

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

March 27, 2017

Sheryl Lindros Dolan Consultant Evonik Corporation 299 Jefferson Road Parsippany, NJ 07054

Subject: Label Amendment – Updating dosage directions and adding a new use site

Product Name: Peraclean 15 (Peroxyacetic Acid Solution)

EPA Registration Number: 54289-4

Application Date: 10/18/16 Decision Number: 523407

Dear Ms. Dolan:

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. 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 the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. 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) list 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. 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 Compliance.

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.

Page 2 of 2 EPA Reg. No. 54289-4 Decision No. 523407

The primary brand name has been changed to "Peraclean 15 (Peroxyacetic Acid Solution)". The previous primary brand name, "Peraclean 15% (Peroxyacetic Acid Solution)", is retained as an alternate brand name.

If you have any questions, you may contact Aline Heffernan at 703-347-8602 or via email at heffernan.aline@epa.gov.

Sincerely,

John Hebert, Chief

Regulatory Management Branch I Antimicrobials Division (7510P) Office of Pesticide Programs

Enclosure: Stamped Label

DIRECTIONS FOR USE

with its labeling.

SANITIZATION

NOTE: FOR MECHANICAL OPERATIONS prepared use solution may not be

FOR MANUAL OPERATIONS fresh sanitizing solutions should be prepared at least daily or more often if the solution becomes diluted or soiled.

PERACLEÁN® 15 peroxyacetic acid sanitizer is recommended for use dairies, breweries, wineries, beverage and food processing/packing plants. egg processing/packing equipment surfaces, and eating establishments. than a 99.999% reduction of survivors after a 30 second exposure period in indicates there is less then 3 ppm peroxygen. the AOAC Germicidal and Detergent Sanitizing Action of Disinfectants study. Continuous/Intermittent addition to MINIMIZE THE ACCUMULATION OF

SANITIZING FOOD CONTACT SURFACES

Prior to sanitizing, remove gross food particles, then wash with a detergent solution, followed by a potable water rinse. Sanitize with a concentration of SURFACES) PERACLEAN® 15, as received or diluted, may be added will provide 88-500 ppm of peroxyacetic acid. At this dilution PERACLEAN® to aid in minimizing the regrowth/ accumulation of biological matter. The 15 is effective against Staphylococcus aureus and Escherichia coli. Use peroxygen residual in the system which will be effective will vary with the immersion, coarse spray or circulation techniques as appropriate to the design and usage characteristics of the system. Adjust the addition rate equipment. All surfaces should be exposed to the sanitizing solution for a of PERACLEAN® 15 or the solution and periodically monitor residual period of at least 60 seconds or more if specified by governing sanitary code. Peroxygen so that the desired effect is obtained. For continuous addition, 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. I give 110 ppm peroxyacetic acid and 160 ppm hydrogen peroxide. dissolved in 5 gallons of water. Immerse all utensils for at least 60 seconds or HARD SURFACE DISINFECTION contact time specified by governing sanitary code. 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. This will provide 88 -500 ppm of peroxyacetic acid. Air dry.

To insure that the PERACLEAN® 15 sanitizer concentration does not fall technical service representative for assistance and further information on sanitizing tableware in warewashing machines.

FINAL SANITIZING BOTTLE RINSE

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 high level disinfection. and their associated distribution systems.

This product has been shown to be an effective disinfectant when tested COMBINATION DISINFECTION AND CLEANING by AOAC and EPA methods. This product may not eliminate all vegetative micronganisms in reverse osmosis membranes and their associated piping directed. Check with equipment manufacturer for membrane compatibility with PERACI FAN® 15

Remove biological or organic fouling from the membrane or other parts of the resident of the proposition of t To gallons of water). This will provide 568 ppm of peroxyacetic acid and 15 is specifically designed to disinfect, desorbed ideal relative and clean inanimate, hard, 834 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). 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 All treated equipment that will contact food, feed, or drinking water must be reduce residuals

