



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

May 15, 2023

Tiana Rosamilia
Evonik Corporation
Electronic Transmittal: tiana.rosamilia@evonik.com

Subject: PRIA Label Amendment – Add virucidal disinfectant claims and removal of EVP
Product Name: Peraclean 15
EPA Registration Number: 54289-4
Received Date: 2/3/2022
Action Case Number: 00338976

Dear Tiana Rosamilia:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

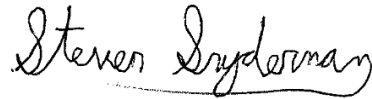
A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. Pursuant to 40 CFR 156.10(a)(6), you must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under FIFRA and is subject to review by the Agency. See FIFRA section 2(p)(2). If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) lists examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process, FIFRA section 12(a)(1)(B). Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Assurance.

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Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions, please contact Stacey Grigsby via phone at 202-566-0821, or by email at grigsby.stacey@epa.gov.

Sincerely,

A handwritten signature in black ink that reads "Steven Snyderman". The signature is written in a cursive style with a horizontal line underneath the name.

Steven Snyderman, Product Manager 33
Regulatory Management Branch II
Antimicrobials Division (7510M)
Office of Pesticide Programs

Enclosure: Stamped Final Label

PERACLEAN® 15

ACCEPTED

05/15/2023

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 54289-4

EPA Reg. No. 54289-4 version 2
EPA Est. 70253-CA-001, 70547-IL-001

ACTIVE INGREDIENTS:

Hydrogen Peroxide 22.0%
Peroxyacetic Acid 15.0%

OTHER INGREDIENTS: 63.0%

TOTAL: 100%

KEEP OUT OF REACH OF CHILDREN DANGER

[Note to Reviewer: In accordance with 40 CFR 156.68(d), all first aid statements, as prescribed, will appear on the front panel of the product label.]

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

(PEROXYACETIC ACID SOLUTION) PERACLEAN® 15 IS A PEROXYACETIC ACID-BASED SANITIZER/DISINFECTANT DEVELOPED FOR THE FOLLOWING USES:

Institutional/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:

- Hospitals
- Health Care Facilities
- Schools
- Colleges
- Veterinary Clinics
- Animal Life Science Laboratories
- Industrial Facilities
- Office Buildings
- Recreational Facilities
- Retail and Wholesale Establishments

Non-public Health Bacteria, Fungi, and Slime Control in:

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



Manufactured by:

Evonik Corporation

299 Jefferson Rd.

Parsippany, New Jersey 07054-0677



Net Contents as stated on container

First Aid

Have the product container or label with you when calling a poison control center or doctor, or going for treatment.

If in eyes

- Hold eye open and rinse slowly and gently with water for 15-20 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 15-20 minutes.
- Call a 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 Coveralls worn over long-sleeved shirt and long pants, socks, chemical-resistant footwear, waterproof or chemical-resistant gloves, a NIOSH approved respirator with any N, R, P filter with NIOSH approval number prefix TC-84A; or a NIOSH- approved powered air purifying respirator with an HE filter, with NIOSH approval number prefix TC-21c. 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 or Chemical Hazards

STRONG OXIDIZING AGENT. CORROSIVE. Mix only with water. Product must be diluted in accordance with label directions prior to use. PERACLEAN® 15 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 Reg Office of the US Environmental Protection Agency.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Wear Coveralls worn over long-sleeved shirt and long pants, socks, chemical-resistant footwear, waterproof or chemical resistant gloves, a NIOSH approved respirator with any N, R, P filter with NIOSH approval number prefix TC-84A; or a NIOSH-approved powered air purifying respirator with an HE filter, with NIOSH approval number prefix TC-21c.

Bactericidal, Virucidal Δ , Fungicidal, Tuberculocidal For use on hard, non-porous surfaces.

SANITIZATION

NOTE: FOR MECHANICAL OPERATIONS prepared use solution may not be used for subsequent sanitizing but may be reused for other purposes such as cleaning.

