

BioSide HS™ 15%

(ANTIMICROBIAL SOLUTION)

BioSide HS 15% is a peroxyacetic acid-based microbiocide developed for Equipment Sanitizing, Disinfection, Aseptic Packaging and Bacteria, Fungi, Slime and Odor Control in: Pulp and Paper Mill Systems, Fruit and Vegetable Process Water Systems, Oil and Gasfield water systems, and Bacterial and Algae Control in Wastewater Treatment Systems.

ACTIVE INGREDIENT:

Peroxyacetic Acid	15.0%
Hydrogen Peroxide	22.0%

INERT INGREDIENTS:

TOTAL	100.0%
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EPA Registration No: 63838-2 EPA Est. No. 63838-CA-01: 63838-AR-001

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

KEEP OUT OF REACH OF CHILDREN DANGER-PELIGRO

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(If you do not understand this label, find someone to explain it to you in detail.)

FIRST AID

IF IN EYES	<ul style="list-style-type: none">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 SWALLOWED:	<ul style="list-style-type: none">Call a poison control center or doctor immediately for treatment advice.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.
IF ON SKIN OR CLOTHING	<ul style="list-style-type: none">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 INHALED	<ul style="list-style-type: none">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 treatment advice.
QUESTIONS? 1-209-581-9576	Have the product container or label with you when calling a poison control center or doctor, or going for treatment.
NOTE TO PHYSICIAN:	Probable mucosal damage may contraindicate the use of gastric lavage.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER CORROSIVE: Do not enter an enclosed area without proper respiratory protection, or when uncoupling of product transfer hoses. Causes irreversible eye damage and skin burns. May be fatal if inhaled or absorbed through skin. Harmful if swallowed. Do not breathe vapors or spray mist. Do not get in eyes, on skin, or on clothing. Wear goggles, face shield, rubber gloves and protective clothing with long sleeves when handling. Wash thoroughly with soap and water after handling and before eating, drinking or using tobacco. Remove contaminated clothing and wash before reuse.

PHYSICAL OR CHEMICAL HAZARDS:

STRONG OXIDIZING AGENT. CORROSIVE: [Mix only with water below 140° F.] Product must be diluted in accordance with label directions prior to use. This product 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 must 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 the National Pollution Discharge System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product into sewer systems without previously notifying the local sewage plant authority.

STORAGE AND DISPOSAL

Storage: Never return this product to the original container after it has been removed. Avoid all contaminants, especially dirt, caustic, reducing agents, and metals. Contamination and impurities will reduce shelf life and can induce decomposition. In case of a decomposition, isolate container, spray container with cool water and dilute this product with large volumes of water. Avoid damage to containers. Keep container closed at all times when not in use. **Keep container out of direct sunlight.** To maintain product quality, store at temperatures below 86°F.

Procedure for Leak or Spill: Stop leak if this can be done without risk. Shut off ignition sources: no flames, smoking, flares, or spark producing tools. Keep combustible and organic materials away. Flush spilled material with large quantities of water. Undiluted material must not enter confined spaces.

Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or Hazardous Waste representative at the nearest EPA Regional Office for guidance. If material has been spilled, an acceptable method of disposal is to dilute with at least 20 volumes of water followed by discharge into suitable treatment system in accordance with all local, state and Federal environmental laws, rules, regulations, standards, and other requirements. Because acceptable methods of disposal may vary by location, regulatory agencies must be contacted prior to disposal. This product which is to be discarded, must be disposed of as hazardous waste after contacting the appropriate local State or Federal agency to determine proper procedures.

Container Disposal: Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying. Offer for recycling, if available. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Container Handling: (Containers equal to or less than 5 gallons): Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. 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 the procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances.

Directions For Use

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

Note: All volumes given in ounces are fluid ounces.

SANITIZATION

This 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, and egg processing/packing equipment surfaces. 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 than 99.999% reduction of *Staphylococcus aureus* and *Escherichia coli* in the AOAC Germicidal and Detergent Sanitizing Action of Disinfectants study.

Sanitizing Food Contact Surfaces: Sanitize with a concentration of 0.7-3.8 fl. oz. of this product diluted in 10 gallons of water (93-500 ppm active peroxyacetic acid and 136-733 ppm active hydrogen peroxide). Use immersion, spray or circulation techniques as appropriate to the equipment. All surfaces must be exposed to sanitizing solution for a period of at least 60 seconds or more if specified by a governing code. Drain thoroughly and allow to air dry. Do not rinse. Sanitization of Conveyors and Equipment for Meat, Poultry, Seafood, Dairy, Fruit, Nuts and Vegetables: This product is effective against the gram positive organism *Staphylococcus aureus* and gram negative organism *Escherichia coli*. For use in the static or continuous sanitizing, washing or rinsing of conveyors, slicers, saws, and equipment, apply a solution of this product using a recommended 0.7-3.8 fl. oz. per 10 gallons of water (93-500 ppm active peroxyacetic acid and 136-733 ppm active hydrogen peroxide). Apply sanitizer solution to the return portion of the conveyor or equipment using spray or similar means of wetting surfaces, so as to prevent puddling. Allow sanitizer to thoroughly wet surface for a minimum 60 seconds contact time. No rinse is needed.

