

Think **PURITY** **ALGAECIDE SOLUTION**

When Algae/Bacteria Problems Become A Battle

1-866-543-5276
www.thinkpurity.com

- ✓ Lake and Pond Management
- ✓ Agriculture Waste Management
- ✓ Potable Water Management
- ✓ Wastewater Management
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NOTICE TO USER: This control product is to be used only in accordance with the directions on this label. It is an offence under the Pest Control Products Act to use a control product under unsafe conditions.

Think Purity algaecide - P.C.P.# 27754
Think Purity algaecide/bactericide - P.C.P.# 27434

Think Purity

When algae/bacteria problems become a battle.

Think Purity is a proven and reliable solution with a large variety of applications. We know preventing the water from developing algae blooms is the best thing to do.

1. It costs much more to treat algae bloom than prevent algae blooms.
- 2: The cost to treat later is 2 to 3 times more than preventing algae bloom to start with.
3. Having to kill large blooms of algae requires high levels of chemicals this can be very hard on your water. Killing off beneficial bacteria you need to keep your water clean.
4. Killing of large amounts of blue/green algae can cause the development of very dangerous toxins. Animals and people could die after drinking water when algae-toxins evolve.

Think Purity is an innovative, algaecide/bactericide designed for use in lakes, ponds, reservoirs, irrigation canals, treatment lagoons, and other water systems. Think Purity's active ingredient is a biologically active form of cupric ion (Cu^{++}). Think Purity contains a unique blend of acids resulting in a greater concentration of these ions under varying water conditions. Think Purity is registered by the Health Canada's Pest Management Regulatory Agency (PMRA), as an algaecide/bactericide.

Think Purity algaecide - P.C.P.# 27754
Think Purity algaecide/bactericide - P.C.P.# 27434

Unlike all other copper sulfate water treatment products available today, the ionized copper in Think Purity is already fully dissolved, and more importantly, the release of the cupric ion is controlled by biological demand instead of by water conditions. These unique characteristics allow you to achieve long-term control of algae and bacteria without over treatment. Until they encounter their targets, Think Purity copper ions remain suspended without settling out or adding to bottom sediment.

Lake And Pond Management

Recurring algae blooms can create a real problem in the maintenance of ornamental lakes, ponds and fountains.

Think Purity is a proven, reliable and environmentally responsible solution.

Think Purity algaecide/bactericide is designed for use in lakes, ponds, fountains and other water. Think Purity is a user-friendly method of controlling algae and bacteria. These micro-organisms can make humans sick and are commonly known to cause unsightliness, bad odor, and off taste in water storage containers, including potable water systems.

Prevent algae. Think Purity active ingredient is a biologically active form of copper ion (Cu^{++}). Unlike other copper algaecides available today, the copper in Think Purity is already fully dissolved, and more importantly, the release of its active ingredient is controlled by biological demand (such as an algae bloom) instead of by water conditions. This allows you to treat your pond or fountain prior to an ugly outbreak of algae. The copper will not precipitate out of solution, but will remain fully dissolved, thereby insuring long-term algae control without over treatment.



Save time and labour, Think Purity will rapidly and evenly self-disperse throughout the body of water to which it is applied without mixing or agitation, minimizing equipment and labour costs.

Lake and pond water may be used immediately following treatment for irrigation without harm to plants or grass. Think Purity may also be used in fish bearing ponds at prescribed application rates. When adding Think Purity to fish

bearing ponds do not exceed 0.06 parts per million of ionized copper.

Think Purity is a safe and environmentally responsible product used for drinking water applications. Chlorine-based algaecides kill microorganisms by oxidation. Think Purity is absorbed by each micro-organism and adversely affects the metabolism resulting in the death of the algae or bacterium systems.

Think Purity is a safe and environmentally responsible product used for drinking water applications.

Agriculture Waste Management

Oudours are a natural part of livestock farming. When gas-producing bacteria levels rise, the resulting odours and gases are unpleasant. Compacted solid waste build-up can cause a reduction in liquid storage capacity in waste pits and lagoons. Think Purity has the unique property of controlling gas-producing bacteria and routinely reducing ammonia gas levels by 50% during the two weeks after application. Think Purity pit and lagoon treat is unique, environmentally safe, PH controlled product.