FOR MANUAL OPERATIONS fresh sanitizing solutions should be prepared at least daily or more often if the solution becomes diluted or soiled. PERACLEAN® 15 peroxyacetic acid sanitizer is recommended for use on precleaned surfaces such as equipment, pipelines, tanks, vats, fillers, evaporators, pasteurizers and aseptic equipment in dairies, breweries, wineries, beverage and food processing/packing plants, egg processing/packing equipment surfaces, and eating establishments. This product is effective as a sanitizer when solution is prepared in water of up to 400 ppm hardness as CaCO₃. This product has demonstrated a 99.999% reduction of survivors after a 30 second exposure period in the AOAC Germicidal and Detergent Sanitizing Action of Disinfectants study.

SANITIZING FOOD CONTACT SURFACES: Effective against *Staphylococcus aureus* [(ATCC 6538)] and *Escherichia coli* [(ATCC11229)], and *Listeria monocytogenes* [(ATCC 19117)].

Prior to sanitizing, remove visible food particles, then wash with a detergent solution, followed by a potable water rinse. Sanitize with a concentration of 0.33- 1.87 fluid ounce PERACLEAN® 15 dissolved in 5 gallons of water (0.053% v/v concentration). This will provide 88- 500 ppm of peroxyacetic acid. At this dilution PERACLEAN® 15 is effective against *Staphylococcus aureus* and *Escherichia coli*. For use against *Listeria monocytogenes* prepare a sanitizing solution by adding 0.85 fl. oz. PERACLEAN® 15 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. Surfaces should remain visibly wet for the duration of the contact time. Drain thoroughly. Do not rinse.

SANITIZING, EATING, DRINKING, AND FOOD PREP

UTENSILS: Remove gross food particles by a prescrape, a preflush and, when necessary, a presoak treatment. Wash with a recommended detergent. Rinse with clean water. Sanitize in a solution of 0.33- 1.87 fluid ounce PERACLEAN® 15 dissolved in 5 gallons of water. Immerse all utensils for at least 60 seconds or contact time specified by governing sanitary code. Surfaces should remain visibly wet for the duration of the contact time. Drain and air dry.

SANITIZING TABLEWARE: For sanitizing tableware in low temperature warewashing machines, inject PERACLEAN® 15 into the final rinse water at a concentration of 0.33 - 1.87 fluid ounce PERACLEAN® 15 dissolved in 5 gallons of water. Do not exceed 500 ppm. This will provide 88- 500 ppm of peroxyacetic

acid. Surfaces should remain visibly wet for the duration of the contact time. Air dry.

To insure that the PERACLEAN® 15 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.

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

PERACLEAN® 15 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 according to AOAC. 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® 15.

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® 15. Flush the system again with the RO permeate or similar quality water. Prepare an appropriate volume of 1% solution of the product 42.52 fl. oz of PERACLEAN® 15 to 100 gallons of water. This will provide 568 ppm of peroxyacetic acid and 833.1 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). Recirculate the dilute solution of PERACLEAN® 15 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 per oxygen. Diverting product water to drain can reduce residuals.

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

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 0.33 to 0.5% PERACLEAN® 15 by adding 41.47-62.88 fl oz of the product for every 100 gallons of solution prepared. Use RO permeate or similar quality water for dilution. This will provide 554 to 840 ppm peroxyacetic acid and 812.5 to 1232 ppm hydrogen peroxide. Recirculate the dilute PERACLEAN® 15 solution through the system for a minimum of 4 hours. Process usage valves should be opened and closed to expose internals to the PERACLEAN® 15. Completely drain the system of dilute PERACLEAN® 15 solution. Thoroughly rinse the system by filling with RO permeate or similar quality water and recirculate before drainage. Repeat the process until test for residuals indicates there is less than 3 ppm peroxygen.

