

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. 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 state or tribal agency responsible for pesticide regulation.

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 a(in this labeling) about (use any of the following that are applicable) personal protective equipment, restricted entry interval, and notification to workers."40 CFR 156.206(b)(2).

FOR FIELD APPLICATIONS:

Keep unprotected persons out of treated areas until sprays have dried.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in original containers in a cool, well-vented area, away from direct sunlight. Do not allow product to become overheated in storage. This may cause increased degradation of the product, which will decrease product effectiveness. In case of spill, flood area with large quantities of water. Do not store in a manner where cross-contamination with other pesticides or fertilizers could occur.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Open dumping is prohibited. If wastes cannot be disposed of according to label directions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

CONTAINER DISPOSAL: Non-refillable container. Do not reuse or refill this container unless the directions for use allow a different (concentrated) product to be diluted in the container.

CONTAINERS 5 GALLONS OR GREATER: Triple rinse (or equivalent) promptly after emptying. Triple rinse as follows: Empty remaining contents into application equipment or mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip the container on its side and roll it back and forth ensuring at least 1 complete revolution, for 30 seconds. Stand container on its end and tip back and forth several times. Empty rinsate into application equipment, mix tank, or store for disposal. Then offer for recycling, or dispose in a sanitary landfill, or incineration if allowed by state and local authorities by burning.

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 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 poison control center or doctor for treatment advice.

IF SWALLOWED: Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a poison control center or doctor. Do not give anything by mouth to an unconscious person. Call poison control center or doctor for treatment advice.

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.

NOTE TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS DANGER. CORROSIVE. Causes irreversible eye damage and skin burns. May be fatal if inhaled or absorbed through the skin. Harmful if swallowed. Do not breathe vapors or spray mist. Do not get in eyes on skin or on clothing. Wear goggles and/or face shield and rubber gloves when handling. Do not enter an enclosed area without proper respiratory protection. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated clothing and wash before reuse.

PHYSICAL AND CHEMICAL HAZARDS

STRONG OXIDIZING AGENT. CORROSIVE. Mix only with water. Product must be diluted in accordance with label directions prior to use. PERACLEAN® 5 is not combustible; however, at temperatures exceeding 156°F, decomposition occurs releasing oxygen. The oxygen released could initiate combustion.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to birds, fish, and aquatic invertebrates. Caution should be used when applying indoors because pets may be at risk. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the US Environmental Protection Agency.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Handlers who may be exposed to the undiluted product through mixing, loading, application, or other tasks must wear: coveralls over long-sleeved shirt and long pants, rubber gloves, chemical resistant footwear plus socks, and protective eyewear (goggles or face shield).

Handlers who may be exposed to the diluted product through application or other tasks must wear: long-sleeved shirt and long pants, and shoes plus socks.

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

USER SAFETY RECOMMENDATIONS

Users should remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

54289-3_Peraclean 5 Peroxyacetic Acid Solution_20211019_1_54289_.pdf

PERACLEAN® 5

(PEROXYACETIC ACID SOLUTION) PERACLEAN® 5 IS A PEROXYACETIC ACID-BASED SANITIZER/DISINFECTANT DEVELOPED FOR THE FOLLOWING USES:

Before Using This Product, Please Read This Entire Label Carefully.

KEEP OUT OF REACH OF CHILDREN DANGER

Industrial/Industrial Sanitizing of Previously Cleaned Non-Porous Food Contact Surfaces in:

- Dairies
- Wineries
- Breweries
- Food and Beverage Plants
- Disinfecting Poultry Premises
- Poultry Hatchery surfaces
- Animal Housing Facilities
- Reverse Osmosis Membranes and Ultra Filtration

Hard Surface Disinfection in:

- Industrial Facilities
- Office Buildings
- Recreational Facilities
- Retail and Wholesale Establishments

Bacteria, Fungi, and Slime Control in:

- Pulp and Paper Mill Systems
- Dispersed Pigments
- Cooling Water Systems
- Coatings Preservation

Active Ingredients:

Hydrogen Peroxide	26.5%
Peroxyacetic Acid	4.9%
Inert Ingredients	68.6%

Total: 100%

Net contents as stated on container

EPA Reg No: 54289-3
EPA ESTAB. NO: 70547-IL-001
70253-CA-001

FOR ENCLOSED ENVIRONMENTS

There is a restricted entry of one (1) hour for this product when applied via fogging or spraying to growing plants, surfaces, equipment, structures and non-porous surfaces in enclosed glasshouses and greenhouses. PPE requirement 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 worn over long-sleeved shirt and pants, waterproof gloves and shoes plus socks.

There is a restricted entry of zero (0) hours for pre-plant dip, seed treatment, soil drench, mop, sponge, dip, soak, rinse or other non-spraying application methods when used in enclosed environments such as glasshouses and greenhouses.

NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are not within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses. Keep unprotected persons out of treated areas until sprays have dried.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to birds and fish. Begin treatment along the shore and proceed outward in bands to allow fish to move into untreated areas. Consult with the State agency with primary responsibility for regulating pesticides before applying to public waters to determine if a permit is needed. Do not apply directly to treated, finished drinking water reservoirs or drinking water receptacles when the water is intended for human consumption.

PERACLEAN® 5 SOLUTION FOR MEAT, POULTRY, SEAFOOD, FRUIT, NUTS AND VEGETABLES (NOT APPROVED IN THE STATE OF CALIFORNIA):

For use in the static or continuous sanitizing, washing or rinsing of conveyors, slicers, saws, and equipment, apply a solution of this product using 1.15-7.0 oz. per 6 gallons of water (82 ppm to 500 ppm active peroxyacetic acid) to pre-cleaned surface. Apply sanitizer solution to the return portion of the conveyor or equipment using coarse spray or similar means of wetting surfaces, so as to affect draining and prevent puddling. Allow sanitizer to thoroughly wet surface for a minimum 60 seconds contact time. No rinse is needed.

SANITIZING FOOD CONTACT SURFACES

Effective against Staphylococcus aureus [(ATCC 6538)] and Escherichia coli [(ATCC11229)], Pseudomonas Aeruginosa [(ATCC 15442)] Salmonella typhimurium [(ATCC 23564)] and Listeria Monocytogenes (not approved in the State of California) [(ATCC 19117)].

Prior to sanitizing, remove gross food particles, then wash with a detergent solution, followed by a potable water rinse. Sanitize with a concentration of 1.0 to 1.5 fl. oz. PERACLEAN® 5 dissolved in 5 gallons of water (0.16 to 0.22% v/v concentration). This will provide 88 to 130 ppm of peroxyacetic acid. At this dilution PERACLEAN® 5 is effective against Staphylococcus aureus and Escherichia coli and Salmonella typhimurium [(ATCC 23564)]. For use against Pseudomonas aeruginosa prepare a sanitizing solution by adding 2.1 to 2.3 fl. oz. PERACLEAN® 5 dissolved in 5 gallons of water. This will provide 180-200 ppm of peroxyacetic acid. For use against Listeria monocytogenes prepare a sanitizing solution by adding 2.3 fl. oz. PERACLEAN® 5 dissolved in 5 gallons of water. This will provide 200 ppm of peroxyacetic acid. Use immersion, coarse spray or circulation techniques as appropriate to the equipment. All surfaces should be exposed to the sanitizing solution for a period of at least 60 seconds or more if specified by governing sanitary code. Allow sanitized surfaces to adequately drain before contact with food so that little or no residue remains. Do not rinse.

SANITIZING, EATING, DRINKING, AND FOOD PREP UTENSILS

Remove gross food particles by a pre-scrape, a pre-flush and, when necessary, a presoak treatment. Wash with a recommended detergent. Rinse with clean water. Sanitize in a solution of 1.0 to 1.5 fl. oz. PERACLEAN® 5 dissolved in 5 gallons of water. Immerse all utensils for at least 60 seconds or contact time specified by governing sanitary code. Drain and air dry.

SANITIZING TABLEWARE

For sanitizing tableware in low temperature warewashing machines, inject PERACLEAN® 5 into the final rinse water at a concentration of 1.0 to 1.5 fl. oz. PERACLEAN® 5 dissolved in 5 gallons of water. Do not exceed 0.16 to 0.22% v/v. Air dry. This will provide 88 to 130 ppm of peroxyacetic acid.

To insure that the PERACLEAN® 5 sanitizer concentration does not fall below 48 ppm peroxyacetic acid, periodically test the rinse solution with a suitable test kit and adjust the dispensing rate accordingly. Consult your technical service representative for assistance and further information on sanitizing tableware in warewashing machines.

FOAM SANITIZATION

PERACLEAN® 5 can be applied as a foam for sanitization for previously clean, hard non-porous food contact surfaces and general environmental (non-food contact) hard non-porous surfaces such as floors, walls, ceilings, drains, and boots. Foam applications can be used where penetration and retention of product for required times is difficult to achieve. For example, uses that include operating conveyor belts and vertical or uneven surfaces.

1. Prepare a dilute PERACLEAN® 5 solution by adding 1.2 to 2.3 fl. oz. per 5 gallons of potable water.
2. After preparing the PERACLEAN® 5 solution add 1.2 to 10.0 fl. oz. of AGRHO FM-2011. AGRHO FM-2011 is the only approved foam-generating additive for use with PERACLEAN® 5
3. Apply the sanitizing solution as a foam using commercially available foam generating equipment. Allow foam to contact surfaces at least one minute. For foot bath application, allow foam to remain on boot surface for one minute upon exiting the bath.
4. Drain items and or surfaces thoroughly.

ANTIMICROBIAL RINSE OF PRE-CLEANED OR NEW RETURNABLE OR NON-RETURNABLE CONTAINERS:

To reduce the number of non-pathogenic beverage spoilage organisms. Effective against Aspergillus versicolor[(ATCC 9577)], Byssoclamys fulva [(ATCC 10099)], Pediococcus damnosus [(ATCC 29358)], Lactobacillus buchneri [(ATCC4005)], and Saccharomyces cerevisiae [(ATCC47058)].