The chemical reaction boosts the aerobic manure digestion process, which dislodges the solids from the bottom of the pit/lagoon and holds them in suspension. This process homogenizes the slurry and helps digestion of the solids.

Think purity helps keep nitrogen in the slurry and less nitrogen from gassing off as ammonia.

The net result is more nitrogen less labor, less odor, better work environment, ect.



EFFECTS OF AMMONIA ON HUMANS AND LIVESTOCK

- 5- ppm lowest level by smell
- 6- ppm eye and respiratory membrane irritation begins.
- 11-ppm animal performance reduced.
- 25-ppm maximum level for an 8-hour exposure.
- 35-ppm maximum level for a 10 min. exposure.
- 40-ppm headaches, nausea and appetite loss in humans.
- 50-ppm severe reduction in animal performance, health and increased possibility of pneumonia.
- 100-ppm sneezing, salivation, irritation to mucus surfaces.

Potable Water

The main use for Think Purity is algae and bacteria control if you use an algaecide like Think Purity you will have less algae and bacteria. Just keep in mind no one product is the fix .You may need to look at a pond program contact your dealer or the manufacture to help with this.

Less algae. Think Purity is an innovative algaecide/bactericide containing a very high concentration of biologically active cupric ions (Cu⁺⁺). Conventional methods involve treating for algae

after a bloom occurs, resulting in the need for high treatment levels and damage to non-target species. Think Purity allows long-term control and will prevent blooms from reoccurring.

Control of algae and reduction of bacteria yield several benefits . .

- Elimination of bad taste in drinking water due to algae blooms
- Reduction in bacteria in water
- Safer recreational environment for boaters and swimmers
- Reduces or eliminates need for activated carbon

Less work. Think Purity green liquid solution self-disperses, allowing even distribution without spraying or mixing. Labour costs are greatly reduced.

Less copper. Think Purity active ingredient is a biologically active cupric ion (Cu⁺⁺), which is the only form of copper that is useful in controlling algae and bacteria. Think Purity con-

tains a unique Blend of acids, which allows a greater concentration under varying water conditions. Think Purity's high content of biologically active copper results in less total copper being added to the environment. The release of Think Purity ionized copper is controlled by biological demand (such as an algae bloom) instead of by water conditions. This allows you to treat prior to an algae bloom. The copper will not precipitate out of solution, but will remain fully dissolved for much longer than copper sulfate, thereby insuring long-term algae control without over treatment.

Think Purity is registered by the Health Canada's Pest Management Regulatory Agency (PMRA). As an algicide/bactericide.

Think Purity algaecide **P.C.P.#27754**
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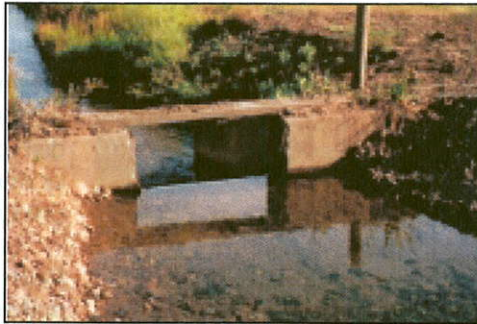
RESTRICTED USES: Product is to be used for control of algae in municipal water supplies (bodies of water that may be used as a source of potable water before it is purified for drinking purposes). Do not apply or allow discharge to lakes, flowing water or ponds with outflow.

Wastewater Management

Something in your lagoon may be generating odour, creating problems in decomposition of solids, and causing your facility to be out of compliance.

- #1 reduce solids and odor
- #2 reduce cleaning, repairs, down time
- #3 make your life simple

Think Purity an environmentally responsible solution to your problems in wastewater treatment. Think purity is an innovative algacide and bactericide designed for use in wastewater lagoons, sewage treatment facilities, animal confinement pits and a wide variety of other water and wastewater systems.



Think Purity is the most cost effective liquid copper water treatment product registered as an algacide/bactericide with the Health Canada's Pest Management Regulatory Agency (PMRA). As an algacide/bactericide.

Think Puritys active ingredient is a biologically active form of copper ion (Cu^{++}). Unlike other copper sulfate water treatment products available today, the copper in Think Purity is already fully dissolved, and more importantly, the release of its active ingredient is controlled by biological demand instead of by the conditions in your wastewater treatment plant. These unique characteristics allow you to achieve long-term control of algae and bacteria without over treatment.

