena</li> <li>Petunia</li> </ul>		
Shrubs or Trees	<b>DO NOT</b> apply <b>Tower</b> sequentially to the plants listed below. During the growing season, a second application of <b>Tower</b> can be made if a herbicide with a different mode of action is applied between <b>Tower</b> applications. <b>Tower</b> applications must be separated by at least 16 weeks.		
	<ul> <li>Azalea</li> <li>Boxelder</li> <li>Butterfly bush</li> <li>Chinese fringe flower</li> <li>Maple</li> <li>Oak</li> <li>Rhododendron</li> <li>Spirea</li> <li>Viburnum</li> <li>Rhododendron</li> </ul>		

**Table 5. Ornamental Plants** 

Common Name	Scientific Name	Plant also registered for Use in California?
	Trees	
Apple (juvenile)	Malus spp.	Yes
Arborvitae	Thuja spp.	
Ash	Fraxinus spp.	Yes
Birch	Betula spp.	Yes
Boxelder	Acer spp.	
Cedar	Thuja spp.	
Cedar, Japanese	Cryptomeria spp.	
Crabapple	Malus spp.	Yes
Crape myrtle	Lagerstroemia spp.	
Dogwood	Cornus spp.	
Elm	Ulmus spp.	
Fir	Abies spp.	
Fir, Fraser	Abies fraseri	
Fir, Douglas	Pseudotsuga menzeii	Yes
Hemlock	Tsuga spp.	Yes
Holly	llex spp.	
Honeylocust	Gleditsia spp.	
Lilac	Syringa spp.	
Maple, Japanese Maple, red Maple, sugar	Acer spp.	
Oak	Quercus spp.	Yes
Peach (juvenile)	Prunus spp.	Yes
Pine	Pinus spp.	Yes
Red cedar, Western	Thuja plicata	
Spruce	Picea spp.	Yes
Walnut, black (juvenile)	Juglans spp.	
		(continued)

**Table 5. Ornamental Plants** (continued)

Common Name	Scientific Name	Plant also registered for Use in California?
	Shrubs	
Abelia	Abelia spp.	Yes
Azalea	Rhododendron spp.	
Bamboo, heavenly	Nandina domestica	
Barberry, Japanese	Berberis spp.	
Bottlebrush	Callistemon spp.	
Boxwood, common	Buxus spp.	Yes
Boxwood, Japanese		Yes
Bridal wreath	<i>Spiraea</i> spp.	Yes
Butterfly bush	Buddleia spp.	
Camellia	Camellia spp.	Yes
Cardinal shrub	Weigela spp.	
Cinquefoil	Potentilla spp.	
Cotoneaster	Cotoneaster spp.	
Dogwood	Cornus spp.	
Euonymus, winged	Euonymus alatus	
Fetterbush	Leucothoe spp.	
Forsythia	Forsythia spp.	Yes
Fringe flower, Chinese	Loropetalum spp.	
Hawthorn, Indian	Raphiolepis spp.	Yes
Hibiscus	Hibiscus spp.	
Holly	llex spp.	
Holly, American	nor opp.	
Holly, Chinese		
Holly, Japanese		
Hydrangea	Hydrangea spp.	
Juniper, Chinese	<i>Juniperus</i> spp.	Yes
Juniper, shore		Yes
Juniper, trailing		Yes
Lantana	Lantana spp.	Yes
Laurustinus	Viburnum spp.	Yes
Lavender	Lavandula spp.	Yes
Leucothoe, drooping	Leucothoe spp.	
Lilac	Syringa spp.	
Nandina	Nandina domestica	
Olive, false	Osmanthus spp.	
Olive, fragrant		
Olive, sweet		
Olive, tea Osmanthus	Oomanthua ann	
	Osmanthus spp.	
Pieris, Japanese	Pieris japonica	Voo
Pine Pine, mugo	Pinus spp.	Yes Yes
Privet, California	 Ligustrum spp.	100
Privet, glossy	Ligusti ai ii app.	
Privet, variegated		
Privet, waxleaf		
Quince, flowering	Chaenomeles spp.	
Rhododendron	Rhododendron spp.	
Rose	Rosa spp.	Yes
	1.1	

 Table 5. Ornamental Plants (continued)