Final Bottle or Container Rinse: This product may be used as a final sanitizer rinse for pre-cleaned returnable and non-returnable bottles or containers at 93-500 ppm active peroxyacetic acid and 136-733 ppm active hydrogen peroxide (0.7-3.8 fl. oz. of this product diluted in 10 gallons of water). The container must be drained as much as is practical prior to filling operations.

Combination Disinfection and Cleaning: This product is effective against *Staphylococcus aureus* and *Salmonella enterica* at 1.0 oz per 10 gallons of water (130 ppm active peroxyacetic acid and 191ppm active hydrogen peroxide) in hard water (400 ppm as CaCO₃) and 5% organic soil on hard nonporous surfaces. For visibly soiled areas a pre-cleaning step is required. Apply solution with a mop, cloth, sponge, brush, or by soaking, spraying, or immersion so as to wet all surfaces thoroughly. Allow to remain wet for 10 minutes, then remove excess solution and entrapped soil with a clean wet mop, cloth, wet vacuum pickup or by draining. Prepare a fresh solution daily or when it becomes soiled or diluted.

ANTIMICROBIAL RINSE OF PRECLEANED OR NEW RETURNABLE OR NON-RETURNABLE CONTAINERS

To reduce the number of nonpathogenic beverage spoilage organisms: *Aspergillus versicolor*, *Byssoschlamys fulva*, *Pediococcus damnosus*, *Lactobacillus buchneri*, and *Saccharomyces cerevisiae*, use 1.0 to 10.1 fluid ounces of product per 5 gallons of water. This provides 265 to 2700 ppm peroxyacetic acid and 389 to 3960 ppm hydrogen peroxide. All surfaces must be exposed to antimicrobial solution for at least 15 seconds. After applying the antimicrobial rinse, allow containers to drain thoroughly. A rinse is optional. Either sterile or potable water may be used.

COMMERCIAL STERILANT FOR ASEPTIC PACKAGING OF LOW ACID FOOD

This product can be used in food, beverage and dairy processing aseptic packaging systems as a commercial sterilant to treat clean, non-porous food, beverage and dairy packaging materials and equipment, such as, pipelines, pumps, tanks, vats, fillers, evaporators, and pasteurizers, when the solution is prepared in water of up to 400 ppm hardness.

Food Packaging Materials: This product may be used alone or in combination with other processes as a commercial sterilant for aseptic packaging of low acid foods, such as, commercial sterilization of aseptic filling systems and glass and plastic food packaging and their enclosures prior to filling, except for use on food packaging used in contact with infant formula or human milk or on aseptic filling equipment used to fill such packaging. Apply at a concentration of 3.4 fl. oz. of this product per 1 gallon of water (4500 ppm peroxyacetic acid and 6597 ppm hydrogen peroxide) and at a temperature of 65°C. Use immersion, coarse spray, or circulation techniques as appropriate to sterilize the food, beverage or dairy packaging materials. The solution must remain in contact with the packaging surface for a minimum of 20 seconds. Rinse containers with sterile water prior to filling with processed food, beverages or dairy products. When used according to label directions, this product is effective against spores of the following organisms: *Bacillus subtilis*, *Bacillus cereus* and *Clostridium sporogenes*.

For a fine mist or vapor application, no rinse treatment is required if: (1) solution application does not exceed 0.0175 mL treatment solution per ounce container capacity; (2) treatment solution has not been recycled; (3) no treatment solution with a concentration of higher than 4500 ppm peracetic acid and 6597 ppm hydrogen peroxide has been added to the treatment solution reservoir.

The aseptic food, beverage and dairy food processing operation must comply with all applicable FDA regulations and Food Contact Notification (FCN) 1851. Use in an aseptic food, beverage and dairy processing operation includes testing required for the process validation.

Aseptic Food Packaging Equipment: This product may be used as a commercial sterilant for aseptic packaging of low acid foods for non-porous food manufacturing, packaging and filling equipment. Remove gross soil particles from surfaces prior to use of this product. Thoroughly clean surfaces and follow with a potable water rinse.

Commercially sterilize clean manufacturing, filling, and packaging equipment with a concentration of 3.4 fl. oz. of this product per 1 gallon of water (4500 ppm peroxyacetic acid and 6597 ppm active hydrogen peroxide) at a temperature of 65°C. Use immersion, coarse spray, or circulation techniques as appropriate to sterilize the equipment. The solution must remain in contact with the equipment for a minimum of 20 seconds. Allow to drain dry. A final rinse with sterile water is optional. When used according to label directions, this product is effective against *Bacillus subtilis*, *Bacillus cereus* and *Clostridium sporogenes*.

