

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

David J. Meyers
AEGIS Environmental Management, Inc.
11400 Vanstory Drive
Huntersville, NC 28078

JUN 12 2012

SUBJECT: AEM 5700 Antimicrobial
EPA Registration No. 64881-1
Application Dated: March 23, 2012
Receipt Date: May 18, 2012

Dear Mr. Meyers:

The following amendment, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable with comments.

- Propose to add additional indoor, nonfood site per PR notice 98-10.

Conditions

- Correct the section "Miscellaneous Manufactured Products" by deleting the language: "AEM 5700 antimicrobial provides residual self-sanitizing activity against athlete's foot fungus (Trichophyton mentagrophytes) on treated socks. Durable for up to 10 repeated washings; prevents 99.99% of the growth of athlete's foot fungus on the sock." In order to support this claim, your product must demonstrate effectiveness as a disinfectant before a residual self sanitizing claim will be accepted for your product.

General Comments

A stamped copy of the accepted labeling is enclosed. Submit one (1) copy of your final printed labeling before distributing or selling the product. Should you have any questions concerning this letter, please contact Velma Noble at (703) 308-6233 or Emilia Oiguenblik at (703) 347-0199.

Sincerely,



Velma Noble
Product Manager (31)
Regulatory Management Branch I
Antimicrobials Division (7510P)

CONCURRENCES

SYMBOL							
SURNAME							
DATE							

275

Master Label

AEM 5700 Antimicrobial

A SILANE QUATERNARY AMMONIUM SALT

EPA Reg. No. 64881-1

EPA Est.

ACTIVE INGREDIENT: 3-(trimethoxysilyl) propyldimethyloctadecyl ammonium chloride 42%
 INERT INGREDIENTS 58%
 TOTAL 100%

CONTAINS OVER 50% METHANOL
KEEP OUT OF REACH OF CHILDREN
DANGER! ☒ POISON
FIRST AID

Have product container or label with you when calling Poison Control Center or doctor, or going for treatment.

If inhaled:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible • Call a Poison Control Center or doctor for treatment advice.
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 first 5 minutes, then continue rinsing. • Call a Poison Control Center or doctor for treatment advice.
If in skin or clothing:	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a Poison Control Center or doctor immediately for treatment advice.
If swallowed:	<ul style="list-style-type: none"> • 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.

PRODUCT FEATURES AND BENEFITS

- AEM 5700 Antimicrobial imparts durable biostatic activity to the surface of a wide variety of substrates.
- AEM 5700 Antimicrobial is effective against mold, mildew and algae as a static agent.
- Increased efficiency – through proper application, durable bacteriostatic, fungistatic and algistatic surfaces can be attained with a minimum amount of AEM 5700 Antimicrobial.
- Provides freshness and combats deterioration and discoloration caused by bacteria, fungi and algae.

LOT NO.

NET CONTENTS

Sold by:



AEGIS ENVIRONMENTS

2205 RIDGEWOOD DRIVE, MIDLAND, MICHIGAN 48642 U.S.A.

1-989-832-8180

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The AEGIS logo is a trademark of AEGIS Environments

Origin: U.S.A.

Form: Rev

ACCEPTED
with COMMENTS
in EPA Letter Dated:

6/18/2012

Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide, registered under EPA Reg. No. 64881-1

PRECAUTIONARY STATEMENTS

HAZARD TO HUMANS AND DOMESTIC ANIMALS.

DANGER! CORROSIVE. CONTAINS 50% METHANOL. CAUSES IRREVERSIBLE EYE DAMAGE AND SKIN IRRITATION. MAY BE FATAL IF INHALED. Methanol may cause blindness. May be harmful if swallowed or absorbed through the skin. Do not get in eyes, on skin, or on clothing. Wear protective eyewear, rubber gloves, and protective clothing. Do not breathe vapor. Wear a NIOSH approved respirator with any N, R, P, or HE filter. Appropriate measures should be taken to prevent the accumulation of hazardous concentrations of methanol vapors in the work area. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove and wash contaminated clothing before reuse.

ENVIRONMENTAL HAZARDS:

This pesticide is toxic to fish and aquatic invertebrates. Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other waters unless in accordance with the requirements of a 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 to sewer systems without previously notifying the local sewage treatment plant authority. For guidance contact your State Water Board or Regional Office of the EPA.