		Plant also registered for Use in California
	Shrubs (continue	ed)
Shrub verbena La	ntana spp.	Yes
Spirea Sp	oiraea spp.	Yes
Viburnum Vik	ournum spp.	Yes
Weigela We	eigela spp.	
Wild lilac Ce	eanothus spp.	
Wisteria Wi	isteria spp.	Yes
Yew Ta.	xus spp.	Yes
	Ground Cover	'S
Cinquefoil Pa	tentilla spp.	
•	elosperma spp.	
·	achelospermum spp.	
	phiopogon spp.	Yes
	etentilla spp.	
	Herbaceous Pere	nnials
Agapanthus Ag	apanthus spp.	
<u> </u>	aryopteris spp., Caryopteris x	clandonensis
	aladium x hortorum	
, ,	alla spp., Zantedeschia Sprer	ng 7 aethiopica
	lave spp.	91, 2. 461. 1100164
	ematis spp.	
	arcissus spp.	
	emerocallis spp.	Yes
	yopteris spp.	103
Fern, shaggy	уориль эрр.	
	osta spp.	Yes
	spp.	
	arcissus spp.	
	ntana spp.	Yes
	apanthus spp.	
·	ium spp.	
Lily, Asiatic	ат орр.	
Lily, Oriental		
Lily, plantain Ho	osta spp.	Yes
Lilyturf <i>Lir</i>	iope spp.	
Liriope, big blue		
Liriope, creeping		
Liriope, variegated		
, ,	endranthema x morifolium	
	arcissus spp.	
-	lvia spp., Salvia x sylvestris	\
	arex spp.	Yes
Shrub verbena La	ntana spp.	Yes
	Bedding Plan	ts
	gelonia spp.	
	epeta spp.	
	elosia spp.	
	elosia spp.	
Coleus Co	oleus spp., C. x hybridus, Sol	enostemon spp.

**Table 5. Ornamental Plants** (continued)

Common Name	Scientific Name	Plant also registered for Use in California?
	Bedding Plant	ts (continued)
Gomphrena	Gomphrena spp.	
Marigold, African	Tagetes spp.	
Petunia	Petunia spp.	
Salvia	Salvia spp.	
Sweet potato vine	lpomoea spp.	
Zinnia	Zinnia spp.	

#### **Landscape and Grounds Maintenance**

**Tower** herbicide can be used in landscape and grounds maintenance programs for extended preemergence weed control. **Tower** can be used in and around established ornamental plantings in nonagricultural areas defined as follows:

- Landscaped ornamental areas in and around residential and commercial establishments, multifamily dwellings, military and other institutions, university or college campuses, parks, airports, roadsides, schools, picnic grounds, athletic fields, houses of worship, cemeteries, golf courses, prairie grass areas, and common areas in residential developments.
- **Specified noncrop areas** including parking lots, driveways and roadsides, highway rights-of-way, alleyways, bike and jogging paths, vacant lots, buildings, stone gardens and gravel yards, around statuary or monuments, utility substations, markers/borders and fence lines, and mulch beds. **Tower** may be used under asphalt or concrete treatments as part of a site-preparation program.

Table 6. Specific Landscape and Ornamental Planting Use Site Instructions

Site	Application Instructions
Landscape ornamental planting*	<ul> <li>Apply as a directed or over-the-top spray.</li> <li>Use the <b>Low</b> labeled rate. Repeat applications for extended landscape weed control.</li> </ul>
	<ul> <li>Application Restrictions</li> <li>DO NOT apply to sensitive ornamental plants listed in Table 2.</li> <li>DO NOT apply to newly transplanted ornamentals until plants have been watered and soil has been thoroughly packed and settled around roots.</li> <li>DO NOT apply at bud break.</li> </ul>
*Before applying <b>Tower</b> , ref	er to the Plant Tolerance and Phytotoxicity Notice section.

Refer to **Table 1** for use rates, **Table 5** for list of tolerant ornamental plants, and **Table 14** for weeds controlled. If weed control necessitates a tank mix of herbicides, see **Tank Mixes** in **Tree Plantations** section for tank mix combinations that can be used when individual product labels allow for similar uses, sites, and precautions.

#### **Tree Plantations**

**Tower** can be used for preemergence weed control during site preparation, establishment, and/or maintenance of tree plantations, Christmas tree plantations, conifer and hardwood seedling nurseries, pulpwood farms, fiber farms and nurseries for fruit and nut tree seedlings and rootstock. **Tower** may also be used for hardwood and conifer regeneration on Conservation Reserve Program land or similar areas.

Table 7. Specific Tree Planting Use Site Instructions

Site	Application Instructions
Tree planting including Christmas tree	<ul> <li>IMPORTANT: Close slit so herbicide does not directly contact tree roots.</li> <li>Directed or over-the-top spray applications can be made except at the time of bud break.</li> </ul>
plantations, conifer and hardwood tree seedling nurseries, established trees*	<ul> <li>Application Restrictions</li> <li>DO NOT apply to newly transplanted seedlings until plants have been watered and soil has been thoroughly packed and settled around roots.</li> <li>DO NOT apply at bud break.</li> </ul>
*Before applying <b>Tower</b> , refer to	the Plant Tolerance and Phytotoxicity Notice section.