1. Prepare PERACLEAN® 5 solution by adding 31 fl. oz. to 5 gallons potable water. This provides 2,632 ppm peroxyacetic acid.
2. Apply antimicrobial rinse at a temperature of 40°C to 60°C (104°F to 140°F) and allow a minimum seven-second contact period.
3. Allow containers to drain thoroughly, and then rinse with sterile or potable water.

FOR THE TREATMENT OF PROCESSED FRUITS AND VEGETABLES AND PROCESS WATERS TO CONTROL GROWTH OF NON-PUBLIC HEALTH MICROORGANISMS THAT CAN CAUSE SPOILAGE (FCN 1888) (NOT APPROVED IN THE STATE OF CALIFORNIA

Prepare treating solution by diluting 4.66 fluid ounces per 25 gallons of potable water. This will provide 80 ppm peroxyacetic acid and 433 ppm hydrogen peroxide.

1. Apply the diluted solution as a spray or dip. Allow a contact time of at least 45 seconds. No rinse following application is required. This use complies with the requirements of 21 CFR173.315 (a) 5
2. The treated produce can be drain dried without a potable water rinse.
3. Do not reuse solution after treatment.

FOR TREATMENT OF RAW, UNPROCESSED FRUIT AND VEGETABLE SURFACES

PERACLEAN® 5 can be applied by fogging to control the growth of non-public health microorganisms that may cause decay and/or spoilage on raw, post-harvest fruits and vegetables during the post-harvest process.

1. Ensure room is properly ventilated. Vacate all personnel from room during fogging and for a minimum of 2 hours after fogging. Ensure there is no strong odor characteristic of acetic acid before having personnel return to work area. Do not enter room until hydrogen peroxide concentrations are correctly tested and are below 1 ppm on a time weighted average.
2. Fog areas using one quart of a 0.2% solution (3.5 fl. oz. per 16 gallons of water) per 1,000 cu. ft. of room volume. Allow surfaces to drain thoroughly before operations are resumed.



Manufactured by:
Evonik Corporation
299 Jefferson Rd
Parsippany, New Jersey 07054-0677



FRUIT AND VEGETABLE WATER TREATMENT (NOT APPROVED IN THE STATE OF CALIFORNIA)

This product may be used to help control spoilage or decay-causing bacteria and fungi in water or ice that contacts raw, unprocessed fruits and vegetables in commercial operations and packinghouses.

PERACLEAN® 5 can be applied as a dip or spray to control the growth of non-public health microorganisms that may cause decay and/or spoilage on raw, post-harvest fruits and vegetables during the post-harvest process. This product can be applied during physical cleaning processes, including at the roller spreader, washer manifold, dip tank, on the brushes or elsewhere in the post-harvest process prior to, simultaneously with or after detergent wash.

1. Prepare treating solution by diluting 1.12 to 3.5 fl. oz. per 16 gallons of water. This will provide 30 to 100 ppm of peroxyacetic acid.
2. Apply the diluted solution using a spray directed at the fruits or vegetables, or by soaking the fruits or vegetables in the solution. Allow a contact time of at least 45 seconds.
3. The treated produce can be drain dried without a potable water rinse.

SURFACES TREATED TO CONTROL SPREAD OF CITRUS CANCKER

PERACLEAN® 5 can be used to control the spread of citrus canker between inanimate surfaces and inanimate surfaces to plants. This product is for surfaces such as packing house conveyors and harvesting equipment and containers. This product is not for treatment of infected plants.

PERACLEAN® 5 is an effective against microoganisms such as Xanthomonas campestris (axonopodis) pathovars cirumelo (citrus canker surrogate)

1. Remove gross contamination with a cleaner or suitable detergent and rinse with potable water.
2. Use PERACLEAN® 5 at a dilution of 9.9 to 16.0 fl. oz per 50 gallons of water (85-137.2 ppm peroxyacetic acid and 460-742 ppm of hydrogen peroxide) as a general course spray.
3. Allow to contact surface for at least one minute.
4. Allow to air dry, do not rinse.

TO PREVENT AND CONTROL ALGAE AND CYANOBACTERIA IN WATERS(NOT APPROVED IN THE STATE OF CALIFORNIA).

Use PERACLEAN® 5 to suppress, control and prevent algae and cyanobacteria in the following waters: Ponds, Lakes, Lagoons, Water Gardens, Ornamental Pools/Ponds, Ornamental Waterfalls, Fountains, Bird Baths, Irrigation Ponds, Rice/Wild Rice Fields and Paddies, Farm Ponds, Impounded Waters, Bilge Water, Reservoirs, Waterways, Conveyance Ditches, Canals, Laterals, Drainage Systems, Catch Basins, Sewage Lagoons and Pits, Feedlot Run-Off Lagoons, Sewage Systems, Fire Ponds, Watering Tanks, Storage Tanks, Water Collectors.

