

81446-1

8/9/2010

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

AUG -9 2010

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

Mr. Bruce Jaeger
Agent for Chem-Tex Laboratories, Inc
Health & Environmental Horizons, Ltd.
2851 South Haven Road
Annapolis, MD 21401

Subject: ChitoSante [BacShield]
EPA Registration No.: 81446-1
Amendment Date: May 4, 2010
EPA Receipt Date: May 11, 2010

Dear Mr. Jaeger,

The following amendment submitted in connection with registration under FIFRA, as amended, is acceptable with conditions.

Proposed Amendment

- Add Category Headings, Cleaning Instructions, Marketing Claims

Conditions

Revise the label as follows:

- 1.) Revise the 3rd claim under the "Directions for Use" on page 3 by adding the phrase, "against the growth of bacteria, mold, mildew, and fungi *that cause odor, stains, discoloration, decay, and deterioration* in or on the treated product."
- 2.) Revise the "Commercial/Industrial Use" directions on page 3, the "Porous Surfaces" directions on page 5, and "Non-Food hard Contact Surfaces" directions on page 5, and "Professional Applicators" directions on page 7 by deleting the term, should, and stating "must" such that the directions are in compliance with PR Notice 2000-5, Mandatory Labeling.
- 3.) The "Mold/Mildew Remediation and Prevention" guidance information pages 8-11 must be removed from the label. You may list these websites for your consumers to consult; however, the information selected from these websites is incomplete and often misleading.

4.) The "Small Areas" statement under PPE Personal Protection Equipment Requirements for Applicators on page 14 is not in compliance with PR Notice 2000-5, Mandatory labeling.

CONCURRENCES

SYMBOL							
SURNAME							
DATE							

5.) The "Container Disposal" statements are not in compliance with PR Notice 2007-4. You must add the statements, "Nonrefillable container. Do not reuse or refill this container" as the first statements to this section.

6.) Delete the claim, "approved for use by D.O.D and/or the Service Branches," on page 17 is because it is a false or misleading according to 40 CFR 156.10 (a)(5)(v) by directly implying the this pesticide is recommended or endorsed by an agency of the Federal Government.

7.) According to 40 CFR 156.10 (a)(5) (ix) and (x), the following claims on pages 17 and 18 are implied safety claims regarding the product and its ingredients which are false or misleading. Delete the following claims:

- a. Bac-Shield is one aspect of a hygienic cleaning program
- b. Active ingredient is derived from a replenishable natural resource.
- c. Active ingredient has a long history of safe effective application.
- d. Biodegradable
- e. Naturally Occurring Active Ingredient
- f. Virtually nontoxic to humans and animals
- g. Does not harm plants and shrubs
- h. Natural by-product of the fishing/crabbing industry
- i. Derived from crab shells

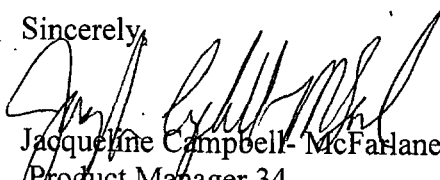
8.) The 6th claim, "Reduces Mold Spores that cause allergies," on page 18 is a public health claim that requires the submission of efficacy data to support. Therefore, delete the claim.

General Comments

A stamped copy of the label is enclosed for your records. Submit three (3) copies of your final printed labeling before distributing or selling the product bearing the revised labeling.

Should you have further questions concerning this letter, please contact me by telephone at (703) 308-6416 or by e-mail at Campbell-mcfarlane.jacqueline@epa.gov. When submitting information or data in response to this letter, a copy of this letter should accompany the submission to facilitate processing.

Sincerely,



Jacqueline Campbell-McFarlane
Product Manager 34
Regulatory Management Branch II
Antimicrobials Division (7510P)

CONCURRENCES

SYMBOL	Enclosure: Stamped Label						
SURNAME							
DATE							

COPY

ChitoSante' [BacShield]

Antimicrobial for Textiles and Surfaces

Inhibits Growth and Odor from Bacteria, Mold, Mildew and Fungi

ACTIVE INGREDIENT:	% w/w
Chitosan	6.0%
OTHER INGREDIENTS:	94.0%
Total	100.00%

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION
Causes moderate eye irritation. Avoid contact with eyes. Wash thoroughly with soap and water after handling.