REVERSE OSMOSIS (RO), ULTRA FILTRATION (UF) AND OTHER MEMBRANE CLEANING

This product may be used in the sanitization of ultra filtration (UF) and reverse osmosis (RO) membranes and their associated piping systems. This product is not for use in kidney dialysis equipment. Do not use the intermittent or continuous dosing methods for nano or ultra-filtration food or drinking water applications. This product may not totally eliminate all vegetative microorganisms in RO or NF or UF membranes and their associated piping systems due to their construction or assembly, but can be relied upon to reduce the number of microorganisms to acceptable levels when used as directed. Prior to using this product check with membrane manufacturer to confirm compatibility of membranes with various types or concentration of peroxyacetic acid solutions.

Batch Sanitation of NF, UF and RO Systems: Isolate incompatible equipment, such as carbon filters and ion exchangers. Clean system with an appropriate cleaner and follow with RO permeate water or potable water. Remove mineral deposits if necessary with an acidic cleaner, and rinse as before. Fill entire system with water and add up to 0.5% of this product by volume. This will equal 680 ppm peroxyacetic acid and 1000 ppm hydrogen peroxide. Recirculate the sanitizing solution through the piping and membrane system at 20° C for 10 minutes minimum, or up to 4 hours, depending on the severity of cleaning to be done. Open and close process valves and solenoids to be sure all parts are in contact with the solution. Rinse the system with RO permeate or potable water until residual peroxygen concentration is below 1 ppm.

Continuous or Intermittent Addition: For continuous addition (dosing) for RO systems, use 2-5 ppm of active peroxyacetic acid, which equals 1.5-3.7 fl. oz. of this product per 1000 gallons of process water. For occasional intermittent feed, do not exceed 93 ppm active peroxyacetic acid, which equals 0.7 fl. oz. of this product per 10 gallons of feed water. Continuous or intermittent dosing of this product is not allowed for use in NF or UF systems for on-line food or drinking water applications.

NOTE: This product at its use dilution is compatible with stainless steel and aluminum surfaces. If product is intended to be used on any other surface, it is recommended that you apply product to a smaller test area to determine compatibility before proceeding with its use.

BIOFOULING CONTROL IN PULP, PAPER AND PAPERBOARD MILL AND WATER SYSTEMS (Not for use in California)

For use in the manufacture of paper and paperboard intended for food or non food contact. This product can be used to control bacteria and fungi 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, white water storage systems and influent water streams.

Influent Water Systems: This product should be fed continuously to incoming fresh water streams (nonpotable use only) at dosages ranging from 0.11- 2.0 lbs (1.5-27 fl. oz) of this product per 1000 gallons of raw or process water (2.0-36 ppm peroxyacetic acid). Adjust dosage as necessary to maintain microbiological control.

Mill Process Waters: Intermittent Feed - This product may be fed intermittently (for example: 2-3 hours per 8 hour shift) at dosages ranging from 0.5 lbs to 1.2 lb (7-16 fl. oz.) of this product per ton (dry basis) of pulp or paper produced. This dosage is equivalent to 37-90 ppm peroxyacetic acid. Repeat as necessary when the peroxyacetic acid concentration reaches less than 2 ppm.

Continuous Feed - This product should be fed continuously at dosages ranging from 0.11-1.2 lbs (1.5-16 fl. oz) of this product per ton (dry basis) of pulp or paper produced. This dosage is equivalent to 8.0-90 ppm peroxyacetic acid.

Shock (slug) Dose - This product may be used to shock dose systems requiring a high level of biofouling control. Use rates ranging from 1-8 lbs (13.5-108 fl. oz.) of this product per ton (dry basis) of pulp or paper produced may be necessary. This dosage is equivalent to 75-600 ppm peroxyacetic acid. Shock dose every 1-3 hrs as necessary until biofouling control is evident. Thereafter, revert to continuous or intermittent feed methods.

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).

CLEANING: To remove sessile bacteria from cooling systems it is necessary to clean slime and slime-forming bacteria from the surfaces of all areas of water contact. This can be accomplished by treating the recycled water with 2.8-8.3 lbs. (37-112 fl. oz.) of this product per 1000 gal of water (50-150 ppm active peroxyacetic acid) for 4-8 hours during normal lower operating cycles. This procedure can be used for online or offline cleaning. When finished, bleed down the system until the PAA level is <5-10 ppm, then normal chlorine or bromine or PAA treatments can begin. This treatment must be done at least once or twice each year depending on exposure conditions.