(NOT APPROVED IN THE STATE OF CALIFORNIA) CONTINUOUS/INTERMITTENT ADDITION TO MINIMIZE THE ACCUMULATION OF BIOLOGICAL MATTER BETWEEN

INTERMITTENT SANITIZING EPISODES IN PIPING SYSTEMS ASSOCIATED WITH RO MEMBRANES (NON-FOOD CONTACT SURFACES):

PERACLEAN® 15, as received or diluted, may be added continuously to the feed water system, between system sanitizing episodes, to aid in minimizing the regrowth/ 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® 15 or the solution and periodically monitor residual peroxygen so that the desired effect is obtained. For continuous addition, do not exceed 7 ppm peroxyacetic acid (0.33 fluid ounce of product per 440 gallons of water) PERACLEAN® 15. This will give 1 ppm peroxyacetic acid and 1.4 ppm hydrogen peroxide. For intermittent feed, do not exceed 750 ppm (8.5 fluid ounces of product per 100 gallons of water) PERACLEAN® 15. This will give 110 ppm peroxyacetic acid and 160 ppm hydrogen peroxide.

HARD SURFACE DISINFECTION:

PERACLEAN® 15 disinfects as it cleans in one operation. PERACLEAN® 15 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, glazed tile, linoleum, vinyl, non-porous glazed porcelain, plastic (such as polypropylene and polyethylene), stainless steel, or glass. Refrigerators and coolers should be at room temperature for treatment

COMBINATION DISINFECTION AND CLEANING:

PERACLEAN® 15 is effective against *Staphylococcus aureus*, *Salmonella choleraesuis*, *Pseudomonas aeruginosa*, *Trichophyton interdigitale*, and *Escherichia coli* O157:H7 at 0.08% 0.5 fl. oz./5 gal. in hard water (400 ppm as CaCO₃) and 5% fetal bovine serum on hard nonporous surfaces which will provide 137 ppm peroxyacetic acid. For visibly 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 visibly wet for 10 minutes, then remove solution and entrapped soil with a clean wet mop, cloth, or wet vacuum pickup. Surfaces should remain visibly wet for the duration of the contact time. Prepare a fresh solution daily or when it becomes soiled or diluted.

PERACLEAN® 15 is designed for use in animal hospitals, animal laboratories, kennels, pet shops, zoos, pet animal quarters, poultry premises, poultry hatcheries (not eggs) and livestock quarters. When used as directed, PERACLEAN® 15 is specifically designed to disinfect, deodorize and clean inanimate, hard, surfaces such as walls, floors, sink tops, furniture, operating tables, kennel runs, cages, and feeding and watering equipment. In addition, PERACLEAN® 15 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 visibly soiled areas, a pre-cleaning step is required. Prepare a fresh solution for each use. Surfaces should remain visibly wet for the duration of the contact time.

(NOT APPROVED IN THE STATE OF CALIFORNIA) DISINFECTION OF POULTRY PREMISES, TRUCKS, COOPS AND CRATES:

POULTRY HATCHERY DISINFECTION: Not for hatching eggs. 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 0.08% (0.5 fl. oz./5 gal.) solution of PERACLEAN® 15 for a period of 10 minutes. Surfaces should remain visibly wet for the duration of the contact time. 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.

(NOT APPROVED IN THE STATE OF CALIFORNIA) 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 a detergent and rinse with water. Saturate surfaces with a 0.08% 0.5 fl. oz./5 gal. solution of PERACLEAN® 15 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.

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

For use in the manufacture of paper and paperboard intended for food-contact and non-food contact.

PERACLEAN® 15 can be used to control bacteria, fungi, and freshwater organisms in paper, paperboard, or nonwoven 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.

CONTAMINATION WITH OTHER CHEMICALS COULD RESULT IN PRODUCT DECOMPOSITION.

- Add PERACLEAN® 15 at a point in the system where uniform mixing and even distribution will occur.
- Use 0.1 to 0.5 lb. (1.4 to 6.85 fl. oz.) of PERACLEAN® 15 per 1000 gallons of solution as a continuous or intermittent slug treatment. This will provide 1.8 to 9 ppm peroxyacetic acid (12 to 60 ppm PERACLEAN® 15). Repeat treatment as required to maintain control.

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), *Byssoschlamys fulva* (ATCC 10099), *Pediococcus damnosus* (ATCC 29358), *Lactobacillus buchneri* (ATCC 4005), and *Saccharomyces cerevisiae*.

1. Prepare PERACLEAN® 15 solution by adding 9.85 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. (ATCC 47058)
3. Allow containers to drain thoroughly, and then rinse with sterile or potable water.