#### **Tank Mixes**

Use tank mix\* combinations of **Tower® herbicide** plus glyphosate, glufosinate, or other labeled herbicides for broad spectrum postemergence control of weeds. Determine rates for the tank mix partner from product labels before use. Use caution to prevent combination sprays from direct contact with desirable foliage, or injury may result. Refer to manufacturers' labels for specific use directions, precautions, and limitations before use, and always follow the most restrictive label. Refer to **Table 1** for use rates, **Table 5** for list of tolerant ornamental trees, and **Table 14** for weeds controlled.

\*Refer to **Tank Mixing Information** section for further instructions.

#### **Turfgrass - Golf Course**

**Tower** may be used as part of a preemergence weed management program in select turfgrass use sites:

Golf courses

Apply **Tower** as directed for preemergence control or suppression of weeds listed in **Table 14**.

#### **Application Instructions**

Apply **Tower** with ground equipment in a minimum spray volume of 10 gallons water per acre. **Tower** may also be applied through ground equipment containing spray injection systems in a minimum spray volume of 5 gallons water per acre.

**Tower** is a preemergence herbicide therefore all applications must be made before weed seed germination.

**NOTE:** Spring applications can be made when soil temperature is 55° F or higher. If application is made before soil temperature reaches 55° F, injury may occur.

**Tower** may be applied in a single application or sequential applications. **DO NOT** apply more than 64 fluid ounces (3 lbs ai) of **Tower** per acre per year.

For extended weed control, sequential applications of **Tower** can be made 5 to 8 weeks between applications. **Tower** may be applied in a sequential use program with other herbicides that control emerged weeds in turfgrass. Refer to **Table 10** for special instructions.

**Tower** must be watered into the soil with rainfall or irrigation equivalent to 1/4 inch to 1/2 inch of rainfall within 24 hours after application. If **Tower** is not activated by rainfall or irrigation, erratic weed control may result.

Weed control may be reduced when **Tower** is applied to turfgrass stands under conditions of heavy thatch.

Apply **Tower** to cool-season and warm-season turfgrass species as described in **Table 8**. Follow all instructions, restrictions, and limitations listed in **Table 9 (a, b)**. Apply **Tower** at use rates only as directed on listed turfgrass species. To the extent of applicable law, the user assumes all risk with application of **Tower** to any other turfgrass

species not listed as tolerant in **Table 8**. If **Tower** applications are intended for turfgrass species not listed in **Table 8**, treat a small area before making a large scale application. See the **Plant Tolerance and Phytotoxicity Notice** section for more information.

**Table 8. Tolerant Turfgrass Species to Applications of Tower** 

Species	Tower Use Rate/ Range (fl ozs/A)
Warm-season Turfgras	s
Bahiagrass <sup>†</sup>	21 to 32
Bermudagrass, common or seeded	21 to 32
Bermudagrass, hybrid	21 to 32
Buffalograss†	21 to 32
Centipedegrass <sup>†</sup>	21 to 32
Kikuyugrass <sup>†</sup>	21 to 32
St. Augustinegrass	21 to 32
Seashore paspalum <sup>†</sup>	21 to 32
Zoysiagrass <sup>†</sup>	21 to 32
Cool-season Turfgrass	S
Bentgrass	21
Bluegrass, Kentucky <sup>†</sup>	21
Fine fescue <sup>†</sup>	21
Perennial ryegrass	21
Tall fescue (established)	21
Tall fescue (transition zone, re-seeded)†	21
†Not labeled for use in California	

Table 9a. Specific Instructions and Restrictions for Golf Course Turfgrass Species