FIRST AID STATEMENTS

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.
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Have the product container or label with you when calling a poison control center or doctor, or going to receive treatment.

EPA Reg. No. 81446-1
EPA Est. No. 081446-NC-001

Net Contents:

Chem-Tex Laboratories, Inc.
2725 Armentrout Dr
Concord, NC 28025

ACCEPTED
with **COMMENTS**
in EPA Letter, Dated:

AUG -9- 2010

Under the Federal Insecticide,
Fungicide, and Rodenticide Act as
amended, for the pesticide,
registered under EPA Reg. No **81446-1**

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ENVIRONMENTAL HAZARDS

Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or public waters unless in accordance with the requirements of National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product into sewer without previously notifying the sewage treatment plant authority. For guidance, contact your State Water Board or regional Office of the EPA.

NOTICE OF WARRANTY

Chem-Tex Laboratories, Inc. warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label only when used in accordance with the label directions under normal conditions of use. Chem-Tex Laboratories, Inc. makes no other express or implied warranties either of merchantability or fitness for a particular use. Handling, storage and use of the product by Buyer or User are beyond the control of Chem-Tex Laboratories, Inc. and Seller. Risks such as ineffectiveness or other unintended consequences resulting from, but not limited to, failure to follow label directions will be assumed by the Buyer or User. In no case will Chem-Tex Laboratories, Inc. or Seller be held liable for consequential, special or indirect damages resulting from the handling, storage or use of this product.

The terms of this Limited Warranty and Disclaimer cannot be varied by any written or verbal statements or agreements. No employee or agent of the seller is authorized to vary or exceed the terms of this Limited Warranty and Disclaimer in any manner.

Produced by:
Chem-Tex Laboratories, Inc.
2725 Armentrout Dr
Concord, NC 28025

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. ChitoSante' [BacShield] is intended as a treatment in order to give antimicrobial and antifungal activity to the treated materials.

ChitoSante' [BacShield] inhibits the growth of non-health related organisms such as bacteria, mold, mildew and fungus that cause odor, stains, discoloration, decay and deterioration of the treated materials.

Distributors of products containing ChitoSante' [BacShield] may not make claims of antimicrobial activity other than the protection of the treated material against the growth of bacteria, mold, mildew and fungi in or on the treated product.

See 40 C.F.R.152.25 (a) for further guidance about treated article claims.

COMMERCIAL/INDUSTRIAL USE

ChitoSante' [BacShield] is used in the finishing process of manufacturing textiles. It is generally applied during or after the dyeing process, at a rate of 0.1- 4.0% owg ("on weight of goods") or, relative to the dry weight of the textiles. Textile materials ~~should~~ be soaked in this ChitoSante' [BacShield] solution for good saturation and penetration of fibers. After soaking, textile materials ~~should~~ be dried at a temperature of 150-338 degrees F, dependent upon the fiber content of the textile material.

Manufacturing of carpet: ChitoSante' [BacShield] can be applied to the face or the back of the carpet after the dyeing process. Apply by spray, foam, kiss roll, or flooded nip. Apply at a rate of 1-2% on the face weight or 0.3 to 0.6 grams per square foot.

For surface applications to textiles, paper, leather, textile wall partitions, wallboard liner and other construction materials: Apply as a spray, direct surface application (kiss roll, flooded nip) or foam at a rate of 3-12 fluid ounces of ChitoSante' [BacShield] per gallon of water, depending upon surface texture and absorption qualities of textile.

Contact Chemtex Laboratories @ 800-532-5361 for questions pertaining to specific manufacturing processes.

DOMESTIC USES

As a cleaner:

ChitoSante' [BacShield] in a diluted solution, may be used as a cleaner to remove [odor-causing bacteria], [mold], [mildew], and [other organic matter] from surfaces [materials] prior to subsequent [treatment] [application] to inhibit [prevent] bacterial and [or] fungal [mold] growth on those surfaces [and] [or] [materials].

Mix 6 -12 ounces of ChitoSante' [BacShield] into one gallon of water to prepare cleaning solution. Use 6 ounces /gallon for general cleaning and 12 ounces per gallon for more severe applications.