It is a violation of Federal law to use this product in a manner inconsistent 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 used for subsequent sanitizing but may be reused for other purposes such 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 0.33 to 0.5 gallons 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 813 to on precleaned surfaces such as equipment, pipelines, tanks, vats, fillers, 1232 ppm hydrogen peroxide. Recirculate the dilute PERACLEAN® 15 evaporators, conveyor belts, pasteurizers and aseptic equipment in 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 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 greater recirculate before drainage. Repeat the process until test for residuals

BIOLOGICAL MATTER BETWEEN INTERMITTENT SANITIZING EPISODES IN

0.33 - 1.87 fluid ounce PERACLEAN® 15 dissolved in 5 gallons of water. This continuously to the feed water system, between system sanitizing episodes, do not exceed 7 ppm (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

PERACLEAN® 15 disinfects as it cleans in one operation. PERACLEAN® shelves, racks, carts, refrigerators, coolers, glazed tile, linoleum, vinyl, nonstainless steel, or glass.

to fisher that the PEROCECON To admitted set the rinse solution with a below 48 ppm peroxyacetic acid, periodically test the rinse solution with a nursing services; autopsy facilities. Also, use PERACLEAN® 15 in nursing Note to Physician: Probable mucosal damage may contraindicate the use of gastric lavage. suitable test kit and adjust the dispensing rate accordingly. Consult your homes, other health-care facilities, schools, colleges, veterinary clinics, animal life science laboratories, industrial facilities, dietary areas, office PRECAUTIONARY STATEMENTS buildings, recreational facilities, retail and wholesale establishments.

> the body, or (2) contacts intact mucous membranes but reuse which does not ordinarily penetrate the blood barrier or PHYSICAL AND CHEMICAL HAZARDS or semi-critical medical devices prior to sterilization or released could initiate combustion

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 system with an appropriate cleaner. Flush the system with RO permeate or solution and entrapped soil with a clean wet mop, cloth, or wet vacuum again with the RO permeate or similar quality water. Prepare an appropriate kennels, pet shops, zoos, pet animal quarters, poultry premises, poultry volume of 1% solution of the product (0.33 gallon of PERACLEAN® 15 to Recirculate the dilute solution of PERACLEAN® 15 for a minimum of 10 15 will deodorize those areas which are generally hard to keep smelling fresh minutes. Allow membrane elements to soak in the solution for a minimum such as garbage storage areas, empty garbage bins and cans, and any other

rinsed with notable water before reuse

For heavily soiled areas, a pre-cleaning step is required. Prepare a fresh

PERACLEAN ® 15 ®

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

Institutional/Industrial Hard Surface Disinfection Bacteria, Fungi, Active Ingredients: Sanitizing of Previously and Slime ·Hospitals Cleaned Non-Porous Control in: Hydrogen Peroxide 22.09 Food Contact Surfaces in Health Care Facilities Pulp and Paper Peroxyacetic Acid Dairies Schools Mill Systems Inert Ingredients: Wineries ·Colleges Dispersed Pigments ·Veterinary Clinics Cooling Water Systems Total: Breweries Food and Beverage Plants Animal Life Science Laboratories ·Coatings Preservation Net contents as stated Disinfecting Poultry Premises Industrial Facilities on container Office Buildings Poultry Hatcheries ·Animal Housing Facilities ·Recreational Facilities EPA Reg No: 54289-4 ·Reverse Osmosis Membrane ·Retail and Wholesale EPA ESTAB. and Ultra Filtration Establishments 70253-CA-002 70547-IL-001

Before Using This Product, Please Read This Entire Label Carefully. KEEP OUT OF REACH OF CHILDREN

DANGER

Label not for use in California

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 For use in the manufacture of paper and paperboard intended for food-15 can be used to disinfect floors, walls and other hard nonporous surfaces minutes, then continue rinsing eye. Call poison control center or doctor for treatment advice.

such as tables, chairs, countertops, bathroom fixtures, sinks, bed frames

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for the control of sulfides, odor, stime and algae in water systems, apply this

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For the control of sulfides, odor, stime and s center or doctor for treatment advice.

porous glazed porcelain, plastic (such as polypropylene and polyethylene). 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.