Every effort should be made to contain accidental spills of concentrate to the immediate area. This may be accomplished by the use of sandbags or barrier material to confine the spill to facilitate cleanup and disposal. Contaminated sand or barrier material may then be disposed of by burial in an approved landfill. Many spills may be cleaned up with rags or other absorbent materials by wiping, soaking and/or mopping and allowing the liquid to absorb onto the material. The absorbent material may then be disposed of by incineration or landfill. Floor drains in areas of material use should be protected with absorbent material or barrier material to contain accidental spills.

Inactivation of solutions containing AEM 5700 Antimicrobial may be accomplished by addition of an anionic surfactant, or detergent in quantity equivalent to that of AEM 5700 Antimicrobial in solution.

PHYSICAL OR CHEMICAL HAZARDS

Flammable. Keep away from heat and open flame

DIRECTIONS FOR USE:

It is a violation of Federal Law to use this product in a manner inconsistent with its label.

FOR INDUSTRIAL USE . This product is registered for formulation into Antimicrobial Products or as a microbiostatic agent for material preservation.

- Antimicrobial product formulations containing AEM 5700 require approval by the US EPA for antimicrobial claims made. Formulators are responsible for satisfying registration requirements for their formulated products.
- For use as a microbiostatic agent for material preservation, neither this product nor the articles treated with this product may state or imply any public health claims. Articles or substances treated with this product will be exempt from FIFRA regulation pursuant to 40 CFR 152.25(a) if the intended use for incorporating this material into a treated article or substance is for the protection of the article or substance itself.

APPROVED USES: AEM 5700 Antimicrobial may be applied to or incorporated into manufactured products listed below for use in industrial, institutional, commercial or residential locations for non-food contact uses

Plastics, fiberglass, metals, glass, wood, ceramics, stone, natural materials, composites: Including air filters for furnaces, air conditioners, air purification devices, automobiles, and recirculating air handling systems; aquarium filters; automotive and vehicular parts; roofing materials (tiles, shakes, shingles, granules, stone, membranes, felt, underlayment and synthetic overcoats); building materials and components (including siding, wallboard, wood and wood composites, insulation and non-food contact cabinetry); ceiling tiles; concrete products; paints and coatings; mastics and sealants; cementitious materials (including caulk, grout and cement and grout premixes); non-food contact conveyor and humidifier belts; non-food contact countertops; fiberglass ductboard for air handling systems; floor covering; flooring; general purpose (non-food contact) containers; furniture; bathroom and non-food contact kitchen hardware; mats; plumbing supplies and fixtures; sheet and formed glass; non-food contact sponges and mops; vacuum cleaner bags and filters; foam for packaging and cushioning in non-food contact applications.

Fibers, fabrics (natural and synthetic, woven and non-woven), leather and household materials (natural and synthetic): Including buffer pads (abrasive and polishing); mattress cover pads, filling and ticking; pillow covers; sheets; blankets; bedspreads; fiberfill for upholstery, recreational gear, quilts and pillows; curtains; draperies; carpet and carpet underlay; rugs; upholstery; towels; shower curtains; toilet tank and seat covers; wall covering fabrics and wallpaper (including vinyl) for non-food contact surfaces; umbrellas; fire hose fabric; non-woven disposable diapers; wiping cloths; pre-moistened towelettes and tissue wipes (these do not impart pesticidal properties); apparel, including outerwear, sportswear, sleepwear, socks, hosiery, undergarments, gloves and uniforms; footwear (boots, shoes and components); sports equipment and athletic gear; cloth for sails, ropes, tents and other outdoor equipment; sand bags; tarps; awnings; file folders and binder covers; book covers; pictures.

Miscellaneous Manufactured Products: disposable foam cushions for Lapidus Airfloat Systems; foam used as a growth medium for non-food crops and plants.

~~AEM 5700 Antimicrobial provides residual self-sanitizing activity against athlete's foot fungus (Trichophyton mentagrophytes) on treated socks. Durable for up to 40 repeated washings; prevents 99.9% of the growth of athlete's foot fungus on the sock.~~

HOW TO USE:

MSDS INFORMATION: BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE MATERIAL SAFETY DATA SHEET CAN BE OBTAINED BY WRITING TO AEGIS ENVIRONMENTS OR BY CALLING (989) 832-8180. A MATERIAL SAFETY DATA SHEET FOR A TYPICAL USE DILUTION AQUEOUS SOLUTION IS ALSO AVAILABLE.