Cleaning [Preparing the Surface] with ChitoSante' [BacShield]

- [1] Apply ChitoSante' [BacShield] until area to be cleaned is thoroughly wet.
- [2] Wipe or scrub area to loosen mold [dirt] [soil] [organic matter]
- [3] Wipe with rag [cloth] to remove mold [dirt] [soil] [organic matter] from surface and dispose of rag [cloth]

Home use (washing machine): Add ChitoSante' [BacShield] to the fabric softener dispenser or directly onto laundry in washer. Dry laundry in dryer or allow to air-dry before use. See table below:

Table: Mixing instructions for a 1% Application Rate

		8 Gallons	12 Gallons	15 Gallons
<u>Textile</u>	<u>Absorption</u>	<u>Small Load</u>	<u>Medium Load</u>	<u>Large Load</u>
Nylon	Low	5 cups	7.5 cups	9.5 cups
Polyester	Moderate	2 cups	3 cups	4 cups
Cotton	High	1 cup	1.5 cups	1.75 cups

Home use (as an after-wash spray for laundry): Add 3-12 ounces ChitoSante' [BacShield] per gallon of water. Spray articles to be treated until thoroughly soaked. Dry article in dryer or allow to air-dry before use.

Amount of ChitoSante' [BacShield] for spray applications (1% application rate)

<u>Textile</u>	<u>Absorption</u>	<u>ChitoSante' [BacShield] per gal of water</u>
Nylon	Low	12 fl. oz/gal
Polyester	Moderate	6 fl oz/gal
Cotton	High	3 fl oz/gal

Note: Always test for staining in an inconspicuous area. ChitoSante' [BacShield] should not stain articles not stained by water alone.

Laundry:

For use in automatic washers:

Run laundry through entire rinse cycle.

Re-set washer to final rinse cycle

Add undiluted ChitoSante' [BacShield] to fabric softener receptacle as instructed in chart below, or pour undiluted directly onto laundry.

Repeat rinse cycle.

Dry laundry thoroughly

Apply to each load.

Washer Type: Domestic/Coin Operated (less than 30 lb machines)

	<u>Front Load</u>	<u>Top Load</u>
Cotton/Cotton blends	1.75 oz/load	4 oz/load
Nylon, polyester & Other synthetics	6.5 oz/load	15 oz/load

As an after-wash treatment for clothing, linens, uniforms, textiles in general:

Mix 6 ounces [1.5 ounces] of ChitoSante' [BacShield] per gallon [quart] of water and fill hand held spray bottle or other suitable sprayer.

Remove laundry from washer after final spin cycle.

Spray each article with ChitoSante' [BacShield] solution.

Apply to damp articles as removed from the washer, or dried articles if they have been previously washed and dried.

Dry treated articles thoroughly before use.

Apply to each load.

Other Uses (Surfaces):

Porous Surfaces:

As a spray for textiles, paper and other porous surfaces such as but not limited to: awnings, bedding, car covers, boat covers, ceilings, curtains, drapes, linens, mattresses, pet bedding, pillows, shoes, umbrellas, upholstery, vehicle interiors, leather, textile wall partitions, wallboard liner, wallboard and other household or construction materials.

Areas to be treated with ChitoSante' [BacShield] ~~should~~ be thoroughly cleaned to remove dirt, mold, mildew, fungi, or other organic matter. ChitoSante' [BacShield] can be used as a cleaner prior to subsequent treatment [application] with [of] ChitoSante' [BacShield]. **See section titled "Cleaning with ChitoSante' [BacShield]" for instructions in using ChitoSante' [BacShield] as a cleaner**

To treat porous surfaces, mix 6 ounces [1.5 ounces] of ChitoSante' [BacShield] per gallon [quart] of water and fill hand held spray bottle or other suitable sprayer.

Apply ChitoSante' [BacShield] solution until thoroughly damp. One gallon of solution covers approximately 270 sq. ft. Allow to dry before use.

Table: Amount of ChitoSante' (BacShield) Solution for Spray Applications

<u>Textile</u>	<u>Absorption</u>	<u>Solution</u> fl. oz/gal	<u>Light Material</u> fl. oz/sq yd	<u>Heavy Material</u> fl. oz/sq yd
Nylon	Low	12	0.06	0.25
Polyester	Moderate	6	0.12	0.50
Cotton	High	3	0.25	1.00

Non-food Hard Contact surfaces:

As a spray or mist for non-food hard contact surfaces, such as, but not limited to: fiberglass, masonry, metal, particle board, vinyl, wood, garbage cans, laminated surfaces, desks, window sills and other interior and exterior surfaces.