Turfgrass Use Site	Application Instructions
Cool-season turfgrass	<ul> <li>Apply Tower® herbicide to actively growing cool-season turfgrass when soil temperature is 55° F or higher.</li> <li>Tower application to cool-season turfgrass species may result in injury/yellowing and unacceptable thinning/stand reduction.</li> <li>Apply Tower only to dense, uniform and well-established stands of coolseason turfgrass mown at a height of 1/2-inch or taller.</li> <li>Avoid making applications of Tower to turfgrass stands under stress or injury may occur. Allow turfgrass to recover before making a Tower application.</li> <li>Avoid spring application of Tower on fall-seeded cool-season turfgrass or unacceptable thinning/stand reduction and yellowing of the cool-season species may occur.</li> </ul>
	<ul> <li>Application Restrictions</li> <li>DO NOT use Tower on desirable winter overseeded turfgrass species including, but not limited to, perennial ryegrass, creeping bentgrass or roughstalk bluegrass (<i>Poa trivialis</i>) as discoloration/yellowing and/or stand reduction can occur.</li> <li>DO NOT apply Tower to turfgrass where annual bluegrass (<i>Poa annua</i>) or roughstalk bluegrass is part of the stand. Tower will injure, thin and discolor both seedling and established annual and roughstalk bluegrasses.</li> <li>DO NOT apply Tower to turfgrass within 2 weeks following mechanical disturbance including core cultivation or verticutting.</li> </ul>
Warm-season turfgrass	<ul> <li>Apply Tower to actively growing warm-season turfgrass when soil temperature is 55° F or higher.</li> <li>Apply Tower only to dense, uniform and well-established stands of warm-season turfgrass.</li> <li>Avoid making applications of Tower to turfgrass stands under stress or injury may occur. Allow turfgrass to recover before making a Tower application.</li> </ul>
	<ul> <li>Application Restrictions</li> <li>DO NOT apply Tower to turfgrass within 2 weeks following mechanical disturbance including core cultivation or verticutting.</li> </ul>
Overseeded warm-season turfgrass	<ul> <li>Apply Tower to aid in removal of cool-season turfgrass used to overseed warm-season turfgrass. Apply only when soil temperature is above 55° F and warm-season turfgrass is actively growing.</li> <li>Delay overseeding with cool-season turfgrass species for at least six (6) weeks following the last Tower application.</li> <li>Application of a nitrogen-containing fertilizer at or soon after a Tower application will minimize delay in spring green-up.</li> </ul>
	<ul> <li>Application Restrictions</li> <li>DO NOT use Tower on desirable winter overseeded turfgrass species including, but not limited to, perennial ryegrass, creeping bentgrass or roughstalk bluegrass as discoloration/yellowing and/or stand reduction can occur.</li> </ul>
Sprigging warm-season turfgrass	<ul> <li>Delay <b>Tower</b> applications for at least one (1) month after sprigging or until sprigs are successfully rooted.</li> <li>Following a <b>Tower</b> application, delay sprigging turfgrass into treated area for one (1) month.</li> </ul>
Dormant warm-season turfgrass	Tower can be tank mixed with glyphosate or other postemergence herbicides for application to dormant, non-overseeded turfgrass stands.

Table 9b. Instructions and Restrictions for Golf Course Turfgrass Use Sites

Turfgrass Use Site	Application Instructions
Golf course	Tower® herbicide may be applied to established turfgrass on tees, fairways, roughs, and any other maintained or naturalized turfgrass areas on the golf course.
	<ul> <li>Application Restrictions</li> <li>DO NOT apply Tower to putting greens.</li> <li>DO NOT apply to turfgrass within 2 weeks after mechanical disturbance such as aerification or verticutting.</li> </ul>
Naturalized areas	<ul> <li>Tower may be used to control weeds in naturalized grass areas on species listed in Table 8. Some species may have a reduction or elimination of seedheads.</li> <li>Tower may be used to control weeds in naturalized wildflower and/or ornamental areas on plants listed in Table 5.</li> </ul>

#### **Turfgrass Tank Mixes**

**Tower** may be tank mixed with the following golf course turfgrass herbicides including, but not limited to:

- Basagran® T&O herbicide
- Drive® XLR8 herbicide
- Pendulum<sup>®</sup> AquaCap<sup>™</sup> herbicide
- Pendulum® 3.3 EC herbicide
- glyphosate

When tank mixing with **Pendulum AquaCap**:

- 1. Add **Pendulum AquaCap** to the partially filled spray tank, while agitating.
- 2. Add **Tower**.
- 3. Fill the remainder of the spray tank with water.

BASF recommends testing **Tower** tank mixes on a small portion of the target turfgrass to determine if damage is likely to occur. Consult your local BASF dealer regarding local tank mix options.

#### Table 10. Special Instructions for Control of Key Weeds in Golf Course Turfgrass

BASF recommends a sequential herbicide application program including **Tower** for control of the following key weeds in golf course turfgrass. Begin weed management programs before seasonal germination of weed seeds.

<b>Target Weeds</b>	Initial Ap	Sequential* A	Application(s)	
Goosegrass	Late Winter to Early Spring	<b>Spring</b> (soil temperature at 55° F or higher)	First Application	Second Application
	Pendulum AquaCap, Pendulum 3.3 EC, or Pendulum® 2G herbicide (or other preemergence herbicide, see product labels for use rates)	<b>Tower</b> 32 fl ozs/A	<b>Tower</b> 32 fl ozs/A	_
	Pendulum AquaCap, Pendulum 3.3 EC, or Pendulum 2G (or other preemergence herbicide, see product labels for use rates)	Pendulum AquaCap, Pendulum 3.3 EC, or Pendulum 2G plus Tower 21 fl ozs/A	<b>Tower</b> 21 fl ozs/A	<b>Tower</b> 21 fl ozs/A

Table 10. Special Instructions for Control of Key Weeds in Golf Course Turfgrass (continued)