Wear goggles or face shield, protective clothing, rubber gloves and respirator when handling the concentrate with proper ventilation. Undiluted AEM 5700 Antimicrobial contains 50 percent methanol. Avoid breathing vapors. Keep away from heat and open flame. Methanol is released during mixing, application and drying. If desired, methanol removal may be accelerated by heating dilute solution before treatment of substrate. Appropriate measures should be taken to prevent the accumulation of hazardous concentrations of methanol vapors in the work area.

ACCEPTED COMMENTS
 1/2/2015
 Under the Federal Insecticide, Fungicide, and Rodenticide Act as amended, for the pesticide, registered under EPA Reg. No. 64881-1

AEM 5700 Antimicrobial can be applied to organic and inorganic surfaces as a dilute aqueous solution to give 0.1 to 1.0 percent by weight of active ingredients. Aqueous solutions can be prepared by simply adding the antimicrobial agent to water with stirring. NOTICE: Poor agitation when adding this silane to water can result in locally high concentrations, which may form gel particles. Surfaces can be treated with the aqueous solution by brushing, dipping, padding, soaking, spraying or fogging until adequately wet, or applying by foaming techniques. After applying treatment, the surface should be allowed to dry at temperatures from ambient to a maximum of 160°C (320° F) to effect complete curing of silanol groups and to remove water, solvents and/or traces of methanol from hydrolysis. Curing of polymer may be accelerated or enhanced with heat or catalysis. For each application, determine optimum application and drying conditions, such as time and temperature before use. If desired, reapply AEM 5700 Antimicrobial if odor, staining and discoloration due to bacteria, mold or mildew occur.

Incorporate AEM 5700 Antimicrobial directly into formulations used to make end-use products, or dilute with water or with organic solvents such as alcohols, ketones, esters, hydrocarbons and chlorinated hydrocarbons and then apply it to the organic and inorganic surfaces to give 0.1 to 1.0 percent by weight of active ingredient.

FOR COMMERCIAL APPLICATIONS IN HOMES, OFFICES, AUTOMOBILES AND INSTITUTIONS. This product is registered as a microbiostatic agent for material preservation only; neither this product nor the articles treated with this product may state or imply any public health claims. Articles or substances treated with this product will be exempt from FIFRA regulation pursuant to 40 CFR 152.25(a) if the intended use for incorporating this material into a treated article or substance is for the protection of the article or substance itself.

APPROVED USES: AEM 5700 Antimicrobial is effective against odor causing bacteria, bacteria which cause staining and discoloration, fungi (mold and mildew) and algae as a static agent. AEM 5700 Antimicrobial can be used as a final bacteriostatic finish on the following items to impart bacteriostatic/fungistatic (mold and mildew) activity:

- Carpet, Draperies and Upholstery, Furniture, Book Covers, and Pictures
- ~~Plastics, fiberglass, metals, glass, wood, ceramics, stone, natural materials, composites;~~ including air filters for furnaces, air conditioners, air purification devices, automobiles, and recirculating air handling systems; automotive and vehicular parts; concrete products; roofing materials (tiles, shakes, shingles, granules, stone, membranes, felt, underlayment and synthetic overcoats); building materials and components including siding, wallboard, wood and wood composites, and insulation; Interior non-food contact hard surfaces including floors and floor covering, walls, ceilings, ceiling tiles, ceramic tile, non-food contact countertops, concrete, chrome, stainless steel, fiberglass, vinyl, porcelain, fabric and paper wall covering, wood and glass fixtures, marble, aluminum, and non-food contact cabinetry.

HOW TO USE:

MSDS INFORMATION: BEFORE HANDLING, READ PRODUCT AND MATERIAL SAFETY DATA SHEETS AND CONTAINER LABELS FOR SAFE USE, PHYSICAL AND HEALTH HAZARD INFORMATION. THE MATERIAL SAFETY DATA SHEET CAN BE OBTAINED BY WRITING TO AEGIS ENVIRONMENTS OR BY CALLING (989) 832-8180. A MATERIAL SAFETY DATA SHEET FOR A TYPICAL USE DILUTION AQUEOUS SOLUTION IS ALSO AVAILABLE.