Areas to be treated with ChitoSante' [BacShield] ~~should~~ be thoroughly cleaned to remove dirt, mold, mildew, fungi, or other organic matter. ChitoSante' [BacShield] can be used as a cleaner prior to subsequent treatment [application] with [of] ChitoSante'

[BacShield]. See section titled "Cleaning with ChitoSante' [BacShield]" for instructions in using ChitoSante' [BacShield] as a cleaner

To treat non-food hard contact surfaces, mix 6 ounces [1.5 ounces] of ChitoSante' [BacShield] per gallon [quart] of water and fill hand held spray bottle or other suitable sprayer.

Apply ChitoSante' [BacShield] solution to surfaces until thoroughly wet. Avoid runoff. Allow to dry before use.

ATHLETIC/SPORTS EQUIPMENT/FACILITIES

Laundry

For use in automated washers:

Run laundry through entire rinse cycle, and then re-set washer to final rinse cycle. Add ChitoSante' [BacShield] to fabric softener receptacle or directly onto laundry. Repeat rinse cycle, then dry laundry thoroughly. Apply to each load.

Washer Type: Domestic/Coin Operated (less than 30 lb machines)

	<u>Front Load</u>	<u>Top Load</u>
Cotton/Cotton blends	1.75 oz/load	4 oz/load
Nylon, polyester & Other synthetics	6.5 oz/load	15 oz/load

Large Capacity Washers (30 lb and greater)

Cotton/cotton blends	0.125- 1.0 oz/gal of water in final rinse cycle
Nylon, polyester & Other synthetics	0.5- 4.0 oz / gal of water in final rinse cycle

Add undiluted ChitoSante' [BacShield] to the final rinse cycle, along with fabric softener, if used. Use the lowest water level setting. Apply to each load. Laundry may be air-dried if desired.

Dry thoroughly before use.

As an after-wash treatment for clothing, linens, uniforms, and textiles in general:

Mix 6 ounces [1.5 ounces] of ChitoSante' [BacShield] into one gallon [quart] of water. Remove laundry from washer after final spin cycle. Spray each article with ChitoSante' [BacShield] solution, then dry thoroughly before use. Apply to each load. ChitoSante' [BacShield] solution may also be applied to dry clothing. Spray each article to be treated until thoroughly damp. Dry thoroughly before use. Articles may be air-dried if desired.

See section titled "Cleaning with ChitoSante' [BacShield]" for instructions in using ChitoSante' [BacShield] as a cleaner.

Athletic equipment, including but not limited to, protective helmets, pads, blocking dummies:

First, clean articles to be treated. If disinfecting is required, use an EPA registered disinfectant after article has been cleaned.

Mix 6 ounces of ChitoSante' [BacShield] into one gallon of water.

Apply as a spray or mist until surface is completely moist. Apply weekly. Avoid runoff. Allow to dry thoroughly before use.

Exercise equipment/surfaces/lockers/mats:

First, clean articles to be treated. If disinfecting is required, use an EPA registered disinfectant after article has been cleaned.

Mix 6 ounces of ChitoSante' per gallon of water and apply as a spray, mist or wipe with soaked cloth until surface is thoroughly damp. Avoid runoff. Allow to dry thoroughly before use. Apply daily to exercise equipment, surfaces and mats. Apply weekly to lockers.

PROFESSIONAL APPLICATORS – DIRECTIONS FOR USE

Professional Mold Remediators Refer to Section Titled "Mold/Mildew Remediation and Prevention" or call Chemtex Laboratories @ 800-532-5361 for specific questions.

ChitoSante' [BacShield] may be applied by hand sprayer, garden sprayer, airless/compression sprayer, cold-fogger, brush, roller, cloth, or immersion.

Carpet: Mix 12 ounces of ChitoSante' [BacShield] into one gallon of water.

Apply to clean carpet as a spray or mist. One gallon of solution covers approximately 540 square feet of surface area. Allow carpet to dry before use.

In homes, offices, commercial, hospitality, or industrial settings apply each time carpet is cleaned or as needed for odors due to mold, mildew, fungi, or bacteria.

