

Navitrol[®] DPF

AQUATIC HERBICIDE

GENERAL INFORMATION

When applying this product follow all applicable use directions, precautions and limitations.

For Aquatic and Wetland Sites: Use this product for control of emerged, submersed and floating aquatic weeds in the following aquatic sites: ponds; lakes; reservoirs; marshes; wetlands; impounded rivers, streams and other bodies of water that are quiescent; non-irrigation canals, seasonal irrigation waters and ditches which have little or no continuous outflow.

AQUATIC WEEDS CONTROLLED

alligatorweed	parrotfeather**	yellow water lily (<i>Nuphar spp.</i> , spatterdock)
American lotus	pickerelweed	white water lily (<i>Nymphaea spp.</i>)
bladderwort	pennywort	water primrose (<i>Ludwigia spp.</i>)
Eurasian watermilfoil	smartweed	watershield (<i>Brasenia spp.</i>)
milfoil species	water chestnut*, **	

*Not for use in California and New York.

**Retreatment may be needed to achieve desired level of control.

APPLICATION METHODS

Surface Applications: Use a mechanical spreader such as a fertilizer spreader or mechanical seeder or similar equipment capable of uniformly applying this product. Before spreading any product, carefully calibrate the application equipment. When using boats and power equipment, you must determine the proper combination of (1) boat speed, (2) rate of delivery from the spreader, and (3) width of swath covered by the product. Use the following formula to calibrate the spreader's delivery in pounds of this product per minute:

$$\frac{\text{Miles per hour} \times \text{spreader width (feet)} \times \text{pounds per acre}}{495} = \text{Pounds per minute}$$

Aerial Application (Helicopter Only): Ensure uniform application. All equipment should be properly calibrated using blanks with similar physical characteristics to this product. To avoid streaked, uneven or overlapped application, use an appropriate tracking device (e.g. GPS). Refer to the *Aerial Drift Reduction Advisory* section of this label for additional precautions and instructions for aerial application.

Floating and Emerged Weeds: For control of water lily's (*Nymphaea spp.* and *Nuphar spp.*), watershield (*Brasenia spp.*), and other susceptible emerged and floating herbaceous weeds, apply 1.0 to 2.5 ppm a.e. triclopyr per acre. Apply when plants are actively growing. Use higher rates in the rate range when plants are mature, when the weed mass is dense, or for difficult to control species. Repeat as necessary to control regrowth, but do not exceed a total of 2.5 ppm a.e. triclopyr for the treatment area per annual growing season.

CONCENTRATION OF TRICLOPYR ACID IN WATER (PPM a.e.) - Excluding New York State						
Avg. Water Depth (ft)	0.50 ppm	0.75 ppm	1.0 ppm	1.5 ppm	2.0 ppm	2.5 ppm
	Pounds of Product / acre					
1	14	20	27	41	54	67
2	27	41	54	81	108	135
3	41	61	81	122	162	202
4	54	81	108	162	216	270

is recommended in areas of greater water exchange. These areas may require a repeat application. However, total application of this product must not exceed an application rate of 2.5 ppm a.e. triclopyr for the treatment area per annual growing season.

For optimal control, apply when Eurasian watermilfoil or other submersed weeds are actively growing.

For application greater in depth than 4 feet, when targeting difficult to control species and/or sites with high dilution potential, the following formula should be used to calculate application rates should greater than 270 pounds of this product be needed to achieve desired weed control. Note: Do not exceed 2.5 ppm a.e. triclopyr for the treatment area per annual growing season.

$$\text{average depth} \times \text{target ppm} \times 27 = \text{pounds of this product per acre}$$

Example Calculation:

$$6 \text{ foot average depth} \times 2.5 \text{ ppm} \times 27 = 405 \text{ pounds of this product per acre}$$

Aquatic Sites: For control of emerged, submersed and floating aquatic weeds in the following aquatic sites: ponds; lakes; reservoirs; marshes; wetlands; impounded rivers, streams and other bodies of water that are quiescent; non-irrigation canals, seasonal irrigation waters and ditches which have little or no continuous outflow.

