BUCKEYE eco®
Neutral Disinfectant

Product Reorder Number

E23 S23

Buckeye Eco Neutral Disinfectant is a multi-purpose, neutral pH, broad-spectrum germicidal detergent designed for use in hospital, healthcare and industrial settings at ½ oz. and 2 oz. per gallon of water. Buckeye Eco Neutral Disinfectant is ideal for routine germicidal cleaning and floor care maintenance. With a use-diution pH of 7.0 ± 0.2, Buckeye Eco Neutral Disinfectant will not attack floor finish.

Special detergents effectively remove dirt and soil without harming the finish. Buckeye Eco Neutral Disinfectant requires no rinsing. This means more time may pass between labor intensive stripping and recoating procedures.

Use Buckeye Eco Neutral Disinfectant on most hard, nonporous surfaces in:

Nursing Homes
Hospitals
Healthcare Facilities
Schools and Colleges
Office Buildings
Public Facilities
Hotels
Exercise Facilities

CLASSIFIED UL FLOOR COATING AND FINISHING MATERIAL AS TO SLIP RESISTANCE ONLY. 169S

FEATURES

- Disinfectant
- Bactericidal
- Virucidal*
- Fungicidal
- Mildewstatic
- EPA registered
- Disinfects, cleans, and deodorizes in one labor-saving step
- pH neutral
- Effective in hard water up to 200 ppm [calculated as $CaCO_3$] in the presence of a moderate amount of soil [5% organic serum] according to the AOAC Use-Dilution Test
- Use on hard, nonporous surfaces

*Effectively kills: *HIV-1 (AIDS Virus) • *Hepatitis B Virus (HBV) • *Hepatitis C Virus (HCV) • *Herpes Simplex Virus Type 1 & 2 • *Rubella (German Measles) • *Influenza A Virus/Hong Kong • *Vaccinia • *Adenovirus • Vancomycin resistant Enterococcus faecalis (VRE) • Methicillin resistant Staphylococcus aureus (MRSA) • Community Associated Methicillin-Resistant Staphylococcus aureus (CA-MRSA) • Gram-negative & Gram-positive pathogens • Trichophyton Mentagrophytes (Athlete's Foot Fungus)*

EPA REG. NO. 47371-129-559
EPA EST. NO. 559-MO-1

1.25 L Bag Yield Rate

½ oz./gal. (1:256) makes 84 end-use gallons, which is equivalent to:

42 *2-gallon mop buckets*

Each 4x1 case makes 339 end-use gallons

2 oz./gal. (1:64) makes 21.5 end-use gallons, which is equivalent to:

86 *quarts*

Each 4x1 case makes 343 end-use quarts

0.95 L Squeeze & Pour Yield Rate

½ oz./gal. (1:256) makes 64 end-use gallons, which is equivalent to:

32 *2-gallon mop buckets*

Each 6x1 case makes 386 end-use gallons

2 oz./gal. (1:64) makes 16.3 end-use gallons, which is equivalent to:

65 *quarts*

Each 6x1 case makes 390 end-use quarts

RESEARCH FACTS

Antimicrobial Test Results

Claim:	Contact Time:	Organic Soil:	Water Conditions:
Disinfectant	10 minutes	5%	200 ppm as $CaCO_3$
Test Method:	Official Method of the AOAC, 14th Edition Use-Dilution Method		

Organism	ATCC#	Use-Dilution Concentration
Acinetobacter baumannii	23055	660 ppm (½ oz/gal)
Bordetella bronchiseptica	31427	660 ppm
Chlamydia psittaci	VR-854	660 ppm
Enterobacter aerogenes	13048	660 ppm
Enterobacter cloacae	23355	660 ppm
Enterobacter cloacae NDM-1	CDC1000654	660 ppm
Enterococcus faecalis (Vancomycin Resistant)	51299	660 ppm
Escherichia coli	11229	660 ppm
Escherichia coli NDM-1	CDC1001728	660 ppm
Escherichia coli[1] (Clinical Isolate)	(Clinical Isolate)	660 ppm
Fusobacterium necrophorum	27852	660 ppm
Klebsiella pneumoniae[2]	13883	660 ppm
Klebsiella pneumonia NDM-1	BAA-2473	660 ppm
Legionella pneumophila	33153	660 ppm
Listeria monocytogenes	15313	660 ppm
Pasteurella multocida	7707	660 ppm
Proteus mirabilis	25933	660 ppm
Proteus vulgaris	13315	660 ppm
Pseudomonas aeruginosa[3]	Clinical Isolate	660 ppm
Pseudomonas aeruginosa	15442	660 ppm
Salmonella enterica	10708	660 ppm
Salmonella typhi	6539	660 ppm
Salmonella typhimurium	14028	660 ppm
Salmonella enteritidis	13076	660 ppm
Serratia marcescens	8100	660 ppm
Shigella flexneri	12022	660 ppm
Shigella sonnei	9290	660 ppm
Staphylococcus aureus	6538	660 ppm
Staphylococcus aureus[4]	Clinical Isolate	660 ppm
Staphylococcus aureus[5]	CDC No. HIP-5836	660 ppm
Staphylococcus aureus[6] (MRSA)	33592	660 ppm
Staphylococcus aureus (MRSA) Community Associated	NRS 384 USA 300	660 ppm
Staphylococcus aureus (MRSA) Community Associated	NRS 123 USA 400	660 ppm
Staphylococcus epidermidis[7]	Clinical Isolate	660 ppm
Streptococcus faecalis	19433	660 ppm
Streptococcus faecalis[8]	19433	660 ppm
Streptococcus pyogenes	19615	660 ppm