In athletic facilities, carpet ~~should~~ be cleaned regularly and ChitoSante' [BacShield] applied weekly.

Re-apply ChitoSante' [BacShield] after each carpet cleaning.

Synthetic Turf: Mix 6 ounces of ChitoSante' per gallon of water. Apply as a spray at a rate of 1 gallon of solution per 270 square feet of synthetic turf. If less water is desired in/on turf, mix at a rate of 12 ounces of ChitoSante' per gallon of water and apply at a rate of one gallon of solution per 540 square feet of synthetic turf. Allow to dry before use. Apply every three months.

Vehicle interiors: Dilute 6 ounces of ChitoSante' with 1 gallon of water, spray 3 ounces of solution per average size car. Use more solution to cover larger vehicles.

Mold /Mildew Remediation and Prevention

Note: The information contained in this section is not intended to provide comprehensive instructions for mold removal and remediation, but is intended as a general guide for mold removal and prevention and to provide sources for additional information pertaining to mold, mold removal, and prevention. Mold can have serious health consequences in certain individuals. Consult a certified professional mold remediator for areas larger than 30 square feet.

Excerpt from Homes and Molds

<http://www.epa.gov/mold/moldcleanup.html>

"A Brief Guide to Mold, Moisture and Your Home"

If you already have a mold problem - ACT QUICKLY. Mold damages what it grows on. The longer it grows the more damage it can cause.

*It is impossible to get rid of all mold and mold spores indoors; some mold spores will be found floating through the air and in house dust. The mold spores will not grow if moisture is not present. Indoor mold growth can and should be prevented or controlled by controlling moisture indoors. If there is mold growth in your home, you must clean up the mold **and** fix the water problem. If you clean up the mold, but don't fix the water problem, then, most likely, the mold problem will come back.*

Mold Cleanup

Who should do the cleanup depends on a number of factors. One consideration is the size of the mold problem. If the moldy area is less than about 10 square feet (less than roughly a 3 ft. by 3 ft. patch), in most cases, you can handle the job yourself, following the guidelines below. However:

- If there has been a lot of water damage, and/or mold growth covers more than 10 square feet, consult EPA's Mold Remediation in Schools and Commercial Buildings. Although focused on schools and commercial buildings, this document is applicable to other building types.*
- If you choose to hire a contractor (or other professional service provider) to do the cleanup, make sure the contractor has experience cleaning up mold. Check references and ask the contractor to follow the recommendations in EPA's Mold Remediation in Schools and Commercial Buildings, the guidelines of the American Conference of Governmental Industrial Hygienists (ACGIH), or other guidelines from professional or government organizations.*

- If you suspect that the heating/ventilation/air conditioning (HVAC) system may be contaminated with mold (it is part of an identified moisture problem, for instance, or there is mold near the intake to the system), consult EPA's guide Should You Have the Air Ducts in Your Home Cleaned? before taking further action.
- Do not run the HVAC system if you know or suspect that it is contaminated with mold - it could spread mold throughout the building.
- If the water and/or mold damage was caused by sewage or other contaminated water, then call in a professional who has experience cleaning and fixing buildings damaged by contaminated water.
- If you have health concerns, consult a health professional before starting cleanup.

Resources for Mold Related Information and Remediation Guidance:

Institute of Inspection, Cleaning and Restoration Certification (IICRC)

(360) 693-5675

www.iicrc.org Exit Disclaimer

Information on and standards for the inspection, cleaning, and restoration industry

Centers for Disease Control and Prevention (CDC)

(800) 311-3435

www.cdc.gov Exit Disclaimer

The New York City Department of Health and Mental Hygiene

Guidelines on Assessment and Remediation of Fungi in Indoor Environments

Exit Disclaimer

This document revises and expands the original guidelines to include all fungi (mold). It is based both on a review of the literature regarding fungi and on comments obtained by a review panel consisting of experts in the fields of microbiology and health sciences. It is intended for use by building engineers and management, but is available for general distribution to anyone concerned about fungal contamination, such as environmental consultants, health professionals, or the general public. For further information regarding this document please contact the New York City Department of Health at (212) 788-4290 / 4288.

