

BIOSECURITY FIELD GUIDE



CLEAN
REPUBLIC

ARMATREX™



MERCK
Animal Health

CLEAN

Begin by removing any organic material- this system works best on a visibly cleaned surface that has had biofilm, manure, dust, and other organic substances removed.

DISINFECT

Clean Republic HOCl is a ready-to-use disinfectant that is effective against the bacteria, viruses, and fungi listed on the label when used as directed. It requires no dilution and can be applied to hard, non-porous surfaces in veterinary environments, transport vehicles, equipment, and animal housing. For proper efficacy, surfaces must remain visibly wet for the full contact time specified on the label. When incorporated into routine cleaning and disinfection programs, HOCl supports biosecurity practices in animal environments.

PROTECT

Armatrex™ (silane quaternary ammonium salt) is a ready-to-use spray-on antimicrobial solution that imparts durable biostatic protection to treated, hard, non-porous surfaces. It creates an invisible barrier that inhibits the growth of odor-causing bacteria, fungi, mold, mildew, and algae. For best results, reapply periodically, or sooner if surfaces are subject to heavy use or cleaning. Armatrex can be applied to approved use sites including delivery trucks, waterers, veterinary clinics, quarantine pens, breeder and broiler houses, and other livestock and poultry environments as listed on the label. Apply only to clean, dry surfaces and avoid oversaturation. For best results, incorporate Armatrex into existing biosecurity and sanitation protocols.

APPLICATION METHODS

There are several different options to apply Clean Republic and Armatrex. Electrostatic sprayers and foggers are effective tools for achieving even surface coverage, as permitted by the label. Talk to your Merck Animal Health representative about the opportunity to obtain an electric induction sprayer (handheld, backpack, or cart) through a Customer Sprayer Agreement.

Sprayer	Sq. ft/gallon
Trigger	250
Pump up	900-1400
Fogger	2000-3000
Electrostatic Sprayer	3000-4000

Handheld electric induction sprayer



APPLICATION INSTRUCTIONS

1. PREPARE THE AREA

Remove animals, people, and any exposed food items. Pre-clean visibly dirty surfaces if possible.

2. WEAR PPE AS INSTRUCTED

Wear PPE according to the product label and safety data sheet. Avoid inhaling spray mist.

3. USE ONE PRODUCT AT A TIME

Only fill tank with one chemical at a time. HOCL and Armatrex should be applied separately.

4. MAINTAIN 2-4 FT DISTANCE

Stay at least 2 feet from surfaces for even coverage and wraparound effect.

5. AVOID OVERSATURATION

Surfaces should be damp, not dripping. Too much liquid reduces efficacy and wastes product.

6. RESPECT DRY TIMES

HOCL typically dries in 1-5 minutes; Armatrex may take 10-30 minutes. Allow to dry fully before contact.

7. FLUSH SPRAYER AFTER USE & WASH HANDS

Run clean water through the system to prevent nozzle clogging and corrosion.

8. LOG USAGE FOR CONSISTENCY

Maintain a disinfection log: date, location, product used, and operator initials.

BEST PRACTICES

DO	DON'T
Use properly stored and dated product	Use expired (or UV-exposed) HOCL
Apply Armatrex to clean, dry surfaces	Apply Armatrex over wet HOCL
Spray from a 2-4 ft distance	Spray closer than 1 foot (can cause beading & runoff)
Ensure constant motion while spraying	Pause in one spot (can cause pooling)
Spray in the direction of the air flow, not against it	Spray against air flow (spray goes where the air goes)
Store sprayer dry and upright	Leave product in the tank overnight
Flush with clean water after each use	Leave rinse water in the tank (could cause corrosion)
Apply HOCL before Armatrex (sequentially)	Mix or apply products wet-on-wet
Label sprayer tank with product name	Reuse the tank for both products without full flushing

This field guide is provided for informational and training purposes only. Always refer to the EPA-registered product label for complete directions for use, precautionary statements, and approved application methods. Claims and uses must conform to the label as registered under FIFRA.
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FEATURES AND BENEFITS

Armatrex can be used as a final bacteriostatic finish to impart fungistatic (mold and mildew), or algistatic activity that provides freshness, reduces surface deterioration, or microbiologically induced corrosion.