EPA Reg. No. 228-597-8959

EPA Est. No. 008378-IN-001

ACTIVE INGREDIENTS:

Triclopyr: 3,5,6-trichloro-2-pyridinyloxyacetic acid,
triethylamine salt.....14.0%
OTHER INGREDIENTS86.0%
TOTAL100.0%

Acid equivalent: triclopyr – 10.0%

MANUFACTURED FOR:

ab applied biochemists

Germantown, WI 53022 • 1-800-558-5106
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New York State Specific - Submersed Weeds: For control of Eurasian watermilfoil (*Myriophyllum spicatum*) and other susceptible submersed weeds in ponds, lakes, reservoirs, impounded rivers, streams and other bodies of water that are quiescent; non-irrigation canals, and seasonal irrigation waters, or ditches that have little or no continuous outflow, apply this product using mechanical or portable spreading equipment. Rates should be selected according to the rate chart to the right to provide a triclopyr concentration of 0.50 to 2.5 ppm a.e. in treated water. Use of higher rates in the rate range is recommended in areas of greater water exchange. These areas may require a repeat application. However, total application of this product must not exceed an application rate of 2.5 ppm a.e. triclopyr for the treatment area per annual growing season. For optimal control, apply when Eurasian watermilfoil or other submersed weeds are actively growing.

NEW YORK STATE SPECIFIC - CONCENTRATION OF TRICLOPYR ACID IN WATER (PPM a.e.)

Avg. Water Depth (ft)	0.50 ppm	0.75 ppm	1.0 ppm	1.5 ppm	2.0 ppm	2.5 ppm
	Pounds of Product / acre					
1	14	20	27	41	54	67
2	27	41	54	81	108	135
3	41	61	81	122	162	202
4 feet or greater	54	81	108	162	216	270

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. 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.

Obtain Required Permits: Consult with appropriate state or local water authorities before applying this product in and around public waters. State or local public agencies may require permits. **Recreational Use of Water in Treatment Area:** There are no restrictions on use of water in the treatment area for recreation purposes, including swimming and fishing. **Livestock Use of Water from Treatment Area:** There are no restrictions on livestock consumption of water from the treatment area.

New York State Specific: DO NOT swim in water treated with this product for three (3) hours after treatment. There are no restrictions on use of water in the treatment area for fishing.

PRODUCT RATE CHART FOR AREAS LESS THAN 1/2 ACRE - Excluding New York State - Pounds of Product

Area (ft ²)	3 foot average depth		4 foot average depth	
	1.25 ppm a.e.	2.5 ppm a.e.	1.25 ppm a.e.	2.5 ppm a.e.
500	1.2	2.3	1.5	3.0
1000	2.3	4.6	3.1	6.1
4000	9.3	18.6	12.4	24.7
10000	23.2	46.5	31.0	61.9
20000	46.5	93.0	62.0	123.9

Small Site (Less than 1/2 acre) / Spot Treatment Application - (Use Not Acceptable in New York State)

For small treatment sites of 1/2 acre or less use the rate chart to the left to determine the application rate depending on average water depth to achieve a concentration of 1.25 to 2.5 ppm a.e. Do not exceed 2.5 ppm a.e. triclopyr for the treatment area per annual growing season. Use higher rates in small treatment areas and in areas prone to higher dilution and for heavy weed infestation. Use the lower rates for spot treatment application of areas less prone to dilution and lighter weed infestations. For best results, split the total application rate into three equal applications 8 to 12 hours apart. Apply when water is calm.

Example: A 100 ft. by 40 ft. lakeshore swimming area with a 4 ft. average depth, heavily infested with Eurasian watermilfoil.

Step 1: Determine the area to be treated in square feet (ft²) by multiplying the length of the area by the width. 100 ft. x 40 ft. = 4,000 ft².

Step 2: Determine the amount of product to be used by consulting the Product Rate Chart for Areas Less than 1/2 Acre. Use 24.7 lbs. of this product total based on 4 foot average depth in rate chart above.

Step 3: Apply this product uniformly over weeds in treatment site in three equal applications of 8.2 lbs. each, 8 to 12 hours apart.

For applications with an area or depth not included in the chart above, the following formula should be used to calculate application rates.

$$\text{area (ft}^2\text{)} / 43,560 \times \text{average depth} \times \text{target ppm} \times 27 = \text{pounds of product}$$

Example Calculation: 8250 ft² / 43,560 x 4 foot average depth x 1.25 ppm x 27 = 25.6 pounds of product

Small treatment application of this product is recommended with waterproof gloves or a hand spreader to uniformly distribute this product on target weeds.