DETERMINING WATER VOLUME

Measure length (L), width (W), and average depth (D) in feet (ft) or meters (m) and calculate volume using one of the following formulas:

Square/Rectangular:

$L(ft) \times W(ft) \times D(ft) \times 7.5 = \text{Gallons}$
 $L(m) \times W(m) \times D(m) \times 1,000 = \text{Liters}$

Circular/Elliptical:

$L(ft) \times W(ft) \times D(ft) \times 5.9 = \text{Gallons}$
 $L(m) \times W(m) \times D(m) \times 786 = \text{Liters}$

Avg. Length (ft) x Avg. Width (ft) = acres

43,560

APPLICATION RATES

Apply PERACLEAN® 5 at the rate of 3.0-30.8 gallons per acre-ft of water. Use higher rates when existing algae density is high (algae blooms) and/or when dealing with resistant algae types.

Algae/ Growth Density	Gallons GreenClean® Liquid 5.0 Per Acre Foot
Low Density	3.0
Moderate Density	7.7
High Density	13.8
Extreme Density (full bloom)	30.8

APPLICATION METHODS

In bodies of water where an aerator is available, and when treating the entire water volume, apply at the edges, or in the turbulence created while the aerator runs to facilitate rapid and adequate mixing.

SPOT TREATMENT: Apply PERACLEAN® 5 directly over the infested area. Re-treatment is required when heavy growth occurs.

LIQUID TREATMENT: Surface spray (or inject) spray solution on the water surface from shore or a boat equipped with aquatic spray or injection equipment. Use a rate up to 24 gallons per acre-foot for surface spray or injection treatment. Use in accordance with manufacturer's spray equipment instructions.

INJECTION TREATMENT: Inject solution into the water via a piping system.

GENERAL TREATMENT NOTES

- Control is best achieved when algae are not yet well established. Treat in early spring or summer when growth first begins to appear.
- The application rates are variable and depend upon algae species, water hardness, and amount of algae present.
- Use higher application rates for filamentous algae (pond scum) and lower application rates for planktonic algae. If there is uncertainty about the application rate begin with a lower application rate and increase until control is achieved or until maximum allowable level has been reached.
- Treatment of algae can result in oxygen loss from the decomposition of dead or decaying algae. Begin treatment along the shore and proceed outward in bands to allow fish to move into untreated areas. In regions where ponds freeze in winter, treatment should be done 4 to 6 weeks before expected freeze to prevent masses of decaying algae under an ice cover.
- Apply early in the day under calm, sunny conditions, when water temperatures are warm. Sunlight and higher temperatures both enhance activity.
- Apply evenly over the water surface directly over the algae to be treated.
- Break up any heavy floating algae mats before or during application.
- If using in conjunction with other water additives (such as bacteria or enzymes), always apply PERACLEAN® 5 first and wait 48 hours before adding any other products.
- Re-treat areas if re-growth begins to appear. Allow 48 hours between consecutive treatments.
- Maintain an algae free pond with maintenance rates at a frequency appropriate for your environmental conditions.
- Jar test first when tank mixing with copper based chemistries. Spray tank must be clean to begin mixing. Vent cap to allow oxygen release.

ALGAE CONTROL IN RICE/WILD RICE FIELDS AND PADDIES (NOT APPROVED IN THE STATE OF CALIFORNIA)

Use PERACLEAN® 5 to suppress/control algae in rice fields and paddies. Apply PERACLEAN® 5 at a rate of 6.3-12.6 gallons of PERACLEAN® 5 per surface acre using conventional sprayer equipment or aerial application. This is equivalent to 12.48-21.7 ppm of hydrogen peroxide and 2.5 - 5.0 of peroxyacetic acid per surface acre of water with a 5 inch depth. Apply at the first signs of algae. Applications are most effective when made before rice rises to the water surface. Apply PERACLEAN® 5 as needed to control and prevent algae growth; apply more often in times of higher water temperatures.

STOCK TANKS AND LIVESTOCK WATER (NOT APPROVED IN THE STATE OF CALIFORNIA)

Use PERACLEAN® 5 to suppress/control algae, odor causing and slime-forming bacteria and sulfides in stock tanks, stock watering ponds, tanks and troughs, and livestock water. Apply 1.29-6.48 fluid ounces of PERACLEAN® 5 per 250 gallons of water (2 - 11 ppm of 100% peroxyacetic acid) for algae control. Product can be simply added to the body of water. Where existing algae mats are present at time of treatment, the most effective control will be obtained by breaking up mats and/or evenly dispersing diluted PERACLEAN® 5 over the algae mats. Apply PERACLEAN® 5 as needed to control and prevent algae growth; apply more often in times of higher water temperature.

DRIP SYSTEM APPLICATION FOR LIVESTOCK WATERING TANKS:

Tanks fed by a continuous flow of spring or well water can be equipped with a chemical drip system designed to meter-in PERACLEAN® 5 based upon water flow rates. Pre-dilute PERACLEAN® 5 at a 1 :245 rate or 4-ml/minute water flow rate. Treat continuously or as needed to control and prevent algal regrowth.