Mold Cleanup Guidelines

<http://www.epa.gov/mold/cleanupguidelines.html>

Tips and techniques

The tips and techniques presented in this section will help you clean up your mold problem. Professional cleaners or remediators may use methods not covered in this publication. Please note that mold may cause staining and cosmetic damage. It may not be possible to clean an item so that its original appearance is restored.

What to Wear When Cleaning Moldy Areas

<http://www.epa.gov/mold/whattowear.html>

Avoid breathing in mold or mold spores. In order to limit your exposure to airborne mold, you may want to wear an N-95 respirator, available at many hardware stores and from companies that advertise on the Internet. (They cost about \$12 to \$25.) Some N-95 respirators resemble a paper dust mask with a nozzle on the front, others are made primarily of plastic or rubber and have removable cartridges that trap most of the mold spores from entering. In order to be effective, the respirator or mask must fit properly, so carefully follow the instructions supplied with the respirator. Please note that the Occupational Safety and Health Administration (OSHA) requires that respirators fit properly (fit testing) when used in an occupational setting; consult OSHA for more information (800-321-OSHA or www.osha.gov).

Wear gloves. Long gloves that extend to the middle of the forearm are recommended. When working with water and a mild detergent, ordinary household rubber gloves may be used. If you are using a disinfectant, a biocide such as chlorine bleach, or a strong cleaning solution, you should select gloves made from natural rubber, neoprene, nitrile, polyurethane, or PVC (see Cleanup and Biocides). Avoid touching mold or moldy items with your bare hands.

Wear goggles. Goggles that do not have ventilation holes are recommended. Avoid getting mold or mold spores in your eyes.

Hidden Mold

<http://www.epa.gov/mold/hiddenmold.html#CleanupandBiocides>

Suspicion of hidden mold

You may suspect hidden mold if a building smells moldy, but you cannot see the source, or if you know there has been water damage and residents are reporting health problems. Mold may be hidden in places such as the back side of dry wall, wallpaper, or paneling, the top side of ceiling tiles, the underside of carpets and pads, etc. Other possible locations of hidden mold include areas inside walls around pipes (with leaking or condensing pipes), the surface of walls behind furniture (where condensation forms), inside ductwork, and in roof materials above ceiling tiles (due to roof leaks or insufficient insulation).

Investigating hidden mold problems

Investigating hidden mold problems may be difficult and will require caution when the investigation involves disturbing potential sites of mold growth. For example, removal of wallpaper can lead to a massive release of spores if there is mold growing on the underside of the paper. If you believe that you may have a hidden mold problem, consider hiring an experienced professional.

Cleanup and Biocides

Biocides are substances that can destroy living organisms. The use of a chemical or biocide that kills organisms such as mold (chlorine bleach, for example) is not recommended as a routine practice during mold cleanup. There may be instances, however, when professional judgment may indicate its use (for example, when immune-compromised individuals are present). In most cases, it is not possible or desirable to sterilize an area; a background level of mold spores will remain - these spores will not grow if the moisture problem has been resolved. If you choose to use disinfectants or biocides, always ventilate the area and exhaust the air to the outdoors. Never mix chlorine bleach solution with other cleaning solutions or detergents that contain ammonia because toxic fumes could be produced.

Please note: Dead mold may still cause allergic reactions in some people, so it is not enough to simply kill the mold, it must also be removed.

End of excerpts from EPA.gov website

Recommended Web Sites for Mold Removal/Remediation Information:

NORMI – National Organization for Remediators and Mold Inspectors
www.normi.org

Indoor Air Quality Association Inc
www.iaqa.org

Chemtex Laboratories Inc
www.bacshield.com

EPA – Environmental protection Agency
www.epa.gov

IICRC – Institute of Inspection, Cleaning and Restoration Certification
www.iicrc.org

Mold [Removal] [and] [or] [Prevention]

If mold is present refer to recommended web sites for accepted remediation practices. Refer to section titled “PPE- Personal Protection Equipment for Applicators” for appropriate protective equipment to wear.

ChitoSante' [BacShield] may be applied by hand sprayer, garden sprayer, airless/compression sprayer, cold-fogger, brush, roller, cloth, or immersion.

Small Areas - Affected surface areas less than 30 square feet:

If the affected area is easily replaceable, such as ceiling tiles, remove the [panel] [area], place in a trash bag, seal, and dispose of in normal trash. Area to be removed can be sprayed with ChitoSante' [BacShield] prior to removal to reduce likelihood of airborne spores. If the affected area cannot be easily removed, follow these steps.