TREATMENT OF FRUIT AND VEGETABLE PROCESS WATER SYSTEMS:

PERACLEAN® 15 can be used in water or ice that contacts raw or fresh, post-harvest or further processed fruits and vegetables for the control of spoilage bacteria and fungi in commercial operations and packinghouses. Batch, Continuous or Spray System Processes: Fill vessel containing fruits and vegetables with known amount of water. Ensure that water is circulating in vessel if using the submersion method. Add this product at a rate no more than 80 ppm peroxyacetic acid to the use solution. This can be accomplished by initially adding 1.0 fl. oz. per 16.4 gallons of water. The fruits and vegetables can be continuously sprayed (using coarse spray) or submerged (dipped) in the resulting solution. Periodic or continuous addition of this product to maintain the required concentration may be added as necessary. Contact time of 60 seconds is recommended to insure efficacy. A potable water rinse is not required. This product is not intended for use in primary flumes prior to the point of the first dewatering stage.

(NOT APPROVED IN THE STATE OF CALIFORNIA) AGRICULTURAL OR HORTICULTURAL USES:

There is a Restricted-Entry-Interval of zero (0) hours after the use of this product. This product should never be mixed or combined with any other pesticide or fertilizer. Upon soil contact this diluted product decomposes rapidly to oxygen, carbon dioxide and water. This product may be harmful to fish if exposed on a continuous basis at concentrations of 1 ppm or more of active peroxyacetic acid.

Meter this product into pressurized pipes using a plastic or stainless-steel injection/backflow device installed far enough upstream from the equipment to insure thorough mixing. For open flowing bodies of water, apply this product as far upstream as possible to allow adequate mixing prior to the flow entering any larger body of water. If open pouring of this product is required, pour product as close to the surface of the water as possible to reduce odor exposure.

(NOT APPROVED IN THE STATE OF CALIFORNIA) TREATMENT OF AGRICULTURAL OR IRRIGATION WATER SYSTEMS (SAND FILTERS, HUMIDIFICATION SYSTEMS, STORAGE TANKS, PONDS, RESERVOIRS, CANALS):

For the control of sulfides, odor, slime and algae in water systems, apply this product at 2-10 ppm active peroxyacetic acid. This feed rate equals 15-75 fl. oz per 10,000 gallons of water. Repeat dose as necessary to maintain control, which will vary with seasonal conditions. For prevention of algae, some systems may require continuous low-level dosing during warm sunny periods (2-5 ppm peroxyacetic acid).

(NOT APPROVED IN THE STATE OF CALIFORNIA) DRIP IRRIGATION SYSTEMS:

To clean slime and algae from drip system filters, tapes and emitters, meter this product at the rate of 7.5-15 fl. oz. per 1000 gallons of water (10-20 ppm peroxyacetic acid). When required during normal irrigation cycles, use this product at the recommended dose for a minimum of 30 minutes. Thereafter, the irrigation cycle should be discontinued, and the line should not be flushed.

FOR TREATMENT OF RAW, UNPROCESSED FRUIT AND VEGETABLE SURFACES:

PERACLEAN® 15 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 washing 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 washing process prior to, simultaneously with or after detergent wash.

1. Prepare treating solution by diluting 1 fluid ounces per 16 gallons of potable water. This will provide 85 ppm peroxyacetic acid and 125 ppm hydrogen peroxide.
2. pHase™ can be added up to 3% w/w to the treating solution to adjust the pH of the use-solution, if desired
3. Apply the treating solution using a coarse spray directed at the fruits or vegetables, or by soaking the fruits and vegetables in the solution. Allow a contact time of at least 45 seconds.
4. The treated produce can be drain dried without a potable water rinse.
5. Do not reuse solution after treatment.

FOR THE TREATMENT OF PROCESSED FRUITS AND VEGETABLES AND PROCESS WATERS TO CONTROL GROWTH OF NON-PUBLIC HEALTH MICROORGANISMS THAT CAN CAUSE SPOILAGE:

1. Prepare treating solution by diluting 1.5 fluid ounces per 25 gallons of potable water. This will provide 80 ppm peroxyacetic acid and 117 ppm hydrogen peroxide.
2. pHase™ can be added up to 3% w/w to the treating solution to adjust the pH of the use-solution, if desired.
3. Apply the treating 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
4. The treated produce can be drain dried without a potable water rinse.
5. Do not reuse solution after treatment.