SEWAGE WATER TREATMENT (NOT APPROVED IN THE STATE OF CALIFORNIA)

Use PERACLEAN® 5 for the control of bacteria and the malodors caused by hydrogen sulfide gas. Application rates may vary depending on amounts of organic matter (sewage) in lagoons and pits. Pour PERACLEAN® 5 directly from the container into pit or lagoon at several locations to aid in dispersal. Use 1.296 gallons of PERACLEAN® 5 for 60,000 gallons (8,000 cubic feet) of sewage. For best results, disperse PERACLEAN® 5 evenly throughout sewage. Odors should be noticeably reduced in 1-2 weeks. Repeat application when odor reappears. For lagoons, wait 24 hours before adding beneficial bacteria.

IRRIGATION CONVEYANCE SYSTEMS AND OTHER MOVING WATER (NOT APPROVED IN THE STATE OF CALIFORNIA)

Use PERACLEAN® 5 to suppress/control algae in flowing water systems. Apply PERACLEAN® 5 at first signs of algae as needed to control and prevent algae growth. Apply more often in times of higher water temperatures. Distance of control down the waterway will vary depending upon density of growth and water flow rates (C.F.S.). Inject PERACLEAN® 5 for a minimum of 4 hours. Treatments of longer duration or more frequent intervals along the channel may be necessary.

Prior to treatment it is important to accurately determine water flow rates. In the absence of weirs, orifices, or similar devices which give accurate water flow measurements, volume of flow may be estimated by the following formula:

Average Width (feet) x Average Depth x Velocity* (feet/second) x 0.9 = Cubic Feet per Second (C.F.S.)

* Velocity is the time it takes for a floating object to travel a given distance. Dividing the distance traveled (feet) by the time (seconds) will yield velocity (feet/second). This measurement should be repeated at least three times at the intended application site and then averaged.

After accurately determining the water flow rate in C.F.S., find the corresponding application rate of PERACLEAN® 5 in the chart below.

Algae/ Growth Density	Application Rate per C.F.S.
Low Density	0.525 gallons
Moderate Density	1.08 gallons
High Density	1.62 gallons
Extreme Density (full bloom)	2.16 gallons

CHEMIGATION GENERAL REQUIREMENTS(NOT APPROVED IN THE STATE OF CALIFORNIA) -

1. Apply this product only through a drip system or sprinkler including center pivot, lateral move, end tow, side(wheel) roll,traveler, big gun, sun, solid set, hand move flood (basin) furrow border or drip (trickle) irrigation systems. Do not apply this product through any other type of irrigation system.
2. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.
3. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.
4. Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.
5. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.
6. Posting of areas to be chemigated is required when 1) any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps, businesses, day care centers, hospitals, in patient clinics, nursing homes or any public areas such as schools parks, playgrounds, or other public facilities not including public roads, or 2) when the chemigated area is open to the public such as golf courses or retail greenhouses.
7. Posting must conform to the following requirements. Treated areas shall be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive areas. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any other location affording maximum visibility to sensitive areas. The printed side of the sign should face away from the treated area towards the sensitive area. The signs shall be printed in English. Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared.signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period.
8. All words shall consist of letters at least 2.5 inches tall, and all letters and the symbol shall be a color which sharply contrasts with their immediate background. At the top of

the sign shall be the words KEEP OUT, followed by an octagonal stop sign symbol at least 8 inches in diameter containing the word STOP. Below the symbol shall be the words PESTICIDES IN IRRIGATION WATER.

SPECIFIC REQUIREMENTS FOR CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS (NOT APPROVED IN THE STATE OF CALIFORNIA)

Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

9. Chemigation systems connected to public water systems must contain a functional, reduced pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPA the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.
- 10.The pesticide injection pipeline must contain a functional, automatic, quick closing check valve to prevent the flow of fluid back toward the injection pump.
11. The pesticide injection pipeline must contain a functional normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
12. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.
- 13.Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.
- 14.Do not apply when wind speed favors drift beyond the are intended for treatment.
- 15.The pesticide injection pipeline must contain a functional, automatic, quick closing check valve to prevent the flow of fluid back toward the injection pump.
- 16.The pesticide injection pipeline must contain a functional normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- 17.The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- 18.The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
- 19.Systems must use a metering pump, such as a positive

displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

20.Do not apply when wind speed favors drift beyond the are intended for treatment.

SPECIFIC REQUIREMENTS FOR FLOOD (BASIN), FURROW AND BORDER CHEMIGATION AND FOR DRIP (TRICKLE) CHEMIGATION (NOT APPROVED IN THE STATE OF CALIFORNIA)

Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from backflow if water flow stops.