Areas of use in hospitals: PERACLEAN® 15 may be used for surgical and If inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by influent water streams. obstetrical suites; housekeeping services; physical therapy departments; mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

PERACLEAN® 15 may be used as a final sanitizing rinse for returnable and level disinfectant on any surface or instrument that (1) is 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 9 ppm peroxyacelic acid (12 to 6 non-returnable bottles at a 0.053% dilution (0.33 fluid ounce PERACLEAN® introduced directly into the human body, either into or in gloves when handling. Do not enter an enclosed area without proper respiratory protection. Wash thoroughly with soap and water after as required to maintain control. 15 dissolved in 5 gallors of water). This will provide 88 ppm of peroxyacetic contact with the bloodstream or normally sterile areas of handling and before eating, drinking, chewing gum, using tobacco or using the toilet. Remove contaminated distilling and wash before

otherwise enter normally sterile areas of the body. This STRONG OXIDIZING AGENT. Corrosive. Mix only with water. Product must be diluted in accordance with label directions prior to use. product may be used to preclean or decontaminate critical PERACLEAN® 15 is not combustible; however, at temperatures exceeding 156°F, decomposition occurs releasing oxygen. The oxygen

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. PERACLEAN® 15 is effective against Staphylococcus aureus, Salmonella Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans, or other waters unless in accordance with potable water. This provides 2,632 ppm peroxyacetic acid. choleraesuis, Pseudomonas aeruginosa, Trichophylon mentagrophytes, and the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in 2 Apply antimicrobial rinse at a temperature of 40°C to 60°C (104°F to 140°F). systems due to their construction and/or assembly, but can be relied upon Escherichia coli 0157:H7 at 0.08% (0.5 fl. oz./5 gal.) in hard water (400 ppm writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage and allow a minimum seven-second contact period. (ATCC 47058) to reduce the number of microorganisms to acceptable levels when used as as CaCO3) and 5% fetal bovine serum on hard nonporous surfaces. For treatment plant authority. For guidance contact your State Water Board or Regional Office of the US Environmental Protection Agency.

DISINFECTION OF POULTRY PREMISES, TRUCKS, COOPS AND

POULTRY HATCHERY DISINFECTION

15.09

63.09

Remove all poultry and feeds from premises, trucks, coops and crates. Remove all poultry and feeds from premises, trucks, coops and crates.

Remove all litter and droppings from floors, walls and surfaces of facilities and fungl in commercial operations and packinghouses. occupied or traversed by poultry. Empty all troughs, racks and other feeding Balch, Continuous or Spray System Processes: Fill vessel containing fruits 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. Ventilate buildings, coops than 80 ppm peroxyacetic acid to the use solution. This can be accomplished 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 (BARNS, 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, AGRICULTURAL OR HORTICULTURAL USES: vehicles, and enclosures. Remove litter, waste matter, and gross soils from There is a Restricted-Entry-Interval of zero (0) hours after the use of this and fixtures occupied or traversed by animals. Empty all troughs, racks and pesticide or fertilizer. Upon soil contact this diluted product decomposes other feeding and watering equipment. Thoroughly clean all surfaces with a rapidly to oxygen, carbon dioxide and water. This product may be harmful detergent and rinse with water. Saturate surfaces with a 0.08% (0.5 fl. oz./5 to fish if exposed on a continuous basis at concentrations of 1 ppm or more gal.) solution of PERACLEAN® 15 for a period of 10 minutes. Immerse all of active peroxyacetic acid. Meter this product into pressurized pipes using halters, ropes, and other types of equipment used in handling and restraining a plastic or stainless steel injection/backflow device installed far enough manure. Ventilate buildings, cars, boats, and other closed spaces. Do not bodies of water, apply this product as far upstream as possible to allow house livestock or employ equipment until treatment has been absorbed, adequate mixing prior to the flow entering any larger body of water. If open set, or dried. Thoroughly scrub all treated feed racks, mangers, troughs, pouring of this product is required, pour product as close to the surface of the automatic feeders, fountains, and waterers with soap or detergent, and rinse water as possible to reduce odor exposure. with potable water before reuse.