FOR ANTIMICROBIAL USE WITH AQUEOUS TREATMENT FLUIDS IN SUBTERRANEAN OILFIELD AND GAS-FIELD WELL OPERATIONS SUCH AS WELL DRILLING, FORMATION FRACTURING, PRODUCTIVITY ENHANCEMENT AND SECONDARY RECOVERY:

PERACLEAN® 15 can be for control of slime forming and spoilage bacteria, yeast and fungi and anaerobic sulfate reducing bacteria, that lead to reservoir souring and metal corrosion. This product must be introduced through a closed mixed/loading and delivery transfer system equipped with a metering device that is appropriate for its intended uses.

DRILLING MUDS, FRACTURING FLUIDS, WELL SQUEEZED FLUIDS:

For the preservation of drilling muds, workover and completion fluids and other product susceptible to contamination, pre-mix with the fluid or add directly at the point of use at 3.75 fluid ounces per 1000 gallons of water (5 ppm peroxyacetic acid) to 75 fluid ounces per 1000 gallons of water (100 ppm peroxyacetic acid) as required. Depending on the severity of the contamination, initial application may be added up to 749 fluid ounces per 1000 gallons of water (1000 ppm).

FLOODING, INJECTION, AND PRODUCED WATER:

For Water Flooding operations, add initially at 3.75 fluid ounces per 1000 gallons of water (5 ppm peroxyacetic acid) to 75 fluid ounces per 1000 gallons of water (100 ppm peroxyacetic acid) and repeat until control is achieved. Subsequent treatment may be continued on a weekly basis or as required. Injection wells associated with gas storage systems may be treated up to 100 ppm when diluted in the formation water. Any additional top-up water should be treated as required. For hydrostatic systems, apply 3.75 fluid ounces per 1000 gallons of water (5 ppm peroxyacetic acid) to 75 fluid ounces per 1000 gallons of water (100 ppm peroxyacetic acid) depending on the water quality and the duration of the shut-in.

PIPELINE AND TANK MAINTENANCE:

For microbial control in water-bottoms in crude and refined hydrocarbon storage tanks, piping and transportation systems. Apply 3.75 fluid ounces per 1000 gallons of water (5 ppm peroxyacetic acid) to 75 fluid ounces per 1000 gallons of water (100 ppm peroxyacetic acid) in the aqueous phase, directly injected into the water-bottom, pipeline or may be added to the hydrocarbon phase. Treatment may be applied daily or monthly for both storage and transportation systems as needed.

FOR TREATMENT OF SEWAGE AND WASTEWATER EFFLUENTS IN TREATMENT PLANTS:

Use PERACLEAN® 15 to treat sewage and wastewater effluent related to public and private wastewater treatment plants. PERACLEAN® 15 can be applied directly to the effluent or may be used with an appropriate activator such as hydrogen peroxide or other technology. PERACLEAN® 15 may be applied to effluent water discharged from trickle bed or percolating fluidized bed filters. The application rate for individual facilities will depend on the degree of bioloading of the effluent stream to be discharged and the local microbial discharge limit. Adjust application rate to meet the need of the individual facility.

1. Add PERACLEAN® 15 to effluent water at a concentration of 0.5 ppm to 15 ppm. Allow contact time of approximately 15 to 60 minutes.
2. The maximum amount of peracetic acid that can be discharged from the treatment facility is 1 ppm. Use an appropriate peracetic acid test kit analyzer to ensure that this level is not exceeded. Contact Evonik Corporation for assistance establishing treatment regimes.

INFLUENT WATER SYSTEMS: PERACLEAN® 15 should be fed continuously to incoming freshwater streams (nonpotable use only) at dosages ranging from 10 to 975 ppm peroxyacetic acid (65 to 6500 ppm PERACLEAN® 15).

