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-dilution 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

- 1 minute contact time for Human Coronavirus
  2 minute contact time for Influenza Virus Type A
  4 minute contact time for HIV-1 (AIDS virus)
- 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 Virus • *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:	EPA Approved Method		

Organism	ATCC#	Use-Dilution Concentration
Acinetobacter baumannii	BAA-1709	660 ppm (½ oz./gal.)
Acinetobacter calcoaceticus	23055	660 ppm
Bordetella bronchiseptica	31427	660 ppm
Chlamydia psittaci	VR-854	660 ppm
Enterobacter aerogenes	13048	660 ppm
Enterobacter cloacae	13047	660 ppm
Enterobacter cloacae NDM-1	CDC1000654	660 ppm
Enterococcus faecalis - Vancomycin Resistant (VRE)	51299	660 ppm
Escherichia coli	11229	660 ppm
Escherichia coli NDM-1	CDC1001728	660 ppm
Fusobacterium necrophorum	27852 25286	660 ppm
Klebsiella pneumoniae	4352	660 ppm
Klebsiella pneumonia[1] NDM-1	BAA-2473	660 ppm
Legionella pneumophila	33153	660 ppm
Listeria monocytogenes	15313	660 ppm
Pasteurella multocida	12947	660 ppm
Proteus mirabilis	9240	660 ppm
Proteus vulgaris	9920	660 ppm
Salmonella enterica	10708	660 ppm
Salmonella enteritidis	13076	660 ppm
Salmonella typhi	6539	660 ppm
Serratia marcescens	14756	660 ppm
Shigella flexneri	9380	660 ppm
Shigella sonnei	25931	660 ppm
Staphylococcus aureus	6538	660 ppm
Staphylococcus aureus[1] (MRSA)	33592	660 ppm
Staphylococcus aureus[1] (MRSA) Community Associated	(NRS 384) USA300	660 ppm
Staphylococcus aureus[1] (MRSA) Community Associated	(NRS 123) USA400	660 ppm
Staphylococcus aureus[2] (VISA)	CDC No. HIP-5836	660 ppm
Staphylococcus epidermidis[1] (MDR) Multi-Drug Resistant	12228	660 ppm
Streptococcus pyogenes	19615	660 ppm
Pseudomonas aeruginosa	15442	660 ppm
Pseudomonas aeruginosa[1] (MBL)	CDC 2012059	660 ppm

[1] Antibiotic-resistant strain
[2] Reduced Susceptibility to Vancomycin

Conclusion: **Buckeye Eco Neutral Disinfectant** demonstrated efficacy against the listed bacteria as specified in the test performance standards. The formulation meets EPA requirements for hard surface disinfectant claims when diluted as directed.

Claim:	Contact Time:	Organic Soil:	Water Conditions:
Mildewstat	10 minutes	5%	200 ppm as $CaCO_3$
Test Method:	EPA Approved Method		

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

Conclusion: **Buckeye Eco Neutral Disinfectant** demonstrated efficacy as a mildewstat against the above organism as specified in the test performance standards.

Claim:	Contact Time:	Organic Soil:	Water Conditions:
Citrus Canker Disease Control	10 minutes	5%	Deionized
Test Method: EPA Approved Method			

Organism	Use-Dilution Concentration
Xanthomonas axonopodis (Pathovar citri) (USDA Permit No. 46190)	2000 ppm (5oz. per 3¼ gallons)

Claim:	Contact Time:	Organic Soil:	Water Conditions:
Fungicide	10 minutes	5%	200 ppm as $CaCO_3$
Test Method:	EPA Approved Method		

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

Conclusion: **Buckeye Eco Neutral Disinfectant** demonstrated fungicidal efficacy against the above organisms as specified in the test performance standards.

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

Organism	Source of Virus or ATCC#	Use-Dilution Concentration	Contact Time
Adenovirus Type 4	VR-4 strain RI-67	660 ppm (½ oz./gal.)	10 Min.
Adenovirus Type 7	VR-7	**2640 ppm (2 oz./gal.)**	10 Min.
Hepatitis B (HBV)	Duck Hepatitis B Virus (Hepadna Virus Testing, Inc.)	660 ppm	10 Min.
Hepatitis C (HCV)	Bovine Viral Diarrhea Virus (BVDV-CPE)	660 ppm	10 Min.
Herpes Simplex Type 1	VR-733	660 ppm	10 Min.
Herpes Simplex Type 2	MS Strain	660 ppm	10 Min.
HIV-1 (AIDS Virus)	$HTLV\text{-}III_{RF}$ strain	660 ppm	**4 Min.**
Human coronavirus	VR-740 Strain 229E	660 ppm	1 Min.
Influenza A Virus	VR-544 Strain Hong Kong	660 ppm	2 Min.
Respiratory Syncytical virus (RSV)	VR-26	660 ppm	10 Min.
Rotavirus (WA)	Strain WA	660 ppm	10 Min.
Rubella virus	Strain M-33	660 ppm	10 Min.
SARS Associated Coronavirus (SARS)	CDC Strain #200300592	660 ppm	10 Min.
Vaccinia (Pox virus)	Strain IHD	660 ppm	10 Min.

Conclusion: **Buckeye Eco Neutral Disinfectant** effectively inactivated the above viruses specified in the test performance standards. The formulation meets EPA requirements for hard surface disinfectant claims when diluted as directed.

Claim:	Contact Time:	Organic Soil:	Water Conditions:
Animal Viruses	**10 minutes**	5%	200 ppm as $CaCO_3$
Test Method:	EPA Approved Method		

Organism	Source of Virus or ATCC #	Use-Dilution Concentration	Contact Time
Avian influenza (H5N1)	Strain VNH5N1-PR8/CDC-RG CDC #2006719965	660 ppm (½ oz./gal.)	10 Min.
Avian polyomavirus	Dr. Bruce Calnek, Cornell University	660 ppm	10 Min.
Canine distemper virus	VR-128	660 ppm	10 Min.
Feline leukemia virus	VR-717	660 ppm	10 Min.
Feline picornavirus (calicivirus)	VR-649	660 ppm	10 Min.
Infectious bovine rhinotracheitis	VR-793	660 ppm	10 Min.
Infectious bronchitis [Avian IBV]	VR-22	660 ppm	10 Min.
Newcastle Disease	VR-108, strain B1, Hitchner or Blacksburg	660 ppm	10 Min.
Pseudorabies virus [PRV]	VR-135	660 ppm	10 Min.
Rabies virus	VR-138	660 ppm	10 Min.
Transmissible Gastroenteritis virus [TGE]	VR-763	660 ppm	10 Min.

Conclusion: **Buckeye Eco Neutral Disinfectant** effectively inactivated the above viruses specified in the test performance standards. The formulation meets EPA requirements for hard surface disinfectant claims when diluted as directed.

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
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.

Buckeye International, Inc.
2700 Wagner Place • Maryland Heights • MO 63043 • 800.321.2583
www.buckeyeinternational.com