Target Weeds	Initial Ap	Initial Application		Sequential* Application(s)	
Annual sedges <sup>†</sup> Kyllinga <sup>†</sup> Nutsedge	<b>Spring</b> (soil temperature at 55° F or higher)		First Application	Second Application	
		Tower® herbicide 32 fl ozs/A		_	
Nutscage		wer ozs/A	Tower 21 fl ozs/A	<b>Tower</b> 21 fl ozs/A	
Target Weeds	Initial Ap	plication	Sequential*	Application(s)	
	Late Winter to Early Spring	<b>Spring</b> (soil temperature at 55° F or higher)	First Application	Second Application	
Doveweed <sup>†</sup>	Pendulum® AquaCap™ herbicide, Pendulum® 3.3 EC herbicide, or Pendulum® 2G herbicide (or other preemergence herbicide, see product labels for use rates)	<b>Tower</b> 32 fl ozs/A	<b>Tower</b> 32 fl ozs/A	_	
	Pendulum AquaCap, Pendulum 3.3 EC, or Pendulum 2G (or other preemergence herbicide, see product labels for use rates)	Pendulum AquaCap, Pendulum 3.3 EC, or Pendulum 2G plus Tower 21 fl ozs/A	Tower 21 fl ozs/A plus postemergence herbicide**	Tower 21 fl ozs/A plus postemergence herbicide**	
	Pendulum AquaCap, Pendulum 3.3 EC, or Pendulum 2G (or other preemergence herbicide, see product labels for use rates)	Pendulum AquaCap, Pendulum 3.3 EC, or Pendulum 2G	Tower 21 fl ozs/A plus postemergence herbicide**	Tower 21 fl ozs/A plus postemergence herbicide** Repeat treatment again in 5 to 8 weeks to provide control until frost.	

Table 10. Special Instructions for Control of Key Weeds in Golf Course Turfgrass (continued)

Target Weeds	Initial Ap	Sequential* Application(s)		
	Late Winter to Early Spring	<b>Spring</b> (soil temperature at 55° F or higher)	First Application	Second Application
Spurge and other warm-season broadleaf species	Pendulum® AquaCap <sup>TM</sup> herbicide, Pendulum® 3.3 EC herbicide, or Pendulum® 2G herbicide (or other preemergence herbicide, see product labels for use rates)	<b>Tower<sup>®</sup> herbicide</b> 32 fl ozs/A	<b>Tower</b> 32 fl ozs/A	_
	Pendulum AquaCap, Pendulum 3.3 EC, or Pendulum 2G (or other preemergence herbicide, see product labels for use rates)	Pendulum AquaCap, Pendulum 3.3 EC, or Pendulum 2G plus Tower 21 fl ozs/A	<b>Tower</b> 21 fl ozs/A	<b>Tower</b> 21 fl ozs/A
Target Weeds	Initial Ap	plication	Sequential* Application(s)	
	Late Summer to Non-overseeded Warm-season Turfgrass  Pendulum AquaCap, Pendulum 3.3 EC, or Pendulum 2G plus  Tower 21 to 32 fl ozs/A		Winter App Dormant Be	
Annual bluegrass (Poa annua)			Tower 21 to 32 fl ozs/A plus glyphosate (see product's label for use rates)	

 $<sup>^{\</sup>star}$  Sequential applications should be applied at a 5-week to 8-week interval following the previous application.

<sup>\*\*</sup> For efficacy on emerged doveweed, sequential applications must be tank mixed with a postemergence herbicide product labeled for doveweed control.

<sup>&</sup>lt;sup>†</sup>Not labeled for control in California

## Turfgrass - All Sites Other Than Golf Courses

**Tower® herbicide** may be used as part of a preemergence weed management program in select turfgrass use sites including:

- Sod farms
- Grounds or lawns around industrial or commercial establishments (including military, institutions, campuses, parks, airports, roadsides, houses of worship, cemeteries)
- Recreation and park areas (including picnic grounds)
- Maintained athletic and sports fields
- Residential settings (maintained turfgrass in home lawns, common areas of multifamily dwellings or developments)
- Schoolyards and playgrounds
- Naturalized grass areas

Apply **Tower** as directed for preemergence control or suppression of weeds listed in **Table 14**.

#### **Application Instructions**

Apply **Tower** with ground equipment in a minimum spray volume of 10 gallons water per acre. **Tower** may also be applied through ground equipment containing spray injection systems in a minimum spray volume of 5 gallons water per acre.

**Tower** is a preemergence herbicide therefore all applications must be made before weed seed germination.

**NOTE:** Spring applications can be made when soil temperature is 55° F or higher. If application is made before soil temperature reaches 55° F, injury may occur.

**Tower** may be applied in a single application or sequential applications. **DO NOT** apply more than 64 fluid ounces (3 lbs ai) of **Tower** per acre per year.

For extended weed control, sequential applications of **Tower** can be made 5 to 8 weeks between applications. **Tower** may be applied in a sequential use program with other herbicides that control emerged weeds in turfgrass. Refer to **Table 13** for special instructions.