Conclusion: All lots of Buckeye Eco Neutral Disinfectant (E23/S23) effectively killed the listed bacteria as specified in the test performance standards. This product meets EPA requirements for hard surface disinfectant claims for hospital and medical environments when diluted to 660 ppm active concentration in 200 ppm synthetic hard water in the presence of 5% organic soil.

[1] Resistant to the Antibiotics: Ampicillin, Carbenicillin, Kanamycin, and Tetracycline.
[2] Resistant to the Antibiotics: Ampicillin, Carbenicillin, Chloramphenicol, and Tetracycline.
[3] Resistant to the Antibiotics: Amikacin, Ampicillin, Carbenicillin, Cefamandole, Cefazolin,Cefoxitin, Chloramphenicol, Kanamycin, and Tetracycline.
[4] Resistant to the Antibiotics: Cefazolin, Clindamycin, Erythomycin, Gentamicin, Kanamycin, Methicillin, Penicillin, Tetracycline and Tobramycin
[5] Reduced Susceptibility to Vancomycin
[6] Resistant to Gentamicin and Methicillin
[7] Resistant to the Antibiotics: Cefazolin, Chloramphenicol, Clindamycin, Erythomycin, Gentamicin, Kanamycin, Methicillin, Penicillin, Tetracycline and Tobramycin
[8] Resistant to the Antibiotics: Cefazolin, Chloramphenicol, Clindamycin, Erythomycin, Gentamicin, Kanamycin, Methicillin, Penicillin, Tetracycline and Tobramycin

Claim:	Contact Time:	Organic Soil:	Water Conditions:
Mildewstat	10 minutes	5%	200 ppm as $CaCO_3$
Test Method:	Mildewstat (Mold and Mildew Control) - EPA - TSD 6-201 Mildewstat on Hard Surfaces		

Organism	ATCC#	Use-Dilution Concentration
Aspergillus niger	6275	660 ppm (½ oz/gal)

Conclusion: All lots of Buckeye Eco Neutral Disinfectant (E23/S23) were effective against Aspergillus niger under the test conditions outlined in the EPA test performance standards described above. This product is an effective mildewstat for non-porous inanimate hard surfaces when diluted to 660 ppm active concentration in 200 ppm synthetic hard water in the presence of 5% organic soil.

Claim:	Contact Time:	Organic Soil:	Water Conditions:
Fungicide	10 minutes	5%	200 ppm as $CaCO_3$
Test Method:	Official Method of Analysis of the AOAC – Fungicidal Test		

Organism	ATCC#	Use-Dilution Concentration
Trichophyton mentagrophytes	9533	660 ppm (½ oz/gal)
Candida albicans	11651	660

Conclusion: All lots of Buckeye Eco Neutral Disinfectant (E23/S23) effectively killed Trichophyton mentagrophytes and Candida albicans as specified in the test performance standards. This product is an effective fungicide for non-porous inanimate hard surfaces when diluted to 660 ppm active concentration in 200 ppm synthetic hard water and in the presence of 5% organic soil.

Claim:	Contact Time:	Organic Soil:	Water Conditions:
Virucide	Varies	5%	200 ppm as $CaCO_3$

Organism	Source of Virus or ATCC#	Use-Dilution Concentration	Contact Time
Adenovirus Type 4	ATCC VR-4 strain RI-67	660 ppm (½ oz/gal)	10 Min.
Adenovirus Type 7	ATCC VR-7	2644 ppm (2 oz/gal)	10 Min.
Hepatitis B	Hepadna Virus, Inc.(DHBV)	660 ppm	10 Min.
Hepatitis C (HCV)	Bovine Viral Diarrhea Virus	660 ppm	10 Min.
Herpes Simplex Type 1	HSV-1; ATCC VR-733	660 ppm	10 Min.
Herpes Simplex Type 2	HSV-2; MS Strain	660 ppm	10 Min.
HIV-1 (AIDS Virus)	HTLV-IIIRF; NCI	660 ppm	4 Min.
Human Corona Virus	VR-740 Strain 229E	660 ppm	10 Min.
Influenza A/ Hong Kong	ATCC 68-H3N2	660 ppm	10 Min.
Respiratory Syncytical virus	ATCC VR-26	660 ppm	10 Min.
Rotavirus	Strain WA	660 ppm	10 Min.
Rubella virus	Strain M-33	660 ppm	10 Min.
SARS associated Coronavirus	Vero E6 coronavirus	660 ppm	10 Min.
Vaccinia	Strain IHD	660 ppm	10 Min.

