

Product Explanation guide

Aquathol K

Active ingredient- Dipotassium Endothall 40.3%

Use- Contact herbicide

Half-life- 5-8days

Target Species- Curlyleaf pondweed

Mode of action- Respiration is inhibited, during which, oxygen consumption is also inhibited.

Effects are greater in the dark, due to the fact that the results are non-photosynthesis-based.

Flumioxazin

Active ingredient- Flumioxazin 51%

Trade names- Clipper, Propeller

Use-systemic herbicide

Half-life- >1-4 days pending pH

Target Species- Eurasian watermilfoil

Mode of action- Inhibitor of the enzyme protoporphyrinogen oxidase. This enzyme is part of the chlorophyll biosynthesis pathway and its inhibition leads to a loss of chlorophyll and carotenoids and irreversible damage to the cell membrane function and structure.

ProcellaCOR

Active ingredient- Florpyrauxifen-benzyl 2.7%

Use- Systemic herbicide

Half-life- 1-6days (pH and temp. dependent)

Target Species- Eurasian watermilfoil, Curlyleaf pondweed, some pondweeds

Mode of action- Indoleacetic acid (IAA) is the main auxin in plants, regulating growth and development which is triggered to disrupt growth by binding to it. Roots are most sensitive to fluctuations in IAA level. This product mimics the plant growth hormone auxin that causes excessive elongation of plant cells that ultimately kills the plant.

Navigate (2,4-d)

Active ingredient- 2,4-dichlorophenoxy acetic acid 27.6%

Use- Systemic herbicide

Half-life- 15days

Target Species- Eurasian watermilfoil

Mode of action- Acts as a plant growth hormone (auxin) which stimulates rapid excessive growth which interferes with cell division, food utilization, and other vital processes of the plant. Systemic effects are more specific to dicots as opposed to monocots.

Renovate 3

Active ingredient- Triclopyr 44.4%

Use- Systemic herbicide

Half-life- 1 day with light

Target Species- Eurasian watermilfoil

Mode of action- Acts as a plant growth hormone (auxin) which stimulates rapid excessive growth which interferes with cell division, food utilization, and other vital processes of the plant. Systemic effects are more specific to dicots as opposed to monocots.

Renovate OTF

Active ingredient- Triclopyr 14.0%

Use- Systemic herbicide

Half-life- 1 day with light

Target Species- Eurasian watermilfoil

Mode of action- Acts as a plant growth hormone (auxin) which stimulates rapid excessive growth which interferes with cell division, food utilization, and other vital processes of the plant. Systemic effects are more specific to dicots as opposed to monocots.

SeClear G

Active ingredient- Copper Sulfate Pentahydrate 58.9%

Use- Algaecide

Target Species- Starry stonewort

Mode of action- Copper is regulated by plants/algae because it is an essential mineral. Too much copper can be toxic to plants as it inhibits photosynthesis. Copper naturally occurs in the environment and is highly soluble in water and it can bind with sediments.

Sculpin G

Active ingredient- 2,4-dichlorophenoxyacetic acid, dimethylamine salt 20%

Use- Systemic herbicide

Half-life- 14days

Target Species- Eurasian watermilfoil

Mode of action- Acts as a plant growth hormone (auxin) which stimulates rapid excessive growth which interferes with cell division, food utilization, and other vital processes of the plant. Systemic effects are more specific to dicots as opposed to monocots.

Tribune

Active ingredient- Diquat dibromide 37.3%

Use- Contact herbicide

Half-life- 48hours

Target Species- Eurasian watermilfoil, Curlyleaf pondweed

Mode of action- Reduction of a free radical through the natural processes of respiration and photosynthesis. The salts formed can bond and release with electrons in the plant over and over again, virtually "short circuiting" the plants ability to use photosynthesis.

Product Terminology

Active ingredient: An active ingredient are the chemicals in the pesticide that kills, controls or repels pests. Often, the active ingredient makes up a small portion of the whole product.

Inert ingredient: An inert or other ingredient are combined with active ingredients to make a pesticide product. Inert ingredients are used to stabilize the product, help it stick, sink, dissolve, improve ease of application, drift among other factors.

Half-life: The half-life of an herbicide is the length of time it takes for 50% of the herbicide to break down to secondary compounds. “The half-life can help estimate whether or not a pesticide tends to build up in the environment. Pesticides with shorter half-lives tend to build up less because they are much less likely to persist in the environment.” National Pesticide Information Center

Systemic herbicide: Systemic herbicides are absorbed and transported through the plant’s vascular system, killing the entire plant.

Contact herbicide: Contact herbicides kill the part of the plant in contact with the chemical but the roots may survive.

Selective herbicide: A selective herbicide is formulated to control specific weeds. It is a material that is toxic to some plant species but not all.