**Tower** must be watered into the soil with rainfall or irrigation equivalent to 1/4 inch to 1/2 inch of rainfall within 24 hours after application. If **Tower** is not activated by rainfall or irrigation, erratic weed control may result.

Weed control may be reduced when **Tower** is applied to turfgrass stands under conditions of heavy thatch.

Apply **Tower** to warm-season turfgrass species as described in **Table 11**. Follow all instructions, restrictions, and limitations listed in **Table 12** (a, b). Apply **Tower** at use rates only as directed on listed turfgrass species. To the extent of applicable law, the user assumes all risk with application of **Tower** to any other turfgrass species not listed as tolerant in **Table 11**. See the **Plant Tolerance** and **Phytotoxicity Notice** section for more information.

Table 11. Tolerant Turfgrass Species to Applications of Tower

Species	Tower Use Rate/ Range (fl ozs/A)
Warm-season Turfgras	s
Bermudagrass, common or seeded	21 to 32
Bermudagrass, hybrid	21 to 32
Centipedegrass <sup>†</sup>	21 to 32
Kikuyugrass <sup>†</sup>	21 to 32
St. Augustinegrass	21 to 32
Seashore paspalum <sup>†</sup>	21 to 32
Zoysiagrass <sup>†</sup>	21 to 32
† Not labeled for use in California	

Table 12a. Specific Instructions and Restrictions for Specific Turfgrass Species

Turfgrass Use Site	Application Instructions
Warm-season turfgrass	<ul> <li>Apply Tower® herbicide to actively growing warm-season turfgrass when soil temperature is 55° F or higher.</li> <li>Apply Tower only to dense, uniform and well-established stands of warm-season turfgrass.</li> <li>Avoid making applications of Tower to turfgrass stands under stress or injury may occur. Allow turfgrass to recover before making a Tower application.</li> </ul>
	<ul> <li>Application Restrictions</li> <li>DO NOT apply Tower to turfgrass within 2 weeks following mechanical disturbance including core cultivation or verticutting.</li> <li>DO NOT apply Tower to turfgrass where annual bluegrass (<i>Poa annua</i>) or roughstalk bluegrass is part of the stand. Tower will injure, thin and discolor both seedling and established annual and roughstalk bluegrasses.</li> </ul>
Overseeded warm-season turfgrass	<ul> <li>Apply Tower to aid in removal of cool-season turfgrass used to overseed warm-season turfgrass. Apply only when soil temperature is above 55° F and warm-season turfgrass is actively growing.</li> <li>Delay overseeding with cool-season turfgrass species for at least six (6) weeks following the last Tower application.</li> <li>Application of a nitrogen-containing fertilizer at or soon after a Tower application will minimize delay in spring green-up.</li> </ul>
	<ul> <li>Application Restrictions</li> <li>DO NOT use Tower on desirable winter overseeded turfgrass species including, but not limited to, perennial ryegrass, creeping bentgrass or roughstalk bluegrass as discoloration/yellowing and/or stand reduction can occur.</li> </ul>
Sprigging warm-season turfgrass	<ul> <li>Delay <b>Tower</b> applications for at least one (1) month after sprigging or until sprigs are successfully rooted.</li> <li>Following a <b>Tower</b> application, delay sprigging turfgrass into treated area for one (1) month.</li> </ul>
Dormant warm-season turfgrass	Tower can be tank mixed with glyphosate or other postemergence herbicides for application to dormant, non-overseeded turfgrass stands.

Table 12b. Instructions and Restrictions for Specific Turfgrass Use Sites

Turfgrass Use Site	Application Instructions
Sod establishment	<ul> <li>Application of Tower® herbicide to newly sodded areas must be delayed until the turfgrass root system is well established and the turfgrass has been mowed at least two (2) times.</li> </ul>
Re-seeding in turfgrass establishment	Delay re-seeding of treated turfgrass for at least six (6) weeks following the last <b>Tower</b> application.
Newly planted areas (new seedings)	DO NOT apply Tower to newly planted areas until the turfgrass has filled in and has been mowed at least four (4) times.
Naturalized areas	<ul> <li>Tower may be used to control weeds in naturalized grass areas on species listed in Table 8. Some species may have a reduction or elimination of seedheads.</li> <li>Tower may be used to control weeds in naturalized wildflower and/or ornamental areas on plants listed in Table 5.</li> </ul>
Industrial (unimproved) turfgrass	• <b>Tower</b> will control weeds that germinate in established grass in rights-of-way, roadsides, construction sites, parks, substations, lots, or similar areas. Industrial or unimproved turfgrass areas may contain weeds not present on the <b>Tower</b> label and may require tank mix partners to expand the spectrum of weed control.
Residential turfgrass	Application Restrictions     DO NOT apply Tower to turfgrass within 2 weeks after mechanical disturbance such as core cultivation and verticutting.