An Antimicrobial agent inhibits the growth of odor causing bacteria, fungi, mold, mildew, and algae.

FOR NON-PUBLIC HEALTH ORGANISMS

ARMATREX™

ANTIMICROBIAL†

A Silane Quaternary Ammonium Salt

ACTIVE INGREDIENTS: 3-(Trimethoxysilyl) Propyldimethyl Octadecyl Ammonium Chloride	1.0%
OTHER INGREDIENTS:	99.0%
TOTAL:	100.0%

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish, aquatic invertebrates, oysters and shrimp.



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KEEP OUT OF REACH OF CHILDREN

Distributed by Intervet Inc
(d/b/a Merck Animal Health)
126 E. Lincoln Ave. Rahway,
NJ 07065

NET CONTENTS: 5 GALLONS (640 FL. OZ.)

Use Armatrex in/on locations and surfaces as listed in the directions for use.

EPA Reg. No. 92057-3-773
EPA Est. No. 103745-GA-1

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. This product does not protect against human health pathogens or disease-causing organisms.

FOR COMMERCIAL & INDUSTRIAL USE

ARMATREX can be used as a final bacteriostatic finish for the following sample structures, facilities, and locations:

Locations: Veterinary clinics, laboratories, animal laboratories, animal research centers, animal quarantine areas, animal holding areas, kennels, animal hospitals, animal breeding facilities, breeding establishments, animal husbandry establishments, grooming establishments, animal housing facilities, zoos, tack shops, pet shops, operating rooms, washing areas, waiting rooms, examination rooms, animal care facilities; livestock, equine and poultry based veterinary facilities; restrooms, shower and bath areas.
Farmhouses, barns, sheds, cattle, swine, sheep, horse barns; calf hutches, feed silos and storage facilities, pens and stalls, swine quarters, livestock farms, brooder houses; calving, hog, cattle and horse operations, livestock pens, exotic animal farming operations; swine waterers, feeders and hauling equipment; dairy farming operations (barns and milk houses); delivery trucks, swine premises including: farrowing barns and areas, nurseries, blocks, creep areas, and chutes; poultry and turkey farms inclusive of: breeder, pullet, and broiler farms; poultry premises (hatcheries) including: egg trucks, egg receiving areas, egg holding areas, tray dumping areas, setter rooms, hatchers, chick holding areas, chick processing areas, chick loading areas, poultry buildings including public spaces, chick vans, food processing and food manufacturing plants; USDA inspected food-processing facilities; federally inspected meat and poultry plants; egg processing plants; meat packing plants; hide and leather processing plants; slaughtering operations; fish processing facilities; commercial fishing processing vessels; grain milling and storage operations, hatchery and farm vehicles, poultry transport vehicles. **Surfaces:** Poultry farm equipment, egg conveyors, hen boxes, egg pads, litter, hatchers, setters, trays, racks, egg flats, chick boxes, egg cases, vans and trash containers, water lines, feed conveyors, carts, sexing tables; automated tray, rack and buggy washers; egg receiving and egg holding areas, conveyor systems and belts; hard non-porous

surfaces, veterinary equipment, case goods, kennel runs, cages, kennel/cage floors, conductive flooring, examination tables, veterinary x-ray tables, loading platforms, animal equipment; farming equipment, harvesting and handling equipment; air filters for furnaces, air-conditioners, air purification devices, recirculating air handling systems, waste receptacles, washing machines. Building materials and components for floors, walls, ceilings and fixtures; insulation, cabinetry, wallboard, wood and wood components; cellulosic sheathing, sealed foundations, plumbing fixtures, lighting equipment fixtures, metal structural components, vinyl, stone, roofing materials, brick, cement, concrete, masonry materials (mortar), composite materials, painted surfaces, glass surfaces, aluminum, brass, copper, laminated surfaces, metal, plated steel, stainless steel, glazed porcelain, tile, and ceramic; sealed granite and marble; plastic, sealed limestone, slate, and stone; chrome, Plexiglas®, enameled surfaces, Formica®; water supply lines and tubing; countertops, bathroom and kitchen sinks; shelves, racks, fabrics: natural, synthetic, woven and non-woven; Personal Protective Equipment (PPE).