MILL PROCESS WATERS:

- Continuous Feed – PERACLEAN® 15 should be fed continuously at dosages ranging from 10 to 975 ppm peroxyacetic acid (65 to 6500 ppm PERACLEAN® 15). This range is equivalent to 0.13 to 13 lbs. PERACLEAN® 15 per ton (dry basis) of pulp or paper produced.
- Intermittent Feed – PERACLEAN® 15 should be fed intermittently (6 to 8 times per day) at dosages ranging from 10 to 975 ppm peroxyacetic acid (65 to 6500 ppm PERACLEAN® 15). This range is equivalent to 0.13 to 13 lbs. PERACLEAN® 15 per ton (dry basis) of pulp or paper produced.
- Shock Dose – PERACLEAN® 15 should be shock dosed at dosages ranging from 98 to 2048 ppm peroxyacetic acid (648 to 13,638 ppm PERACLEAN® 15). This range is equivalent to 1.3 to 27.3 lbs. PERACLEAN® 15 per ton (dry basis) of pulp or paper produced.

(NOT APPROVED IN THE STATE OF CALIFORNIA) CONTROL OF SLIME FORMING BACTERIA AND BIOFOULING IN ONCE-THROUGH AND RECIRCULATING COOLING WATER (COOLING TOWERS, EVAPORATIVE CONDENSERS, AIR WASHERS) AND ORNAMENTAL OR RECREATIONAL WATER FEATURES:

Severely fouled systems must be cleaned before adding this product. This product must be added in the water system directly, and not mixed with any other chemicals or additives. Never add this product into any feeding device, such as shot feeders, filter housings, by-pass feeders, or miscellaneous piping of any kind, because dangerous acute decomposition can occur. Discontinue

the use of chlorine or bromine products prior to using this product. Contamination with other chemicals could result in product decomposition. Add this product to only water at a point in the system where uniform mixing and even distribution will occur. For shock (slug) treatment for moderately to severely fouled systems add 5-20 fl. oz. of this product per 1000 gallons of process water (7-27 ppm peroxyacetic acid). Repeat as necessary until microbiological control is evident. Thereafter, to maintain control use 1.5-7.5 fl. oz. of this product per 1000 gallons of process water (2-10 ppm of peroxyacetic acid) as a continuous treatment method. Continuous dosing methods usually require 1.5-5 fl. oz. per 1000 gallons of water (2-7 ppm peroxyacetic acid) to achieve adequate results. Intermittent dosing treatment usually require dose cycles of a minimum once per every other day, up to 6 times per 24 hours. Recommended rates for intermittent dose cycles are 5-10 fl. oz of this product per 1000 gallons of process water (7-14 ppm peroxyacetic acid).

BACTERICIDAL*, VIRUCIDAL^A, FUNGICIDAL[∞], TUBERCULOCIDAL FOR USE ON HARD, NON-POROUS SURFACES.

APPLICATION

PERACLEAN® 15 disinfects as it cleans when used according to disinfection directions for use. PERACLEAN® 15 can be used to disinfect floors, walls, and other hard nonporous surfaces such as tables, chairs, countertops, bathroom fixtures, sinks, bed frames, doors, shelves, racks, carts, refrigerators and coolers that are at room temp for treatment) glazed tile, linoleum, vinyl, non-porous glazed porcelain, glazed ceramic, plastic (such as polypropylene and polyethylene), stainless steel, glass, aluminum, non-porous baked enamel, chrome, laminated or painted surfaces or sealed stone. PERACLEAN® 15 should not be used on marble or brass surfaces.

FOR HEALTH CARE, INSTITUTIONAL, AND INDUSTRIAL USE:

PERACLEAN® 15 may be used for surgical and obstetrical suites; housekeeping surfaces; physical therapy departments; nursing services; dental facilities; autopsy facilities; intensive care units; pharmacies; and clinical laboratories. Also, use PERACLEAN® 15 in nursing homes, other health-care facilities, schools, colleges, veterinary clinics, animal life science laboratories, industrial facilities, dietary areas, office buildings, recreational facilities, industrial facilities; hotels; retail facilities; office buildings; retail and wholesale establishments.