- 21.The systems utilizing a pressurized water and pesticide injection system must meet the following requirements:
 - a. The system must contain a functional check valve, vacuum relief valve and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
 - b. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
 - c. The pesticide injection pipeline must contain a functional normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
 - d. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
 - e. The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.
 - f. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

APPLICATION INSTRUCTIONS (NOT APPROVED IN THE STATE OF CALIFORNIA)

1. Remove scale, pesticide residues, and other foreign matter from the chemical supply tank and entire injector system. Flush with clean water. Failure to provide a clean tank, void of scale or residues may cause product to lose effectiveness or strength.
2. Determine the treatment rates as indicated in the directions for use and make a proper dilutions.
3. Prepare a solution in the chemical tank by filling the tank with the required water and then adding product as required. The product will immediately go into solution without required agitation.
4. PERACLEAN® 5 may be applied in conjunction with other pesticides or fertilizers. Agricultural chemicals may perform in an unpredictable manner when tank mixed, especially where several products are involved. Conduct a compatibility jar test before mixing a whole tank. Because of the eewide variety of possible combinations swich can be encountered, observe all precautions and limitations on the labels of all products used in mixtures.



Manufactured by:
Evonik Corporation
299 Jefferson Rd
Parsippany, New Jersey 07054-0677



HARD SURFACE DISINFECTION

PERACLEAN® 5 disinfects as it cleans in one operation. PERACLEAN® 5 can be used to disinfect floors, walls and other hard nonporous surfaces such as tables, chairs, countertops, bathroom fixtures, sinks, bed frames, shelves, racks, carts, refrigerators, coolers, tile and use sites on this label made from linoleum, vinyl, non-porous glazed porcelain, plastic (such as polypropylene and polyethylene), stainless steel, or glass.

COMBINATION DISINFECTION AND CLEANING

PERACLEAN® 5 is effective against *Staphylococcus aureus*, *Salmonella choleraesuis* [(ATCC10708)], *Trichophyton mentagrophytes* [(ATCC 9533)], and *Escherichia coli* 0157:H7[(ATCC 35150)] at 0.23% (1.5 fl. oz./5 gal.) in hard water (400 ppm as CaCO3) and 5% fetal bovine serum on hard nonporous surfaces. For heavily soiled areas a pre-cleaning step is required. Apply solution with mop, cloth, sponge, brush, scrubber, or coarse spray device, or by soaking so as to wet all surfaces thoroughly. Allow to remain wet for 10 minutes, then remove solution and entrapped soil with a clean wet mop, cloth, or wet vacuum pickup. Prepare a fresh solution daily or when it becomes soiled or diluted.

When used as directed, PERACLEAN® 5 is specifically designed to disinfect, deodorize and clean inanimate, hard, surfaces such as walls, floors, sink tops, and furniture. In addition PERACLEAN® 5 will deodorize those areas which are generally hard to keep smelling fresh such as, garbage storage areas, empty garbage bins and cans, and any other areas which are prone to odors caused by microorganisms.

All treated equipment that will contact food, feed, or drinking water must be rinsed with potable water before reuse.

For heavily soiled areas, a pre-cleaning step is required. Prepare a fresh solution for each use.

BATCH SANITIZATION (NON-FOOD CONTACT SURFACES) OF ULTRA FILTRATION AND REVERSE OSMOSIS (RO) MEMBRANES (NOT APPROVED IN THE STATE OF CALIFORNIA)

PERACLEAN® 5 can be used for the sanitization of ultra filtration, medical and non-medical institutional/industrial reverse osmosis (RO) membranes and their associated distribution systems.

This product has been shown to be an effective disinfectant when tested by AOAC and EPA methods. This product may not eliminate all vegetative microorganisms in reverse osmosis membranes and their associated piping systems due to their construction and/or assembly, but can be relied upon to reduce the number of microorganisms to acceptable levels when used as directed. Check with equipment manufacturer for membrane compatibility with PERACLEAN® 5.

Remove biological or organic fouling from the membrane or other parts of the system with an appropriate cleaner. Flush the system with RO permeate or similar quality water. Remove mineral deposits with suitable acidic cleaner prior to sanitizing the membranes with PERACLEAN® 5. Flush the system again with the RO permeate or similar quality water. Prepare an appropriate volume of 1% solution of the product (1 gallon of PERACLEAN® 5 to 100 gallons of water). This will provide 549 ppm of peroxyacetic acid and 2,967 ppm hydrogen peroxide. Fill the entire water circuit to be sanitized with the dilute solution and allow the solution to reach a minimum of 20°C (68°F). Re-circulate the dilute solution of PERACLEAN® 5 for a minimum of 10 minutes. Allow membrane elements to soak in the solution for a minimum of 20 minutes. Rinse the RO system and test for residuals to ensure that there is less than 3 ppm peroxxygen. Diverting product water to drain can reduce residuals.