Air Washers: This product may be used to control bacteria and biofouling in industrial air washing/scrubbing systems. The air washer must have operational and effective mist elimination systems. Prior to use of this product, heavily fouled systems must be pre-cleaned using the appropriate cleaner. Continuous dosing methods will require 2-7 ppm and intermittent dosing methods require 7-14 ppm (as peroxyacetic acid), as described in the previous 2 paragraphs, depending on the type of system and the level of microbiological control desired.

Evaporated or Condensed Water: This product may be used to treat SWEET or COW water (e.g. condensate of whey) collected from evaporated or condensing water systems in food or dairy plants. Continuous dosing methods will require 2-7 ppm and intermittent dosing methods require 7-14 ppm (as peroxyacetic acid) as described in the previous paragraph, depending on the type of system and the level of microbiological control desired.

FOR DISINFECTION AND MICROBIAL CONTROL IN EFFLUENT TREATMENT SYSTEMS

Use this product to treat sewage and wastewater effluent systems associated with public and private wastewater treatment plants. This product may be applied alone at any point in the treatment train, such as debulking control, or may effectively be used in conjunction with other systems, such as Ultra Violet (UV) light. Doses for UV systems will typically be 1-4 ppm (as active PAA). Initially apply this product at the rate of 3-146 gal per million gallons of water to be treated (0.5-25 ppm as peracetic acid). The PAA dosage will depend on the quality of water, contact (holding) time, and the degree of microbial control necessary. The PAA concentration will rapidly decline after treatment, but the maximum amount of PAA that may be discharged into the receiving body of water is limited to 1 ppm as active PAA, or as required for local discharge requirements. Consult your Enviro Tech representative for recommendations regarding an accurate test kit or on-line analyzer.

OIL, GAS AND SECONDARY OIL RECOVERY SYSTEMS, DRILLING MUDS, FRACTURING FLUIDS, AND PACKING FLUID, INJECTION WATER AND FLOODWATER

This product may be used to treat water used in primary or secondary oil and gas recovery systems to control anaerobic sulfide-forming bacteria and aerobic slime-forming bacteria. This product may be used in fresh or recycled water, secondary recovery systems, muds or fluids. This product controls non-public health biofilm and slime deposits on products associated with oilfield and gasfield systems which are susceptible to contamination. It also controls slime deposits downhole in water-bottoms. Add sufficient amount of this product to achieve satisfactory biological control. Initial recommended dosing levels of 5 to 100 ppm as active peroxyacetic acid are suggested. A dosage of 3.75 fl. oz. per 1000 gallons of water yields approximately 5 ppm of peroxyacetic acid.

TREATMENT OF FRUIT AND VEGETABLE PROCESS WATER SYSTEMS

This product 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 and decay causing 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 to no more than 500 ppm residual peroxyacetic acid to the use solution in accordance with Food Contact Notification #1738, effective March 28, 2017. This can be accomplished by initially adding 3.8 fl. oz. per 10 gallons of water. The recommended concentration is between 30-300 ppm as peroxyacetic acid (0.23-2.3 fl. oz. per 10 gallons of water). The final concentration necessary to accomplish the intended task will vary from plant-to-plant. The fruits and vegetables can be continuously sprayed or submerged (dipped) in the resulting solution. Periodic or continuous additions of this product to maintain the required concentration may be added as necessary. It is also recommended to apply this product during the washing, chilling, or physical cleaning processes, including the roller-spreader, washer or brush washer manifold, dip tank, or sorting processes. Contact time of 60 seconds is recommended to insure efficacy. A potable water rinse is not required.

Fogging: (Not for Use in California): For raw agricultural commodities, commercially-applied fogging methods may be used provided the dilution rates of the resultant solution does not exceed those prescribed in this section (3.8 fl. oz. per 10 gal of water). A potable water rinse is not required. Conventional corrosion-resistant fogging devices are recommended. Vacate the area of all personnel prior to, during and after fogging until the total peroxide concentration is below 1.0 ppm, or there is no strong odor present, characteristic of acetic acid.

POULTRY, SWINE, LIVESTOCK WATERING OPERATING SYSTEMS

After watering lines have been cleaned, use this product at 0.3-42 fl. oz. per 100 gallons of water (4-559 ppm as peroxyacetic acid) to control algae and bacteria in drinking water and to control mineral build up in watering lines. Stop the use of this product twenty-four (24) hours prior to vaccination via the water line.

Manufactured By: ENVIRO TECH CHEMICAL SERVICES, Inc.

500 Winmoore Way, Modesto, CA 95358 209-581-9576 or www.envirotech.com

24 hr Emergency ChemTel Number: 1-800-255-3924

DOT: UN3109, Organic Peroxide, Type F, Liquid (peroxyacetic acid), 5.2, (8), PG II

LOT #:

Net contents: _____

Ver 12.0a (July-2018)