Wear goggles or face shield, protective clothing, rubber gloves and respirator when handling the concentrated material. Use with proper ventilation. Undiluted AEM 5700 Antimicrobial contains 50 percent methanol. Avoid breathing vapors. Keep away from heat and open flame. Methanol is released during mixing, application and drying. If desired, methanol removal may be accelerated by heating dilute solution before treatment of substrate. Appropriate measures should be taken to prevent the accumulation of hazardous concentrations of methanol vapors in the work area. Dry treated areas and articles such as clothing before use. Remove children and pets from treated area until completely dry.

AEM 5700 Antimicrobial can be applied to organic and inorganic surfaces as a dilute aqueous solution to give 0.1 to 1.0 percent by weight of active ingredients (suggested starting level is 2.5 ounces of AEM 5700 Antimicrobial to one gallon of water). Aqueous solutions can be prepared by simply adding the antimicrobial agent to water with stirring. NOTICE: Poor agitation when adding this silane to water can result in locally high concentrations, which may form gel particles. Surfaces can be treated with the aqueous solution by brushing, dipping, padding, soaking, spraying or fogging until adequately wet, or applying by foaming techniques. After applying treatment, the surface should be allowed to dry 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. Open windows and use a fan or other active means of ventilation to remove any methanol vapors from the room.

For Pump Spray Application: Dilute 2.5 ounces of AEM 5700 Antimicrobial per gallon of water. Using pump sprayer, spray entire area 4-6 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 colorfastness of fabrics and carpets by treating and drying a small, concealed area prior to application. When treating coarser substrates, more AEM 5700 Antimicrobial may be required due to absorption.

For Spray Application: For commercial application equipment, dilute 2.5 ounces of AEM 5700 Antimicrobial per gallon of water; mix well. 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 AEM 5700 Antimicrobial may be required due to absorption. Dry carpet areas and surfaces before re-entry and dry articles before use.

For Dipping/Soaking Application: Use appropriate sized washbasin or tub for dipping/soaking the item you are treating. Use enough AEM 5700 Antimicrobial solution to completely submerge item. Dilute 2.5 ounces of AEM 5700 Antimicrobial per gallon of water; mix well. Completely submerge item in solution for 3 minutes. Remove item and dry. Test for staining and color-fastness of fabrics by treating and drying a small, concealed area prior to application. Do not reuse solution after dipping/soaking. The substrate can be dried at room temperatures or at temperatures to a maximum of 160° C (320° F).

For each application, determine optimum application and drying conditions, such as time and temperature before use. If desired, reapply AEM 5700 Antimicrobial if odor, staining and discoloration due to bacteria, mold or mildew occur.

ACCEPTED
with COMMENTS
in EPA Letter Dated:

6/10/2008

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

64581-1

STORAGE AND DISPOSAL:

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

PESTICIDE STORAGE: Store in original, tightly closed container in an area inaccessible to children and away from food or feed. Moisture sensitive. Keep tightly closed until ready to use. Reclose tightly after each use. When stored in original, unopened containers at or below 25°C (77°F), AEM 5700 Antimicrobial has a minimum shelf life of 12 months from date of shipment.

PESTICIDE DISPOSAL: Pesticide is acutely hazardous. Pesticide wastes are toxic. 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 HANDLING: NONREFILLABLE CONTAINER. Do not reuse this container to hold materials other than pesticides or dilute pesticides (rinsate). After emptying and cleaning, it may be allowable to temporarily hold rinsate or other pesticide-related materials in the container. Contact your state regulatory agency to determine allowable practices in your state. Offer for recycling, if available, or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Triple rinse container promptly after emptying.

For pails: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

For drums: Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

NOTICE: AEGIS warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated in the labeling when used in accordance with directions under normal conditions of use; but this warranty of fitness for a particular purpose does not extend to the use of this product contrary to written instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use. **AEGIS ENVIRONMENTS SPECIFICALLY DISCLAIMS ANY OTHER EXPRESS OR IMPLIED WARRANTY, INCLUDING THE WARRANTY OF MERCHANTABILITY.**

ACCEPTED
with COMMENTS
in EPA Letter Dated:

6/12/2013

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

64881-1