BATCH SANITIZATION (NON-FOOD CONTACT SURFACES) OF PIPING SYSTEMS ASSOCIATED WITH RO MEMBRANES (NOT APPROVED IN THE STATE OF CALIFORNIA)

Isolate incompatible equipment from piping system. This includes activated carbon filters and ion exchange equipment. Turn off power to ultraviolet light units. Estimate total volume of water contained in the system (tanks, rinse stations and piping). Prepare an appropriate volume of 1.0 to 1.5% PERACLEAN® 5 by adding 1.0 to 1.5 gallons of the product for every 100 gallons of solution prepared. Use RO permeate or similar quality water for dilution. This will provide 549 to 823 ppm peroxyacetic acid and 2,967 to 4,450 ppm hydrogen peroxide. Re-circulate the dilute PERACLEAN® 5 solution through the system for a minimum of 4 hours. Process usage valves should be opened and closed to expose internals to the PERACLEAN® 5. Completely drain the system of dilute PERACLEAN® 5 solution. Thoroughly rinse the system by filling with RO permeate or similar quality water and re-circulate before drainage. Repeat the process until test for residuals indicates there is less than 3 ppm peroxxygen.

CONTINUOUS/INTERMITTENT ADDITION TO MINIMIZE THE ACCUMULATION OF BIOLOGICAL MATTER BETWEEN INTERMITTENT SANITIZING EPISODES IN PIPING SYSTEMS ASSOCIATED WITH RO MEMBRANES. (NOT APPROVED IN THE STATE OF CALIFORNIA)

Do Not Use for Any Applications Involving Food or Drinking Water Contact.

PERACLEAN® 5, as received or diluted, may be added continuously to the feed water system, between system sanitizing episodes, to aid in minimizing the re-growth/accumulation of biological matter. The peroxygen residual in the system which will be effective will vary with the design and usage characteristics of the system. Adjust the addition rate of PERACLEAN® 5 or the solution and periodically monitor residual peroxygen so that the desired effect is obtained. For continuous addition, do not exceed 20 ppm (1 fl. oz. of product per 440 gallons of water) PERACLEAN® 5. This will give 1 ppm peroxyacetic acid and 5.3 ppm hydrogen peroxide. For intermittent feed, do not exceed 2,000 ppm (23 fl. oz. of product per 100 gallons of water) PERACLEAN® 5. This will give 100 ppm peroxyacetic acid and 530 ppm hydrogen peroxide.

DISINFECTION OF POULTRY PREMISES, TRUCKS, COOPS, AND CRATES

POULTRY HATCHERY DISINFECTION

Remove all poultry and feeds from premises, trucks, coops and crates. Remove all litter and droppings from floors, walls and surfaces of facilities occupied or traversed by poultry. Empty all troughs, racks and other feeding and watering appliances. Thoroughly clean all surfaces with a detergent and rinse with water. Saturate surfaces with a 0.23% (1.5 fl. oz./5 gal.) solution of PERACLEAN® 5 for a period of 10 minutes. Ventilate buildings, coops and other closed spaces. Do not house poultry or employ equipment until treatment has been absorbed, set or dried. Thoroughly scrub treated feed racks, troughs, automatic feeders, fountains and waterers with a detergent and rinse with potable water before reuse. See your technical representative for specific recommendations for all cleaning and rinsing requirements.

DISINFECTION AND DEODORIZING OF ANIMAL HOUSING FACILITIES (BARN, KENNELS, HUTCHES, ETC.)

Do not use in milking stalls, milking parlors, or milk houses (for phenolics, cresylic acid, and pine oils). Remove animals and feed from premises, vehicles, and enclosures. Remove litter, waste matter, and gross soils from floors, walls and surfaces of barns, pens, stalls, chutes and other facilities and fixtures occupied or traversed by animals. Empty all troughs, racks and other feeding and watering equipment. Thoroughly clean all surfaces with detergent and rinse with water. Saturate surfaces with a 0.23% (1.5 fl. oz./5 gal.) solution of PERACLEAN® 5 for a period of 10 minutes. Immerse all halters, ropes, and other types of equipment used in handling and restraining animals, as well as forks, shovels, and scrapers used for removing litter and manure. Ventilate buildings, cars, boats, and other closed spaces. Do not house livestock or employ equipment until treatment has been absorbed, set, or dried. Thoroughly scrub all treated feed racks, mangers, troughs, automatic feeders, fountains, and waterers with soap or detergent, and rinse with potable water before reuse.

BIOFOULING CONTROL IN PULP AND PAPERMILL SYSTEMS (NOT APPROVED IN THE STATE OF CALIFORNIA)

For use in the manufacture of paper and paperboard intended for food-contact and non-food contact. PERACLEAN® 5 can be used to control bacteria, fungi, and fresh water organisms in paper, paperboard, or non-woven process water and influent water systems. Suitable dosing points include but are not limited to: stock chests, pulpers, the white water loop and white water storage systems and influent water streams.

TREATMENT FOR NON-POTABLE WATER SYSTEMS (WASH TANKS, DIP TANKS, DRENCH TANKS, EVAPORATORS, HUMIDIFICATION SYSTEMS AND/OR STORAGE TANKS) (NOT APPROVED IN THE STATE OF CALIFORNIA)

Treat water containing plant pathogens with 0.56-2.1fl. oz. of PERACLEAN® 5 for every 10 gallons of water. This will provide 24 to 85 ppm peroxyacetic acid in the use solution.