BIFOULING CONTROL IN PULP AND PAPERMILL SYSTEMS

contact and non-food contact

organisms in paper, paperboard, or nonwoven process water and influent product at 2-10 ppm active peroxyacetic acid. This feed rate equals 15-75 water systems. Suitable dosing points include but are not limited to: stock fl. oz per 10,000 gallons of water. Repeat dose as necessary to maintain

IContamination with other chemicals could result in product decomposition. -Add PERACLEAN® 15 at a point in the system where uniform mixing and Drip Irrigation Systems: To clean slime and algae from drip system filters even distribution will occur

This product is not to be used as a terminal sterilant/high DANGER. CORROSIVE. Causes irreversible eye damage and skin burns. May be fatal if inhaled or absorbed through the skin. Harmful solution as a continuous or intermittent slug treatment. This will provide 1.8 to irrigation cycles, use this product at the recommended dose for a minimum 9 ppm peroxyacetic acid (12 to 60 ppm PERACLEAN® 15). Repeat treatment of 30 minutes. Thereafter, the irrigation cycle should be discontinued and the

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), Byssochlamys 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

3.Allow containers to drain thoroughly, and then rinse with sterile or potable

ACCEPTED

Mar 27, 2017

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

TREATMENT OF FRUIT AND VEGETABLE PROCESS WATER

PERACLEAN 15 can be used in water or ice that contacts raw or fresh nost

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 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.

floors, walls and surfaces of barns, pens, stalls, chutes and other facilities product. This product should never be mixed or combined with any other animals, as well as forks, shovels, and scrapers used for removing litter and upstream from the equipment to insure thorough mixing. For open flowing

TREATMENT OF AGRICULTURAL OR IRRIGATION WATER SYSTEMS (SAND

FILTERS, HUMIDIFICATION SYSTEMS, STORAGE TANKS, PONDS, RESERVOIRS,

CANALS):

chests, pulpers, the white water loop and white water storage systems and 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).

tapes and emitters, meter this product at the rate of 7.5-15 fl. oz. per 1000 Use 0.1 to 0.5 lb. (1.4 to 6.85 fl. oz.) of PERACLEAN® 15 per 1000 gallons of gallons of water (10-20 ppm peroxyacetic acid). When required during normal 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 neroxide 2 Apply the diluted sanitizer 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 3 The treated produce can be drain dried without a notable water rinse 4.Do not reuse solution after treatment.

FOR THE TREATMENT OF PROCESSED FRUITS AND VEGETABLES AND PROCESS WATERS TO CONTROL GROWTH OF NON-PUBLIC HEALTH

MICRORGANISMS 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 hvdrogen peroxide.

2. Apply the diluted sanitizer 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 CER173 315 (a) 5

3. The treated produce can be drain dried without a potable water rinse 4.Do not reuse solution after treatment.



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

Bactericidal, VirucidalA, Fungicidal, Tuberculocidal

For use on hard, non-porous surfaces

Application:

PERACLEAN® 15 disinfects as it cleans in one operation. PERACLEAN® 15 Enterococcus faecalis (VRE). can be used to disinfect floors, walls and other hard nonprous surfaces such as tables, chairs, countertops, bathroom fixtures, sinks, bed frames, doors, shelves, racks, carts, refrigerators, coolers, glazed tile, linoleum, vinyl, non-porous glazed procelain, 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 Clostridium perfringens should not be used on marble or brass surface.

For health care, institutional, and industrial use.

Areas of use in hospitals: 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, 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 1135pm Peracetic acid and 1665pm hydrogen peroxide (0.85 fl. oz per fogalion of water). Apply solition with a cloth, mop, sponge, auto-scrubber, or hand pumped trigger sprayer such that all surfaces remain wet for 1 minute to kill bacteria, viruses, and fungi as cited on the label. Use a 3 minute contact time for Streptococcus penumoniae, and Vancomycin-Resistant Enterococcus faecalis. Use a 10 minute contact time for Poliovirus Type 1 and Tuberculocidial activity, PERACLEAN® 15 is effective against Mycobacterium bovis (TB surrogate) at ambient temperature (22°C). Allow surface to air dry. For heavily solled areas, a preliminary cleaning is required. Prepare a fresh solution daily or more often if the use solution becomes visibly soiled clouded or diluted.

This product is not for use on medical device surfaces.

