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:	63.0%
TOTAL:	100.0%

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.)

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.

FIRST AID

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 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 treatment advice.
IF SWALLOWED	• 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.
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. Do not enter an enclosed area without proper respiratory protection, or when uncoupling of product transfer hoses. Wear a minimum of a NIOSH-approved elastomeric half mask respirator with organic vapor (OV) cartridges and combination N1, R, or P filters; or a NIOSH-approved gas mask with OV canisters; or a NIOSH-approved powered air purifying respirator with OV cartridges and combination HE filters when handling concentrate product.

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 Pollutant 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.

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, filters, 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 dilution is prepared in water of up to 400 ppm hardness as $CaCO_3$. 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, Seafood, Dairy, Fruit, Nuts and Vegetables: This product is effective against the gram positive organism Staphylococcus aureus and gram negative organism Escherichia coli. Immerse 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 gallon 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 other 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 peroxyacetic acid and 136-733 ppm active hydrogen peroxide (0.7-3.8 fl. oz. of this product diluted in 10 gallons of water). prior to filling operations.

Combination Disinfection and Cleaning: This product is effective against Staphylococcus aureus and Salmonella ente peroxyacetic acid and 191ppm active hydrogen peroxide) in hard water (400 ppm as $CaCO_3$) and 5% organic soil on ha cleaning step is required. Apply solution with a mop, cloth, sponge, brush, or by soaking, spraying, or immersion so as to minutes, then remove excess solution and entrapped soil with a clean wet mop, cloth, wet vacuum pickup or by draining. P o, diluted.

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

To reduce the number of nonpathogenic beverage spoilage organisms: *Aspergillus versicolor, Byssochlamys fulva, Pediocc Saccharomyces cerevisiae*, use 1.0 to 10.1 fluid ounces of product per 5 gallons of water. This provides 265 to 2700 ppm p peroxide. All surfaces must be exposed to antimicrobial solution for at least 15 seconds. After applying the antimicrobial ri 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 tr packaging materials and equipment, such as, pipelines, pumps, tanks, vats, fillers, evaporators, and pasteurizers, when the hardness.

Food Packaging Materials: This product may be used alone or in combination with other processes as a commercial steril commercial sterilization of aseptic filling systems and glass and plastic food packaging and their enclosures prior to filling, e infant formula or human milk or on aseptic filling equipment used to fill such packaging. Apply at a concentration of 3.4 fl. oz peroxyacetic acid and 6597 ppm hydrogen peroxide) and at a temperature of 65°C. Use immersion, coarse spray, or circula beverage or dairy packaging materials. The solution must remain in contact with the packaging surface for a minimum of 20 filling with processed food, beverages or dairy products. When used according to label directions, this product is effective a 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 tre treatment solution has not been recycled; (3) no treatment solution with a concentration of higher than 4500 ppm peracetic added to the treatment solution reservoir.

The aseptic food, beverage and dairy food processing operation must comply with all applicable FDA regulations and Food 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 ac packaging and filling equipment. Remove gross soil particles from surfaces prior to use of this product. Thoroughly clean su Commercially sterilize clean manufacturing, filling, and packaging equipment with a concentration of 3.4 fl. oz. of this produc and 6597 ppm active hydrogen peroxide) at a temperature of 65°C. Use immersion, coarse spray, or circulation techniques must remain in contact with the equipment for a minimum of 20 seconds. Allow to drain dry. A final rinse with sterile water is 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 ass kidney dialysis equipment. Do not use the intermittent or continuous dosing methods for nano or ultra-filtration food or dri eliminate all vegetative microorganisms in RO or NF or UF membranes and their associated piping systems due to their reduce the number of microorganisms to acceptable levels when used as directed. Prior to using this product check wit 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 with RO permeate water or potable water. Remove mineral deposits if necessary with an acidic cleaner, and rinse as befor this product by volume. This will equal 680 ppm peroxyacetic acid and 1000 ppm hydrogen peroxide. Recirculate the sanitiz at 20° C for 10 minutes minimum, or up to 4 hours, depending on the severity of cleaning to be done. Open and close pr contact with the solution. Rinse the system with RO permeate or potable water until residual peroxygen concentration is bel

Continuous or Intermittent Addition: For continuous addition (dosing) for RO systems, use 2-5 ppm of active peroxyace 1000 gallons of process water. For occasional intermittent feed, do not exceed 93 ppm active peroxyacetic acid, which e water. Continuous or intermittent dosing of this product is not allowed for use in NF or UF systems for on-line food or drinkin

NOTE: This product at its use dilution is compatible with stainless steel and aluminum surfaces. If product is intended to 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 con woven process water and influent water systems. Suitable dosing points include but are not limited to: stock chests, pulper and influent water streams.

Influent Water Systems: This product should be fed continuously to incoming fresh water streams (nonpotable use only) a this product per 1000 gallons of raw or process water (2.0-36 ppm peroxyacetic acid). Adjust dosage as necessary to maint

Mill Process Waters: Intermittent Feed - This product may be fed intermittently (for example: 2-3 hours per 8 hour shift) at this product per ton (dry basis) of pulp or paper produced. This dosage is equivalent to 37-90 ppm peroxyacetic acid. Repea 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 produ 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 per ton (dry basis) of pulp or paper produced may be necessary. This dosage is equivalent to 75-600 ppm peroxyacetic acid biofouling control is evident. Thereafter, revert to continuous or intermittent feed methods.

CONTROL OF SLIME FORMING BACTERIA AND BIOFOULING IN ONCE-THROUGH AND RECIRCULATING COOLIN 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 dire additives. Never add this product into any feeding device, such as shot feeders, filter housings, by-pass feeders, or miscella decomposition can occur. Discontinue the use of chlorine or bromine products prior to using this product. Contamination wit 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 proc necessary until microbiological control is evident. Thereafter, to maintain control use (1.5-7.5 fl. oz.) of this product per 100 acid) as a continuous treatment method. Continuous dosing methods usually require 1.5-5 fl. oz. per 1000 gallons of water (results.

Intermittent dosing treatment usually require dose cycles of a minimum once per every other day, up to 6 times per 24 hours 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 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 normal tower operating cycles. This procedure can be used for online or offline cleaning. When finished, bleed down the sys chlorine or bromine or PAA treatments can begin. This treatment must be done at least once or twice each year depending

Air Washers: This product may be used to control bacteria and biofouling in industrial air washing/scrubbing systems. The elimination systems. Prior to use of this product, heavily fouled systems must be pre-cleaned using the appropriate cleaner.