- [1] Eliminate [correct] any sources of water [moisture] that may be causing mold growth.
- [2] Remove excess water from area and dry affected area thoroughly
- [3] Clean affected area with ChitoSante' [BacShield] or other appropriate cleaner [procedure] to remove mold, soil and any other organic matter from surface. In many instances, ChitoSante' [BacShield] will not remove mold stains. Aggressive scrubbing, up to and including partial substrate removal may be required to remove stains.
- [4] Apply ChitoSante' [BacShield] until surface is evenly wet. If area was wet for more than 24 hours prior to removal of mold, allow area to dry thoroughly following first application, and then make a second application.
- [5] Allow treated surfaces to dry completely before covering.

Large Areas – Affected surfaces area larger than 30 square feet

Areas larger than 30 square feet require specific procedures performed by professionals properly trained in mold remediation.

Refer to the recommended web sites for assistance in locating a certified mold inspector and/ or remediator or call Chemtex Laboratories @ 800-532-5361 for assistance.

If you are properly trained in mold remediation, develop a complete assessment and remediation plan incorporating ChitoSante' [BacShield] to [prevent] inhibit future mold [fungal] [and] [or] [bacterial] growth.

Once the water source has been eliminated [corrected] and the surfaces properly cleaned and prepared, apply ChitoSante' [BacShield] until the surface is evenly wet. When properly applied, one gallon of ChitoSante' [BacShield] solution will cover 270-1000 square feet of surface area, depending upon the surface texture and absorbency of the substrate. Extremely porous substrates such as carpet and heavy textiles require more product per square foot and one gallon of solution would be expected to cover approximately 270 square feet. Substrates such as unpainted wood will require approximately one gallon per 600 -800 square feet of surface area. Painted wood, vinyl, fiberglass and similar substrates will require approximately one gallon per 1000 -1500 square feet of surface area.

For substrates that are prone to beading and significant run-off, such as vinyl, painted surfaces and [or] unpainted wood with high resin content, the use of a product such as BacCote (Chemtex Labs 800-532-5361) in combination with ChitoSante' [BacShield] will improve coverage and reduce runoff. Very small droplets such as in fine sprays, mists and fog will minimize run-off. Several light applications rather than one heavy application will reduce run-off.

If affected area was wet for more than 24 hours prior to removal of mold, allow area to dry thoroughly following first application of ChitoSante' [BacShield], and then make a second application.

Allow treated surfaces to dry completely before covering.

Cleaning [Preparing the Surface] with ChitoSante' [BacShield]

- [1] To prepare cleaning solution, mix 6 [9][12] ounces of ChitoSante' [BacShield] into one gallon of water. Use 6 ounces /gallon for general cleaning and 9[12] ounces per gallon for more [the most] severe applications.
- [2] Apply diluted ChitoSante' [BacShield] solution until area to be cleaned is thoroughly wet. Allow to sit [soak] [stand] for 1-2 minutes.
[Thoroughly clean the material [area] to be treated by spraying this [solution] and letting it sit for 1-2 minutes.]
- [3] Wipe or scrub area to loosen mold [dirt] [soil] [organic matter]
- [4] Wipe with rag [cloth] to remove mold [dirt] [soil] [organic matter] from surface and dispose of rag [cloth]

Protecting the Surface with ChitoSante' [BacShield]

- [1] Mix 6 [9] ounces of ChitoSante' [BacShield] into one gallon of water. Use 6 ounces/ gallon for general cleaning and 9[12] ounces per gallon for more [the most] severe applications.
- [2] Apply ChitoSante' [BacShield] solution to cleaned area until surface is thoroughly wet.
- [3] Allow area to dry completely to inhibit [prevent] future growth of mold [and] [or] [odor-causing bacteria].

Prevention of Future Growth

- [1] Monitor and maintain moisture levels at or below 17% in wood and other cellulosic materials
- [2] Minimize [reduce] high humidity levels in areas such as crawl spaces. De-humidifiers may be beneficial in high humidity areas. If de-humidifiers are used, make certain drain lines are piped to the outside.
- [3] Correct [Eliminate] source [sources] of water intrusion[s].
- [4] Keep surfaces free of dust, dirt and other organic matter where feasible.