#### **Turfgrass Tank Mixes**

Tower® herbicide may be tank mixed with the following turfgrass herbicides including, but not limited to:

- Basagran® T&O herbicide
- Drive® XLR8 herbicide
- Pendulum<sup>®</sup> AquaCap<sup>™</sup> herbicide
- Pendulum® 3.3 EC herbicide
- glyphosate

When tank mixing with **Pendulum AquaCap**:

- 1. Add **Pendulum AquaCap** to the partially filled spray tank, while agitating.
- 2. Add **Tower**.
- 3. Fill the remainder of the spray tank with water.

BASF recommends testing **Tower** tank mixes on a small portion of the target turfgrass to determine if damage is likely to occur. Consult your local BASF dealer regarding local tank mix options.

#### Table 13. Special Instructions for Control of Key Weeds in Turfgrass

BASF recommends a sequential herbicide application program including **Tower** for control of the following key weeds in turfgrass. Begin weed management programs before seasonal germination of weed seeds.

Target Weeds	Initial Ap	plication	Sequential* Application(s)	
Goosegrass	Late Winter to Early Spring	<b>Spring</b> (soil temperature at 55° F or higher)	First Application	Second Application
	Pendulum AquaCap, Pendulum 3.3 EC, or Pendulum® 2G herbicide (or other preemergence herbicide, see product labels for use rates)	<b>Tower</b> 32 fl ozs/A	<b>Tower</b> 32 fl ozs/A	_
	Pendulum AquaCap, Pendulum 3.3 EC, or Pendulum 2G (or other preemergence herbicide, see product labels for use rates)	Pendulum AquaCap, Pendulum 3.3 EC, or Pendulum 2G plus Tower 21 fl ozs/A	<b>Tower</b> 21 fl ozs/A	<b>Tower</b> 21 fl ozs/A
Target Weeds	Initial Ap	plication	Sequential* Application(s)	
Annual sedges <sup>†</sup> Kyllinga <sup>†</sup> Nutsedge	<b>Spring</b> (soil temperature at 55° F or higher)		First Application	Second Application
	<b>Tower</b> 32 fl ozs/A		<b>Tower</b> 32 fl ozs/A	_
	<b>Tower</b> 21 fl ozs/A		<b>Tower</b> 21 fl ozs/A	<b>Tower</b> 21 fl ozs/A

 Table 13. Special Instructions for Control of Key Weeds in Turfgrass (continued)

Target Weeds	Initial Ap	Sequential*	Application(s)	
	Late Winter to Early Spring	<b>Spring</b> (soil temperature at 55° F or higher)	First Application	Second Application
Doveweed <sup>†</sup>	Pendulum® AquaCap™ herbicide, Pendulum® 3.3 EC herbicide, or Pendulum® 2G herbicide (or other preemergence herbicide, see product labels for use rates)	<b>Tower<sup>®</sup> herbicide</b> 32 fl ozs/A	<b>Tower</b> 32 fl ozs/A	_
	Pendulum AquaCap, Pendulum 3.3 EC, or Pendulum 2G (or other preemergence herbicide, see product labels for use rates)	Pendulum AquaCap, Pendulum 3.3 EC, or Pendulum 2G plus Tower 21 fl ozs/A	Tower 21 fl ozs/A plus postemergence herbicide**	Tower 21 fl ozs/A plus postemergence herbicide**
	Pendulum AquaCap, Pendulum 3.3 EC, or Pendulum 2G (or other preemergence herbicide, see product labels for use rates)	Pendulum AquaCap, Pendulum 3.3 EC, or Pendulum 2G	Tower 21 fl ozs/A plus postemergence herbicide**	Tower 21 fl ozs/A plus postemergence herbicide** Repeat treatment again in 5 to 8 weeks to provide control until frost.
Target Weeds	Initial Ap	plication	Sequential* Application(s)	
Spurge and other warm-season broadleaf species	Late Winter to Early Spring	<b>Spring</b> (soil temperature at 55° F or higher)	First Application	Second Application
	Pendulum AquaCap, Pendulum 3.3 EC, or Pendulum 2G (or other preemergence herbicide, see product labels for use rates)	<b>Tower</b> 32 fl ozs/A	<b>Tower</b> 32 fl ozs/A	_
	Pendulum AquaCap, Pendulum 3.3 EC, or Pendulum 2G (or other preemergence herbicide, see product labels for use rates)	Pendulum AquaCap, Pendulum 3.3 EC, or Pendulum 2G plus Tower 21 fl ozs/A	<b>Tower</b> 21 fl ozs/A	<b>Tower</b> 21 fl ozs/A

Table 13. Special Instructions for Control of Key Weeds in Turfgrass (continued)

<b>Target Weeds</b>	Initial Application	Sequential* Application(s)
Annual bluegrass (Poa annua)	Late Summer to Non-overseeded Warm-season Turfgrass	Winter Application to Dormant Bermudagrass
	Pendulum <sup>®</sup> AquaCap <sup>™</sup> herbicide, Pendulum <sup>®</sup> 3.3 EC herbicide, or Pendulum <sup>®</sup> 2G herbicide plus  Tower <sup>®</sup> herbicide 21 to 32 fl ozs/A	Tower 21 to 32 fl ozs/A plus glyphosate (see product's label for use rates)

<sup>\*</sup> Sequential applications should be applied at a 5-week to 8-week interval following the previous application.