FOR USE AS AN ANTIMICROBIAL† UNDER EPA REGULATIONS DIRECTIONS PRIOR TO COMMERCIAL & INDUSTRIAL USE

Dry substrates at temperatures from ambient to a maximum of 160°C (320°F) to effect complete condensation of silanol groups and to remove water, solvents, and/or traces of methanol from hydrolysis. Optimum application and drying conditions, such as time and temperature, should be determined for each application before use. If necessary, reapply this product every three months (90 days) or when odor, staining, and discoloration due to bacteria, mold, or mildew returns. Test fabric or surface in an inconspicuous area for color fastness or adverse reaction.
For Pump Spray Application: Spray entire area 4 to 6 inches from the surface making sure the surface is completely covered. Apply and then let stand until dry or let stand 3 minutes and wipe dry with cloth or sponge. If spotting occurs, wipe with moist cloth or sponge. Test for staining and color-fastness of fabrics and carpets by treating and drying a small, concealed area prior to application. When treating coarser substrates, more of this product may be required

due to absorption. A fan may be used to assist in drying.

For Commercial Spray Application Fabric: For commercial application equipment (i.e. carpet/upholstery steamers, rotary jet extraction Cleaners, pressure sprayers) apply without dilution and then let stand until dry or let stand 3 minutes and wipe dry with cloth or sponge. If spotting occurs, wipe with moist cloth or sponge. Test for staining and color-fastness of fabrics and carpets by treating and drying a small, concealed area prior to application. When treating coarser substrates, more of this product may be required due to absorption. Spray application is preferred on large surfaces that are easily accessible. The spray equipment chosen should provide a consistent fine (1-300 micron) particle size and uniform spray pattern. Pump up garden type sprayers can be used but care must be taken to maintain maximum pressure by pumping frequently and adjusting the spray nozzle for the finest spray pattern possible. During application achieve complete uniform coverage. Avoid excessive wetting and do not allow the spray to run or pool. Excess moisture should be removed with a clean, dry towel.

STORAGE AND DISPOSAL

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

Storage: Store in original, tightly closed containers below 30°C (86°F) and above 0°C (32°F) in a secure area inaccessible to children and away from food or feed.

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 the Hazardous Waste Representative at the nearest EPA Regional Office for guidance.

Container Disposal: Non-Refillable Container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Fill the container ¼ full with water and recap. Shake for 10 seconds. Drain for 10 seconds after the flow begins to drip. Follow Pesticide Disposal instructions for rinsate disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration.

Featured label for 5 gallon presentation. Also available in 1 gallon, 55 gallon, and 275 gallon presentations.

Disinfection Claims

Kills bacteria* on hard non-porous surfaces in 10 minutes.

* Staphylococcus aureus (ATCC 6538), Pseudomonas aeruginosa (ATCC 15442), and Salmonella enterica (ATCC 10708), Escherichia coli (ATCC 11229)

Organism Name ATCC numbers and/or strains

Kills Staphylococcus aureus, Pseudomonas aeruginosa, and Salmonella enterica on treated surfaces.

Organism Name	ATCC numbers and/or strains
Staphylococcus aureus	ATCC 6538
Pseudomonas aeruginosa	ATCC 15442
Salmonella enterica	ATCC 10708
Escherichia coli	ATCC 11229
H1 N1 A/Swine/1976/31,	ATCC VR-99
Norovirus (Feline Calicivirus and Murine Norovirus as surrogates) Feline Calicivirus, strain F9, ATCC VR-782; Murine Norovirus, strain G, ATCC TIB-71	
Carbapenem Resistant Klebsiella (CRE) Pneumoniae	ATCC BAA-2470
Hepatitis A	Strain: HM 175/18F Source: University of Ottawa
Hepatitis B	Strain: Grimaud Source: Hepadnavirus Testing
Hepatitis C	Strain: NADL Source: American Biosearch Laboratories
HIV1	Strain: IIBB Source: ZeptoMetrix

Note: ATCC numbers are not available for Hepatitis A, Hepatitis B, Hepatitis C, HIV1, Equivalent identifiers are used in above table accordingly.