This product is not to be used as a terminal sterilant /high level disinfectant on any surface or instrument that (1) is introduced directly into the human body, either into or in contact with the bloodstream or normally sterile areas of the body, or (2) contacts intact mucous membranes but which does not ordinarily penetrate the blood barrier or otherwise enter normally sterile areas of the body. This product may be used to pre-clean or decontaminate critical or semi-critical medical devices prior to sterilization or high-level disinfection.

Dilute PERACLEAN® 15 with the appropriate amount of water to an effective concentration of 1135 ppm Peracetic acid and 1665 ppm hydrogen peroxide 0.85 fl. oz per 1 gallon of water. Apply solution with a cloth, mop, sponge, auto-scrubber, or hand pumped trigger sprayer such that all surfaces remain visibly wet for 1 minute to kill bacteria, viruses, and fungi as cited on the label. Use a 3-minute contact time for Streptococcus pneumoniae, and Vancomycin-Resistant Enterococcus faecalis. Use a 10-minute contact time for Tuberculocidal activity. PERACLEAN® 15 is effective against Mycobacterium bovis (TB surrogate) at ambient temperature (22°C). For Poliovirus Type 1, dilute PERACLEAN® 15 with the appropriate amount of water to an effective concentration of 3000 ppm Peracetic acid and 4400

ppm hydrogen peroxide 2.75 fl. oz per 1 gallon of water for a 3 minute contact time. Surfaces should remain visibly wet for the duration of the contact time. Allow surface to air dry. For visibly soiled areas, a preliminary cleaning is required. Prepare a fresh solution daily or more often if the use solution becomes visibly soiled clouded or diluted.

GENERAL DIRECTIONS FOR USE WITH ELECTROSTATIC SPRAYING:

Remove by-standers and pets from the area to be treated. Do not use for treatment of humans, air, or for fumigation. Spray droplet particle size should set to a limit volume median diameter of ≥40µm. Plan the spray routine to minimize unnecessary exposure to treated areas (for example, begin applying product in the back of the room/area and work towards the front of the room/area). Place the electrostatic spray function in the ON position for electrostatic spray models that have the functionality to toggle ON/OFF. Once treatment is completed, allow 10 to 15 minute resettling time before reentry to the treated space. Consider material compatibility and potential for damage prior to application. Note: Electrostatic spraying is not approved for Mycobacterium bovis (Tuberculosis surrogate), Candida albicans and Trichophyton interdigitale.

FOR USE AS A (MULTI-SURFACE) ONE-STEP CLEANER AND DISINFECTANT BY ELECTROSTATIC SPRAYING:

To disinfect hard, non-porous surfaces, refer to use directions. For visibly soiled areas, pre-cleaning is required. Apply use solution with electrostatic sprayer to hard, non-porous environmental surfaces. Spray approximately 8 to 15 inches from the surfaces; making sure to wet surfaces for 5 seconds or until the surface is thoroughly wet. All surfaces must remain visibly wet for the required contact time indicated in the directions for use, reapplying if necessary. Air dry after use. When using on food contact surfaces, thoroughly rinse all treated surfaces with potable water. This (cleaner) (disinfectant) combines cleaning and disinfecting (in one product) (in one-step).

FOR USE AS A VIRUCIDE ^Δ WITH ELECTROSTATIC SPRAYING:

Refer to use directions. For visibly soiled areas, pre-cleaning is required. Apply use solution with electrostatic sprayer to hard, non-porous environmental surfaces. Spray approximately 8 to 15 inches from the surfaces; making sure to wet surfaces for 5 seconds or until the surface is thoroughly wet. All surfaces must remain visibly wet for the required time indicated in the directions for use, reapplying if necessary. Air dry after use. When using on food contact surfaces, thoroughly rinse all treated surfaces with potable water.