Precautions for Potable Water Intakes (Excluding New York State - see next section)

For applications of this product to control floating, emersed, and submersed weeds in sites that contain a functioning potable water intake for human consumption, see the chart below to determine the minimum setback distances of the application from the functioning potable water intakes.

CONCENTRATION OF TRICLOPYR ACID IN WATER (PPM a.e.) - Excluding New York

Area Treated (acres)	0.75 ppm	1.0 ppm	1.5 ppm	2.0 ppm	2.5 ppm
	Required Setback Distance (ft) from Potable Water Intake				
< 4	300	400	600	800	1000
4 to 8	420	560	840	1120	1400
8 to 16	600	800	1200	1600	2000
16 to 32	780	1040	1560	2080	2600
>32 acres, calculate a setback using the formula for the appropriate rate	Setback(ft) = (800 * In(acres)-160 / 3.33	Setback(ft) = (800 * In(acres)-160 / 2.50	Setback(ft) = (800 * In(acres)-160 / 1.67	Setback(ft) = (800 * In(acres)-160 / 1.25	Setback(ft) = (800 * In(acres)-160

*Note: In = natural logarithm

Example Calculation 1: To apply 2.5 ppm of product to 50 acres:

$$\begin{aligned} \text{Setback in feet} &= (800 \times \ln(50 \text{ acres})) - 160 \\ &= (800 \times 3.912) - 160 \\ &= 2970 \text{ feet} \end{aligned}$$

Example Calculation 2: To apply 0.75 ppm of product to 50 acres:

$$\begin{aligned} \text{Setback in feet} &= (800 \times \ln(50 \text{ acres})) - 160 / 3.33 \\ &= (800 \times 3.912) - 160 / 3.33 \\ &= 892 \text{ feet} \end{aligned}$$

Note: Existing potable water intakes which are no longer in use, such as those replaced by potable water wells or connections to a municipal water system, are not considered to be functioning potable water intakes.

To apply this product around and within the distances noted above from a functioning potable water intake, the intake must be turned off until the triclopyr level in the intake water is determined to be 0.4 parts per million (ppm) or less by laboratory analysis or immunoassay.

New York State Specific - Precautions for Potable Water Intakes: For applications of this product to control floating, emersed and submersed weeds in sites that contain a functioning potable water intake for human consumption, see the chart below to determine the minimum setback distances of the application from the functioning potable water intakes.

NEW YORK SPECIFIC - CONCENTRATION OF TRICLOPYR ACID IN WATER (PPM a.e.)					
Area Treated (acres)	0.75 ppm	1.0 ppm	1.5 ppm	2.0 ppm	2.5 ppm
	Required Setback Distance (ft) from Potable Water Intake				
< 4	1300	1700	2500	3400	4200
4 to 8	1700	2300	3500	4600	5800
8 to 16	2400	3300	4900	6500	8200
16 to 32	3500	4600	6900	9200	11500
>32 acres, calculate a setback using the formula for the appropriate rate	Setback (ft) = $\sqrt{[(4,102,708 \times \text{acres treated}) + 981,690.7] / 3.33}$	Setback (ft) = $\sqrt{[(4,102,708 \times \text{acres treated}) + 981,690.7] / 2.50}$	Setback (ft) = $\sqrt{[(4,102,708 \times \text{acres treated}) + 981,690.7] / 1.67}$	Setback (ft) = $\sqrt{[(4,102,708 \times \text{acres treated}) + 981,690.7] / 1.25}$	Setback (ft) = $\sqrt{[(4,102,708 \times \text{acres treated}) + 981,690.7]}$

Note: † = Square Root

New York State Specific Example Calculation 1:

To apply 2.5 ppm of product to 50 acres:

$$\begin{aligned} \text{Setback in feet} &= \sqrt{[(4,102,708 \times 50) + 981,690.7]} \\ &= \sqrt{206,117,091} \\ &= 14,357 \text{ feet} \\ &= 14,440 \text{ feet (rounded to the nearest 100 feet)} \end{aligned}$$

New York State Specific Example Calculation 2:

To apply 0.75 ppm of product to 50 acres:

$$\begin{aligned} \text{Setback in feet} &= \sqrt{[(4,102,708 \times 50) + 981,690.7] / 3.33} \\ &= \sqrt{206,117,091 / 3.33} \\ &= 4,311 \text{ feet} \\ &= 4,300 \text{ feet (rounded to the nearest 100 feet)} \end{aligned}$$

Note: Existing potable water intakes which are no longer in use, such as those replaced by potable water wells or connections to a municipal water system, are not considered to be functioning potable water intakes. These setback restrictions do not apply to terrestrial applications made adjacent to potable water intakes. To apply this product around and within the distances noted above from a functioning potable water intake, the intake must be turned off until the triclopyr level in the intake water is determined to be 50 parts per billion (ppb) or less by laboratory analysis or immunoassay.

Recreational Use of Water in Treatment Area: DO NOT swim in water treated with this product for three (3) hours after treatment. There are no restrictions on use of water in the treatment area for fishing.

Livestock Use of Water from Treatment Area: There are no restrictions on livestock consumption of water from the treatment area.

Wetland Sites: Wetlands include flood plains, deltas, marshes, swamps, bogs and transitional areas between upland and lowland sites. Wetlands may occur within forests, wildlife habitat restoration and management areas and similar sites as well as areas adjacent to or surrounding domestic water supply reservoirs, lakes and ponds.

For control of emersed, floating or submersed aquatic weeds in wetland sites, follow use directions and application methods associated with the *Floating and Emersed or Submersed* sections on this label.

Use Precautions: Minimize unintentional application to open water when treating target vegetation in wetland sites. Note: Consult local public water control authorities before applying this product in and around public water. Permits may be required to treat such areas.

GENERAL USE PRECAUTIONS AND RESTRICTIONS

State of New York specific restriction: Note to all pesticide applicators: Before application under any project program, notification of an approval by the NYS Department of Environmental Conservation is required, either by an aquatic permit issued pursuant to ECL Section 15.0313(4) or issuance of purchase permits for use. **Chemigation: DO NOT** apply this product through any type of irrigation system. **Irrigation:** Water treated with this product may not be used for irrigation purposes for 120 days after application or until triclopyr residue levels are determined by laboratory analysis, or other appropriate means of analysis, to be 1.0 ppb or less. This label describes both required and recommended uses of a chemical analysis for the active ingredients triclopyr. Applied Biochemists recommends the use of an Enzyme-Linked Immunoassay (ELISA) test for the determination of the active ingredient concentration in water. Contact Applied Biochemists for the incorporation of this analysis in your treatment program. Other proven chemical analysis for the active ingredient may also be used. The ELISA analysis is referenced in this label as the preferred method for rapid determination of the concentration of the active ingredient in the water.

Seasonal Irrigation Waters: This product may be applied during the off season to surface waters that are used for irrigation on a seasonal basis, provided that there is a minimum of 120 days between product application and the first use of treated water for irrigation purposes or until triclopyr residue levels are determined by laboratory analysis, or other appropriate means of analysis, to be 1.0 ppb or less. **Irrigation Canals/Ditches: DO NOT** apply this product to irrigation canals/ditches unless the 120 day restriction on irrigation water usage can be observed or triclopyr residue levels are determined by laboratory analysis, or other appropriate means of analysis, to be 1.0 ppb less. **There is no restriction on use of treated water to irrigate established grasses. DO NOT** apply this product directly to, or otherwise permit it to come into direct contact with grapes, tobacco, vegetable crops, flowers, or other desirable broadleaf plants, and do not permit product dust to drift into them. **DO NOT** apply to salt water bays or estuaries. **DO NOT** apply directly to un-impounded rivers or streams. **DO NOT** apply on ditches or canals currently being used to transport irrigation water or that will be used for irrigation within 120 days following treatment or until triclopyr residue levels are determined to be 1.0 ppb or less. **DO NOT** apply where runoff water may flow onto agricultural land as injury to crops may result. **Grazing and Haying Restrictions:** Except for lactating dairy animals, there are no grazing restrictions following application of this product. **Grazing Lactating Dairy Animals: DO NOT** allow lactating dairy animals to graze treated areas until the next growing season following application of this product. **DO NOT** harvest hay for 14 days after application. Grazed areas of non-cropland and forestry sites may be spot treated if they comprise no more than 10% of the total grazable area. **Slaughter Restrictions:** During the season of application, withdraw livestock from grazing treated grass at least 3 days before slaughter.