(OR)

Kills HIV-1 (AIDS Virus), HBV, and HCV:

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 Henatitis C Virus

Special Instructions for cleaning and decontamination against HIV-1 (AIDS Virus), HBV, and HCV 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 Impute 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 disposed.

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.

* Contact time is increased to 10 minutes to be effective against Poliovirus Type 1 and Mycobacterium bovis (TB surrogate).

§ Contact time is increased to 3 minutes to be effective against Streptococcus pneumoniae and Vancomycin resistant Enterococcus faecalis (VRE).

Bacteria	Human viruses∆
Acinetobacter baumanii ATCC 19606	Herpes simplex virus Type 1 ATCC VR-260
Clostridium perfringens ATCC 13124	Herpes simplex virus Type 2 ATCC VR-734
Community-associated MRSA, USA300 strain (CA-MRSA) CI 08001	Human immunodeficiency virus type 1
(HIV-1) (Zeptometrix Corporation)	
Escherichia coli O157:H7 ATCC 35150	Human Influenza A virus (A/Hong Kong/8/68- H3N2) SPAFAS
Klebsiella pneumoniae ATCC 4352	Human Rotavirus ATCC VR-2018
Listeria monocytogenes ATCC 19111	Poliovirus Type 1* ATCC 1562
Methicillin-resistant Staphylococcus aureus (MRSA) ATCC 33592	Respiratory Syncytial Virus ATCC VR-26
Methicillin-resistant Staphylococcus epidermidis (MRSE) ATCC 51625	Rhinovirus Type 37 ATCC 1147
Mycobacterium bovis (TB surrogate)*	
(Organon Teknika Corp)	Vaccinia virus ATCC VR-156
Pseudomonas aeruginosa ATCC 15442	Human Coronavirus strain 229e
ATCC VR-740	
Salmonella enterica ATCC 10708	Bovine viral diarrhea virus (Human Hepatitis C surrogate) (American Bioresearch Laboratories)
Salmonella enterica serovar Typhimurium ATCC 13311	Duck hepatitis B virus (Human Hepatitis B surrogate) (Hepanda Virus Testing)
Serratia marcescens ATCC 13880	Feline calicivirus (Norovirus surrogate) (University of Ottawa)
Shigella dysentariae serotype 1 ATCC 29026	
Staphylococcus aureus ATCC 6538	Animal viruses∆
Streptococcus pneumoniae§ ATCC 6304	Avian influenza A (Turkey/Wis/66-H9N2) SPAFAS
Streptococcus pyogenes ATCC 19615	
Vancomycin-intermediate Staphylococcus aureus (VISA) ATCC 700787	Fungi
Vancomycin-resistant Enterococcus faecalis (VRE) § ATCC 51575	Candida albicans ATCC 10231
Vibrio cholerae ATCC 14035	Trichophyton mentagrophytes ATCC 9533
Yersinia enterocolitica ATCC 35669	



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FOR ANTIMICROBIAL USE WITH AQUEOUS TREATMENT FLUIDS

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) to 75 fluid ounces per 1000 gallons of water (100 ppm) 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) to 75 fluid ounces per 1000 gallons of water (100 ppm) 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) to 75 fluid ounces per 1000 gallons of water (100 ppm) 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) to 75 fluid ounces per 1000 gallons of water (100 ppm) 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.

08-18-16

FOR DISINFECTION 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.

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 fluidzed 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 peracellic 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 fresh water 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 feel 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 ibs. 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 act (65 to 6500 ppm PERACLEAN® 15). This range is equivalent to 0.13 to 13 tb. PERACLEAN® 15 per ton (dry basis) of pulp or paper produced.

Shook 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 lon (dry basis) of pulp or paper produced.

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

product. Contamination with outer chemicals could result in product decount result in product decount result in 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 5.24 - 20.21fl. 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 1.5-5.24 fl. oz. per 1000 gallons of water (2-7 ppm peroxyacetic acid) to achieve

1000 gallons of water (2-7 ppm peroxyacetic acid) to achievadequate 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 5.24-10 ft. oz of this product per 1000 gallons of process valer (7-14 pm peroxyacelic acid).

STORAGE AND DISPOSAL

Storage and Disposal

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

PÉSTICIDE 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 quidance.

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 ¼ 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 ¼ 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.