PPE – Personal Protection Equipment Requirements for Applicators

Small Areas - Less than 30 square feet: Gloves, protective eye wear [goggles] and a NIOSH approved N-95 respirator are ~~recommended~~ to prevent exposure to mold [and] [or] [mold spores].

Large Areas – more than 30 square feet: Gloves, protective eye wear [goggles], disposable protective suit [coveralls], NIOSH approved N-95 respirator or half-face respirator with HEPA filter as specified by mold remediation certification training.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

PESTICIDE STORAGE:

Store in original container in a cool, dry place, away from sunlight and out of the reach of children and pets.

PESTICIDE DISPOSAL:

Wastes resulting from use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL:

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

BULK CONTAINERS:

Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

MARKETING BULLETS:

Use On:

Apparel:

- Athletic uniforms
- Uniforms: military; law enforcement; nursing
- Work attire
- Athletic clothing
- Body Armour (bullet proof vests)
- Soles/insoles

Athletic/Sports Equipment/Locker Rooms/Training Facilities:

- Exercise equipment
- Exercise mats
- Wrestling mats/protective headgear
- Blocking pads/dummies
- Playing surfaces: wood, plastic, vinyl, carpet

All Athletic Equipment, head to toe

Sports equipment

Vehicle Interiors: all automobiles

Cars, trucks, busses, trains, airplanes

Boat interiors

Boat covers

Synthetic Turf

Synthetic Putting Greens

Indoor/outdoor carpet

Non-food hard contact surfaces

Use Outdoors

Vinyl siding

Vinyl fencing

Awnings

Outdoor Upholstery

Outdoor Furniture

Masonry

Wood: painted and unpainted

Exterior Fabric Protectors

Carpet

Use Indoors:

- Curtains, Drapes
- Mattresses
- Bedding Products
- Leather
- Wall Board
- Upholstery
- Carpet
- Locker room

Easy to use in laundry and a convenient spray bottle
~~Approved for use by D.O.D. and/or the Service Branches~~
 Odor causing bacteria anti-microbial
 Protects treated article from bacterial growth.
 Protects treated article from fungal growth.
 Protects treated article from mold.
 Protects treated article from mildew.
 Inhibits bacterial growth in/on treated article
 Inhibits fungal growth in/on treated article
 Fills the gap between laundering, cleaning and disinfecting
~~Bac-Shield is one aspect of a hygienic cleaning program.~~
 Bac-Shield makes your cleaning program more effective.
~~Active ingredient is derived from a replenishable natural resource.~~
~~Active ingredient has a long history of a safe effective application.~~
 Bacteria Inhibitor
 Fungi Inhibitor
 Mold/Mildew Inhibitor
 Inhibits growth from bacteria
 Bacteria growth inhibitor
 Inhibits the growth of mold and mildew
 Dries on the surface to create an invisible antimicrobial shield
 Acts as an invisible barrier to mold and mildew growth
 Creates a shield against mold and mildew
 Water resistant when dry
~~Biodegradable~~
~~Naturally Occurring Active Ingredient~~
 Contains No Phosphates
 Ammonia free
 Bleach free
 Low Vocs
 Contains No Ammonia
 Contains No Butyl
 No fumes
~~Virtually non-toxic to humans or animals~~
~~Does not harm plants and shrubs~~

- Indoor and Outdoor Use!
- Cleans and protects!
- Natural By-product of the fishing/crabbing industry
- ~~Derived from crab shells~~
- Mold Cleaner and Protectant
- ~~Reduces Mold Spores that could cause allergies~~
- Reduces Mold Spores that could cause musty, mold and mildew related odors
- Provides long lasting protection
- Prevents bacterial growth
- Easy to use in laundry and a convenient spray bottle

May also be used on outdoor surfaces such as concrete, masonry, cinder blocks, construction materials in buildings, stucco, awnings, decks, fences, vinyl and wood siding, patios, patio furniture, and shingles (asphalt and shake).

Use in boats, cruise ships, homes, attics, basements, laundry rooms, closets, institutions, business, schools, health clubs, transportation terminals, and recreational vehicles (RVs), apartments, workshops, trailers, carports, porches, camping equipment and other household areas.