BEST PRACTICES FOR DRIFT MANAGEMENT

Equipment used in the application of this product should be carefully calibrated before use and checked frequently during application to be sure it is working properly and delivering a uniform distribution pattern to prevent dosage of this product above specified limits, do not overlap applications. Aerial application should be made only when the wind velocity is 2 to 10 mph. Applications should be made only when there is little or no hazard for volatility or dust drift, and when application can maintain this product's placement in the intended area. Very small quantities of dust, which may not be visible, may seriously injure susceptible plants, and this product may be blown outside of the intended treatment area under extreme conditions. Do not spread this product when wind is blowing toward susceptible crops or ornamental plants that are near enough to be injured.

Avoiding drift at the application site is the responsibility of the applicator. The interaction of many equipment and weather related factors determine the potential for drift. The applicator is responsible for considering all these factors when making decisions.

Ground Application Equipment: To aid in reducing drift, this product should be applied when wind velocity is low (follow state regulations; see *Sensitive Area* under *Aerial Drift Reduction Advisory*) or using a slurry injection system.

Aerial Drift Reduction Advisory: This section is advisory in nature and does not supersede the mandatory label requirements.

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 drift potential. **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 (e.g. higher wind). **Wind:** Drift potential is lowest between wind speeds of 2 to 10 mph (follow state regulations). However, many factors, including equipment type, determine drift potential at any given speed. Application should be avoided below 2 mph due to 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 drift. **Sensitive Areas:** This product should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

IF ANY CONTENT ON THIS LABEL IS NOT UNDERSTOOD, OR YOU NEED FURTHER ASSISTANCE, CONTACT APPLIED BIOCHEMISTS TECHNICAL SERVICES WITH QUESTIONS SPECIFIC TO YOUR APPLICATION.

KEEP OUT OF REACH OF CHILDREN

CAUTION / PRECAUCIÓN

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.)

For Chemical Spill, Leak, Fire, or Exposure, Call CHEMTREC (800) 424-9300

PRECAUTIONARY STATEMENTS/HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION / PRECAUCIÓN

Causes moderate eye irritation. Avoid contact with eyes or clothing.

FIRST AID: IF IN EYES: Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice. IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice. IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by the poison control center or doctor. Do not give anything by mouth to an unconscious person. IF INHALED: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

HOT LINE NUMBER Have the product container or label with you when calling a poison control center or doctor, or going for treatment. If a medical emergency arises contact Arch Chemicals Emergency Action Network in the US call 1-800-654-6911 or outside the US call 423-780-2970. For help with a spill, leak, fire or exposure involving this material call CHEMTREC 1-800-424-9300.

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. If pesticide gets on skin, wash immediately with soap and water. 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.

ENVIRONMENTAL HAZARDS

Under certain conditions, treatment of aquatic weeds can result in oxygen depletion or loss due to decomposition of dead plants, which may cause fish suffocation. Therefore, to minimize this hazard **DO NOT** treat more than one-half (1/2) of the water area in a single operation and wait at least 10 days between treatments when susceptible plants are mature and have grown to the water's surface, or when the treatment would result in significant reductions in total plant biomass. Begin treatment along the shore and proceed outwards in bands to allow fish to move into untreated areas. Consult with the State agency for fish and game before applying to public water to determine if a permit is needed. **AGRICULTURAL CHEMICAL:** Do not ship or store with food, feeds, drugs or clothing.

STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage and disposal.

PESTICIDE STORAGE: Store in original container. Do not store near food or feed. In case of leak or spill, contain material and dispose as waste.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL: Plastic Bags: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment by shaking and tapping sides and bottom to loosen clinging particles. If not emptied in this manner, the bag may be considered an acute hazardous waste and must be disposed in accordance with local, state and federal regulations. When completely empty, offer for recycling if available or dispose of bag in a sanitary landfill or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

WARRANTY

To the extent consistent with applicable law, neither the manufacturer nor the seller makes any warranty, expressed or implied concerning the use of this product other than indicated on the label. To the extent consistent with applicable law, buyer assumes risk of use of this material when such use is contrary to label instructions. Read and follow the label directions.