Conclusion: All lots of Buckeye Eco Neutral Disinfectant (E23/S23) effectively inactivated the above listed viruses as specified in the test performance standards. This product meets EPA requirements for hard surface virucidal claims in hospital and medical environments.

Claim:
Animal Viruses

Organism	Use-Dilution Concentration	Contact Time
Avian influenza (H5N1)	660 ppm	10 Min.
Avian polyomavirus	660 ppm	10 Min.
Canine distemper virus	660 ppm	10 Min.
Equine herpes Virus Type 1	660 ppm	10 Min.
Feline coronavirus	660 ppm	10 Min.
Feline leukemia virus	660 ppm	10 Min.
Feline panleukopenia virus	660 ppm	4 Min.
Feline picornavirus	660 ppm	10 Min.
Infectious bovine rhinotracheitis	660 ppm	10 Min.
Infectious bronchitis (Avian IBV)	660 ppm	10 Min.
Newcastle Disease	660 ppm	10 Min.
Porcine parvovirus	660 ppm	10 Min.
Pseudorabies virus	660 ppm	10 Min.
Rabies virus	660 ppm	10 Min.
Transmissible gastroenteritis virus	660 ppm	10 Min.

Directions for Use

DIRECTIONS: Disinfects, cleans, and deodorizes the following hard, nonporous, inanimate surfaces: floors, walls, (non-medical) metal surfaces, (non-medical) stainless steel surfaces, glazed porcelain, and plastic surfaces such as polypropylene, polystrene, etc. Remove heavy soil deposits from surface. Then thoroughly wet surface with a use-solution of ½ ounce of the concentrate per gallon of water or equivalent. (Use 2 oz. per gallon of water to kill Adenovirus Type 7.) The use-solution can be applied with a cloth, mop, sponge, or coarse spray, or soaking. For sprayer applications, use a coarse spray device. Spray 6–8 inches from the surface, rub with a brush, cloth or sponge. Do not breathe spray. Let solution remain on surface for a minimum of 10 minutes. Rinse or allow to air dry. Rinsing of floors is not necessary unless they are to be waxed or polished. Food contact surfaces must be thoroughly rinsed with potable water. This product must not be used to clean the following food contact surfaces: utensils, glassware and dishes. Prepare a fresh solution daily or more often if the solution becomes visibly dirty or diluted.

Available in:


1.25 L bags


0.95 L squeeze & pour bottles

Eco Neutral Disinfectant Technical Specifications	
pH in concentrate	7.6 ± 0.2
pH 2 oz./gal. (1:64)	6.8 ± 0.2
pH ½ oz./gal. (1:256)	7.0 ± 0.2
Weight/Gallon	8.31 lbs
Specific Gravity	0.998
Biodegradable	Yes
Color	Forest Green
Fragrance	Lemon Zest
Active Concentration	660 ppm

Active Disinfectant:
Didecyl dimethyl ammonium chloride.....10.14%
n-Alkyl (C_{14} 50%, C_{12} 40%, C_{16} 10%)
dimethyl benzyl ammonium chloride.....6.76%
Inert Ingredients.....83.10%

Connecting 1.25 L Bags to Eco Unit

1. Remove 1.25 L bag from carton.
2. To open the Eco unit product compartment, depress the top of the unit with your fingers and pull the compartment down towards you with your other hand.
3. Align Eco unit connector cap lugs with 1.25 L bag metering plug channels. Rotate clockwise to lock in place.
4. Fit 1.25 L bag neatly into product compartment with hose barb pointed downward.
   **Ensure chemical line is not pinched.*
5. Close Eco unit product compartment.

Dispensing Diluted Product into 32 oz. Trigger Spray Bottle

1. Use appropriate 32 oz. trigger spray bottle, and slide up over 5-inch discharge hose.
2. Push back lever to dispense diluted product.
3. Once trigger spray bottle is filled (approximately 2 inches from top), release lever to avoid overfilling.

Dispensing Diluted Product into Mop and Bucket/Other Equipment

1. Position Eco unit discharge hose into mop bucket or other equipment.
2. Press green button below appropriate product to dispense diluted product.
3. For hands-free operation, push the appropriate green button once to dispense diluted product. Once filled, push the button again to stop product flow.

0.95 L Squeeze & Pour Bottles (S23) – User Instructions:

For mop and bucket applications:
Add 1 oz. per prefilled 2 gallons of water

For Eco 32 oz. trigger spray bottle:
Add ½ oz. per prefilled Eco trigger spray bottle of water

For more information about E23/S23, scan this code.

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