Sanitization Claims

Kills E. coli and S. aureus on treated food contact surfaces in 60 seconds.

Kills Escherichia coli and Staphylococcus aureus on treated surfaces in 60 seconds.

Non-corrosive • No dilution or mixing required

WARRANTY

Clean Republic Multi-Purpose Disinfectant warrants that this product conforms to the product specification on this label and is reasonable fit for the purposes set forth in the Directions for Use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW. NO OTHER EXPRESS WARRANTY OR IMPLIED WARRANTY OF FITNESS FOR PARTICULAR PURPOSE OR MERCHANTABILITY IS MADE.

DIRECTIONS FOR USE

It is a violation of federal law to use this product in a manner inconsistent with its labeling. Clean Republic Multi-Purpose Disinfectant is a disinfectant for use on hard non-porous inanimate surfaces. Clean Republic Multi-Purpose Disinfectant is an oxidized, pH-neutral water based solution that is ready-to-use. When used for directions for use, this product disinfects hard, non-porous surfaces.

Disinfection of Hard, Non-porous Surfaces:

Clean Republic Multi-Purpose Disinfectant can be used to disinfect hard, non-porous surfaces. To disinfect, apply Clean Republic Multi-Purpose Disinfectant to any hard, non-porous surface with a cloth, mop, sponge or coarse sprayer. Wet the surfaces thoroughly and allow surface to remain wet for 10 minutes. Allow treated surface to air dry. Remove visible soil from surfaces before applying this product. Small non-porous objects can also be soaked in Clean Republic Multi-Purpose Disinfectant without dilution. Allow objects to soak for 10 minutes.

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 direct 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 devices prior to sterilization or high level disinfection.

Sanitation of Hard Non-porous Food Contact Surfaces

Clean Republic Multi-Purpose Disinfectant is an effective sanitizer against gram positive and gram negative bacteria (vegetative forms) such as Staphylococcus aureus and Escherichia coli.

Clean Republic Multi-Purpose Disinfectant is a sanitizer for use on pre-cleaned non-porous, food contact surfaces including food preparation and storage areas.

DISTRIBUTED BY: ByoPlanet® International, LLC
125 Old Monroe Road, Athens, GA 30606
United States



MULTI-PURPOSE DISINFECTANT

Ready to Use Disinfectant and Sanitizer for hard Non-Porous Surfaces
For Commercial and Household Use

ACTIVE INGREDIENTS	
Hypochlorous Acid	0.025%
Other Ingredients	99.975%
Total	100.000%

If the product is not used immediately after production, the product should be tested with a chlorine test kit. The product should contain 338 ppm FAC. Do not use product if less than 338 ppm of available chlorine.

EPA Reg. No.: 85134-1- 88556 • EPA Est. No.: 103745-GA-1

Contains 338 ppm FAC **KEEP OUT OF REACH OF CHILDREN**
Date produced:

CAUTION

Batch Code:

Category Code: 5.5.2.D2 4.7.2.3DX

Net Contents: 5 Gallon

Prior to application, remove and pre-clean all surfaces by a pre-flush or pre-scrape and when necessary, presoak. Then thoroughly wash or flush objects with a good detergent or compatible cleaner, followed by a potable water rinse before applications of the sanitizing solution.

To sanitize, apply Clean Republic Multi-Purpose Disinfectant to any hard, non-porous surface with a cloth, mop, sponge or coarse sprayer. Wet surfaces thoroughly and allow surface to remain wet for 60 seconds. Allow treated surface to air dry. Remove gross filth from surfaces before applying this product.

STORAGE AND DISPOSAL

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

Pesticide Storage: Store Clean Republic Multi-Purpose Disinfectant in its original sealed container at room temperature, away from direct sunlight and heat to avoid deterioration.

Pesticide Disposal: Wastes from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Handling: Nonrefillable container. Do not reuse or refill this container. (Then) offer for recycling if available or reconditioning if appropriate puncture and dispose of in a sanitary landfill or incineration.

PHYSICAL OR CHEMICAL HAZARDS

Do not use this product with other household or industrial chemicals such as toilet bowl cleaners, rust removers, acids, or products containing ammonia. To do so will release hazardous, irritating gas. Prolonged contact with metal may cause pitting or discoloration.