This product is not for use on medical device surfaces. (OR) Kills HIV-1 (AIDS Virus), HBV (Hepatitis B), and HCV(Hepatitis C): On pre-cleaned environmental surfaces/objects previously soiled with blood/body fluids in health care settings or other settings in which there is an expected likelihood of soiling of surfaces/ objects with blood or body fluids, and in which the surfaces / objects likely to be soiled with blood or body fluids can be associated with the potential for transmission of Human Immunodeficiency virus Type 1 (HIV-1) (associated with AIDS), Hepatitis B Virus, or Hepatitis C Virus. Special Instructions for cleaning and decontamination against HIV-1 (AIDS Virus), HBV (Hepatitis B), and HCV(Hepatitis C) of surfaces/ objects soiled with blood/body fluids. Personal Protection: Disposable protective gloves, gowns, face masks, or eye coverings as appropriate must be worn during all cleaning of body fluids, blood, and decontamination procedures. Cleaning Procedure: Blood and other body fluids must be thoroughly cleaned from surfaces and objects before application. Contact Time: HIV-1, HBV, and HCV are inactivated after 1 minute of contact.

INFECTIOUS MATERIAL:

Blood and other bodily fluids should be autoclaved and disposed of according to federal, state and local regulations for infectious waste disposal.

PERACLEAN® 15 IS EFFECTIVE AGAINST THE FOLLOWING ORGANISMS

in 1 minute with 5% organic soil load and 400ppm hard water: For use on hard, non-porous surfaces. Ω Contact time is increased to 10 minutes to be effective against Mycobacterium bovis (Tuberculosis surrogate). § Contact time is increased to 3 minutes to be effective against Streptococcus pneumoniae, Vancomycin resistant Enterococcus faecalis (VRE) and Poliovirus Type 1

Bacteria*	Human virusesΔ
Acinetobacter baumannii ATCC 19606	Herpes simplex virus Type 1 ATCC VR-260
Community-associated MRSA, USA300 strain (CA-MRSA) CI 08001	Herpes simplex virus Type 2 ATCC VR-734
	Human immunodeficiency virus type 1 (HIV-1) (Zeptomatrix Corporation)
Escherichia coli O157:H7 ATCC 35150	
Klebsiella pneumoniae ATCC 4352	Human Influenza A virus (A/Hong Kong/8/68-H3N2) SPAFAS
Listeria monocytogenes ATCC 19111	Human Rotavirus ATCC VR-2018
Methicillin-resistant Staphylococcus aureus (MRSA) ATCC 33592	Poliovirus Type 1§ ATCC 1562
Methicillin-resistant Staphylococcus epidermidis (MRSE) ATCC 51625	Respiratory Syncytial Virus ATCC VR-26
Mycobacterium bovis (TB surrogate)Ω (Organon Teknika Corp)	Rhinovirus Type 37 ATCC 1147
Pseudomonas aeruginosa ATCC 15442	Vaccinia virus ATCC VR-156
	Human Coronavirus strain 229e ATCC VR-740
Salmonella enterica ATCC 10708	
Salmonella enterica serovar Typhimurium ATCC 13311	Bovine viral diarrhea virus (Human Hepatitis C surrogate) (American Bioresearch Laboratories)
Serratia marcescens ATCC 13880	Duck hepatitis B virus (Human Hepatitis B surrogate) (Hepanda Virus Testing)
Shigella dysenteriae serotype 1 ATCC 29026	Feline calicivirus (Norovirus surrogate) (University of Ottawa)
Staphylococcus aureus ATCC 6538	
Streptococcus pneumoniae§ ATCC 6304	Animal virusesΔ
Streptococcus pyogenes ATCC 19615	Avian influenza A (Turkey/Wis/66-H9N2) SPAFAS
Vancomycin-intermediate Staphylococcus aureus (VISA) ATCC 700787	
Vancomycin-resistant Enterococcus faecalis (VRE) § ATCC 51575	Fungi ∞
Vibrio cholerae ATCC 14035	Candida albicans ATCC 10231
Yersinia enterocolitica ATCC 35669	Trichophyton interdigitale ATCC 9533

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in original containers in a cool, well-ventilated 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: Nonrefillable 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 LESS THAN 5 GALLONS: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container $\frac{1}{4}$ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

CONTAINERS GREATER THAN 5 GALLONS: Triple rinse (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or mix tank. Fill the container $\frac{1}{4}$ full with water. Replace and tighten closures. Tip the container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand container on its end and tip back and for the several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use of disposal. Repeat the procedure two more times. Then offer for recycling or dispose in a sanitary landfill, or by incineration, if allowed by state and local authorities by burning.