POST HARVEST SPRAY TREATMENTS ON PROCESS AND PACKING LINES (NOT APPROVED IN THE STATE OF CALIFORNIA)

Inject PERACLEAN® 5 directly into spray, misting, humidification, fogging and spray bar system make up system water on process and packing lines to prevent bacterial and fungal diseases on postharvest fruits and vegetables. Inject at a rate of .06-0.23 fl.oz of concentrate per gallon of clean water. This will provide 24 -100.0 ppm of peroxyacetic acid in the use solution. For best results, where dump tanks are used, make post harvest spray treatment as produce is leaving dump tanks.Applicable for use on all types of post harvest commodities.

FINAL SANITIZING BOTTLE RINSE

PERACLEAN® 5 may be used as a final sanitizing rinse for returnable and non-returnable bottles at a 0.16 to 0.22% dilution (1.0 to 1.5 fl. oz. PERACLEAN® 5 dissolved in 5 gallons of water). This will provide 88 to130 ppm of peroxyacetic acid.

DISINFECTION WATER SYSTEMS (NOT APPROVED IN THE STATE OF CALIFORNIA)

PERACLEAN® 5 should be fed continuously to incoming fresh water streams (non-potable use only) at dosages ranging from 10 to 978 ppm peroxyacetic acid (200 to 20,000 ppm PERACLEAN® 5).

Control of bacteria and fungi in non-food contact dispersed pigments (not approved in the State of California) PERACLEAN® 5 can be used in the control of bacteria and fungi in the manufacture and storage of dispersed pigments such as kaolin clay, titanium dioxide, calcium carbonate, calcium sulfate, barium sulfate, magnesium silicate and diatomaceous earth used in paint and paper production. Add 0.3 to 1.5 lbs. (4.1 to 20.6 fl. oz.) of PERACLEAN® 5 to each 1,000 lbs. of pigment slurry. This will provide 14.6 to 73.5 ppm peroxyacetic acid (300 to 1,500 ppm PERACLEAN® 5).

WATER PROCESS SYSTEMS (NOT APPROVED IN THE STATE OF CALIFORNIA)

Continuous Feed - PERACLEAN® 5 should be fed continuously at dosages ranging from 10 to 978 ppm peroxyacetic acid (200 to 20,000 ppm PERACLEAN® 5). This range is equivalent to 0.4 to 40 lbs. PERACLEAN® 5 per ton (dry basis) of pulp or paper produced.

• Intermittent Feed - PERACLEAN® 5 should be fed intermittently (6 to 8 times per day) at dosages ranging from 10 to 978 ppm peroxyacetic acid (200 to 20,000 ppm PERACLEAN® 5). This dosage is equivalent to 0.4 to 40 lbs. PERACLEAN® 5 per ton (dry basis) of pulp or paper produced during the feed period.

• Shock Dose - PERACLEAN® 5 should be shock dosed at dosages ranging from 98 to 1,956 ppm peroxyacetic acid (2,000 to 40,000 ppm PERACLEAN® 5). This dosage may be equivalent to 4 to 80 lbs. PERACLEAN® 5 per ton (dry basis) of pulp or paper produced during the feed period.

• Control of slime forming bacteria to cooling water systems (cooling towers evaporative condensers). (not approved in the State of California)Severely fouled systems should be cleaned before adding the PERACLEAN® 5 solution. PERACLEAN® 5 should be added in the system directly and not mixed with any other chemicals or additives. Contamination with other chemicals could result in product decomposition.

• Add PERACLEAN® 5 at a point in the system where uniform mixing and even distribution will occur.

• Use 0.3 to 1.5 lb. (4.1 to 20.6 fl. oz.) of PERACLEAN® 5 per 1,000 gallons of solution as a continuous or intermittent slug treatment. This will provide 1.8 to 8.8 ppm peroxyacetic acid (36 to 180 ppm PERACLEAN® 5). Repeat treatment as required to maintain control.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY (ONLY APPLICABLE FOR AGRICULTURAL USES)

NOTICE: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions, presence of other materials or other influencing factors in the use of the product, which are beyond the control of Evonik or Seller. All such risks shall be assumed by Buyer and User, and Buyer and User agree to hold Evonik and Seller harmless for any claims relating to such factors.

Evonik warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above when used in accordance with directions under normal use conditions. This warranty does not extend to the use of the product contrary to label instructions, or under abnormal conditions or under conditions not reasonably foreseeable to or beyond the control of Seller or Evonik, and Buyer and User assume the risk of any such use. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, EVONIK MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESSED OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.**

To the extent consistent with applicable law, in no event shall Evonik or Seller be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF EVONIK AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF EVONIK OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

Evonik and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of Evonik.



Manufactured by:
Evonik Corporation
299 Jefferson Rd
Parsippany, New Jersey 07054-0677