Think Purity brings science and nature together by enhancing the bacterial action of a typical treatment system. When Think Purity penetrates a bacterial cell wall and membrane, it acts on sulphur containing amino-acids in the proteins and metabolic enzymes disrupting the proliferation of bacteria, including the proteolytic bacteria which are responsible for producing ammonia, hydrogen sulfide and other harmful gases.



Think Purity self-disperses rapidly and evenly without mixing or agitation, minimizing your equipment and labor costs.

Think Purity brings science and nature together by enhancing bacterial action of a typical treatment system.

In a laboratory studys conducted over many years IONIZED COPPER has shown to do the following in waste water treatment systems

- Reduction of BOD in effluent from levels over 100 to an average of 9.8
- Reduction of Fecal/Coli readings
- Reduction of Total Suspended Solids
- Stabilization of pH values due to a reduction in algae bloom
- Significant odour reduction
- Substantial improvement in effluent water clarity
- Complete compliance with standards

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How Think Purity Works

The disinfection/killing of the cell takes place when the positively charged copper ion form bonds with negatively charged areas on the cell walls of micro-organisms. These bonds create stresses that lead to distorted cell wall permeability, minimizing the normal intake of life-sustaining nutrients.

Once inside the cell of the micro-organism the copper reacts with sulphur containing amino-acids in the proteins used for photosynthesis (the process of converting light and nutrients into useable food and energy)As a result photosynthesis is blocked leading to cell lyses (disintegration) and death.If the cells manages to live for a short time the reproduction is hampered by the presence of copper ions and the spread of the micro-organism is stop.Most undesirable bacteria are killed at low copper ion concentrations whereas import beneficial bacteria, being more tolerant of copper ions, will survive.

Dosage Rates

Think Purity Calculation Formula:

- 1 ppm copper ion (Cu++) = 1 liters Think Purity / 60,000 liters of water
- 0.1 ppm copper ion (Cu++) = 1 liters of Think Purity / 600,000 liters of water
- 0.06 ppm copper ion (Cu++) = 1 liters of Think Purity/ 1,000,000 liters of water
- 1 acre foot = 1,232,280 liters of water

Fish Bearing Applications (0.06 ppm copper)

For fish bearing lakes and ponds, drinking water reservoirs, irrigation canals and other applications Think Purity application rate is 0.06 ppm copper maximum, or 1 litre Think Purity for each million litres of water.

WARNING

Copper ions are very toxic to fish in very small amounts. most fish will die quickly when exposed to approx 0.2 ppm of copper ions. Trout's tolerance is very low, just 0.13 ppm. Do not apply Think Purity to water with fish unless you are prepared to do so weekly in very small amounts and never exceeding the fish tolerance limits.

Fish Bearing Applications (0.06 ppm copper)

Pond Volume (liters)	Think Purity (liters)	Think Purity (ml)
500		0.5
1,000		1.0
3,000		3.0
5,000		5.0
10,000		10.0
25,000		25.0
50,000		50.0
100,000		100.0
300,000		300.0
500,000		500.0
600,000		600.0
750,000		750.0
1,000,000	1	
5,000,000	5	
10,000,000	10	
50,000,000	50	
100,000,000	100	
1,000,000,000	1,000	

Fish Free Applications (1.0 ppm copper)

For applications without fish, such as fountains, water features, wastewater lagoons, and animal confinement pits, the Think Purity dosage rate ranges from 0.6 ppm to 1 ppm copper. The dosage chart provided below is 1 ppm ionized copper, or 1 litre of Think Purity for each 60,000 litres of water.

Fish Bearing Applications (0.06 ppm copper)

Pond Volume (liters)	Think Purity (liters)	Think Purity (ml)
500		8.3
1,000		16.66
3,000		50.0
5,000		83.33
10,000		167.0
25,000		417.0
50,000		833.0
100,000	1.16	
300,000	4.99	
500,000	8.33	
600,000	10.02	
750,000	12.52	
1,000,000	16.17	
5,000,000	83.50	
10,000,000	167.10	
50,000,000	835.00	
100,000,000	1670.00	