**Table 14. Weeds Controlled** 

**Scientific Name Common Name Grass Weeds** Barnyardgrass Echinochloa crus-galli Bluegrass, annual Poa annua Bluegrass, roughstalk Poa trivialis Brome, California Bromus carinatus Brome, downy Bromus tectorum Crabgrass, large Digitaria sanguinalis Crabgrass, smooth Digitaria ischaemum Cupgrass, Southwestern Eriochloa gracilis Eriochloa villosa Cupgrass, woolly\* Fescue, rattail Vulpia myuros Foxtail, giant Setaria faberi Foxtail, green Setaria viridis Foxtail, yellow Setaria pumila spp. pumila Goosegrass Eleusine indica Johnsongrass, seedling\* Sorghum halepense Panicum miliaceum Millet, wild proso\* Panicum, fall Panicum dichotomiflorum Panicum, Texas\* Panicum texanum Red rice Oryza sativa Ryegrass, Italian Lolium multiflorum Sandbur, field\* Cenchrus incertus Shattercane\* Sorghum bicolor Signalgrass, broadleaf\* Brachiaria platyphylla Witchgrass Panicum capillare **Broadleaf Weeds** Amaranth, Palmer Amaranthus palmeri Amaranth, Powell Amaranthus powellii Beggarweed, Florida\* Desmodium tortuosum Bittercress<sup>†</sup> Cardamine spp. Carpetweed Mollugo verticillata Chamomile, mayweed Anthemis cotula Doveweed<sup>†</sup> Murdannia nudiflora

Table 14. Weeds Controlled (continued)

Common Name	Scientific Name		
Broadleaf W	leeds (continued)		
Eclipta*	Eclipta alba E. prostrata		
Galinsoga, hairy*†	Galinsoga ciliata		
Galinsoga, smallflower*†	Galinsoga parviflora		
Groundsel, common <sup>†</sup>	Senecio vulgaris		
Lambsquarters, common*	Chenopodium album		
Liverwort <sup>†</sup>	Marchantia polymorpha		
Nightshade, black	Solanum nigrum		
Nightshade, cutleaf	Solanum triflorum		
Nightshade, Eastern black	Solanum ptycanthum		
Nightshade, hairy	Solanum sarrachoides		
Pearlwort <sup>†</sup>	Sagina procumbens S. decumbens		
Pigweed, prostrate	Amaranthus blitoides		
Pigweed, redroot	Amaranthus retroflexus		
Pigweed, smooth	Amaranthus hybridus		
Pigweed, tumble	Amaranthus albus		
Purslane, common	Portulaca oleracea		
Pusley, Florida	Richardia scabra		
Ragweed, common*	Ambrosia artemisiifolia		
Shepherd's purse	Capsella bursa-pastoris		
Spurge, nodding	Euphorbia nutans		
Spurge, spotted	Euphorbia maculata		
Waterhemp, common	Amaranthus rudis		
Waterhemp, tall	Amaranthus tuberculatus		
Willowherb, Northern <sup>†</sup>	Epilobium ciliatum		
Sedges			
Flatsedge, rice	Cyperus iria		
Kyllinga <sup>†</sup>	Kyllinga spp.		
Nutsedge, yellow	Cyperus esculentus		
Sedge, annual <sup>†</sup>	Cyperus compressus		
Partial control or suppression only of the weed			

<sup>\*\*</sup> For efficacy on emerged doveweed, sequential applications must be tank mixed with a postemergence herbicide product labeled for doveweed

<sup>&</sup>lt;sup>†</sup> Not labeled for control in California

<sup>&</sup>lt;sup>†</sup> Not labeled for control in California

#### **Conditions of Sale and Warranty**

The **Directions For Use** of this product reflect the opinion of experts based on field use and tests. The directions are believed to be reliable and must be followed carefully. However, it is impossible to eliminate all risks inherently associated with the use of this product. Plant injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or use of the product in a manner inconsistent with its labeling, all of which are beyond the control of BASF Agricultural Solutions US LLC ("BASF") or the Seller. To the extent consistent with applicable law, all such risks shall be assumed by the Buyer.

BASF warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the **Directions For Use**, subject to the inherent risks, referred to above.

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