The meeting was called to order by Chairman Dean Cox at 08.00 on Wednesday, 14 March 2012.

The following members and guests were present:

MEMBERS IN ATTENDANCE:
Dean Cox, Chairman Fairfax County (VA) Fire & Rescue
Karen Lehtonen, Secretary Lion
Dave Trebisacci, Staff Liaison NFPA
Steve Corrado Underwriters Laboratories
Charles Dunn TenCate/Southern Mills
Jim Frank CMC Rescue
Dan Gohlke WL Gore and Associates
Bill Haskell NIOSH
Kim Henry PBI Performance Products (by phone)
Diane Hess PBI Performance Products
Tricia Hock SEI
Gavin Horn University of Illinois Fire Service Institute
Steve Hudson Pigeon Mountain Industries
George Krause Globe Manufacturing
Jeremy Metz West Metro Fire Rescue
Craig Mignogno Columbus (OH) Firefighters Union
James Murray FDNY
Robert Nelson Chula Vista Fire Department
Jack Reall Columbus (OH) Firefighters Union
Doug Stephenson City of Johns Creek Fire Department
Beverly Stutts Underwriters Laboratories

GUESTS IN ATTENDANCE:
Roger Barker NC State (by phone)
Shawn Deaton NC State (by phone)
Ben Favret Vestagen
Claire King Propel LLC
Amanda Newsome Underwriters Laboratories
Celia Powell Battelle/US Army
Mark Saner Workrite Uniform
Jeff Stull International Personal Protection (by phone)
Rich Young DuPont
Members and guests introduced themselves. The Staff Liaison read the Committee Procedures statement and provided a Staff Liaison report which included a cycle update for the various documents covered by this Technical Committee.

The Minutes of the last Committee meeting held in Alexandria, VA 12 -- 13 July 2011 were reviewed.

**Motion by Diane Hess, seconded by Bill Haskell**
To approve the Minutes of the 12 -- 13 July 2011 Alexandria, VA
**Motion passed**

**Chairman’s Remarks:**

Chairman Cox welcomed new member Rob Nelson from Chula Vista Fire Department; he also recognized several manufacturers are still awaiting appointment for balance. Chairman Cox also recognized Jim Murray’s task group and Jim Frank’s task group for getting their respective draft documents together and moving that work forward in the process. It was noted that new SCAM documents are on hold until further input/decisions are made regarding the publication of SCAM documents by Standards Council based on TCC input. This committee will provide our recommendation that SCAM documents being should remain stand-alone documents and not be included in the product documents to TCC Chairman Haskell.

**Technical Correlating Committee Update:**

The TCC last met at NFPA headquarters. The TCC spent much of their meeting time reviewing the new NPFA revision process. They also discussed with NFPA staff improvements that can be made within this Fire and Emergency Services project. There was discussion regarding the make-up of the TCC and the ability of committee chairmen to vote at the TCC level.

The concept of the merger of the NFPA TC on Emergency Medical Protective Clothing (NFPA 1999) with the Special Operations TC was discussed. Bill Haskell gave a brief description of the recent history of the EMS committee chairmanship and make up. At this time the technical committee needs a new chairman since Bill Haskell cannot serve as the TC Chair and the TCC Chair. Therefore at the last TCC meeting the option of merging these TC’s was discussed. This technical committee then had discussion on a potential merger; any further comments should be submitted to Chairman Haskell and Chairman Cox.

**The TC attended a breakout training session on the new NFPA document revision process**

**Presentation:** A presentation was provided to the TC on requirements for first layers in the military by C. King, Propel LLC and C. Powell, US Army. A copy of the presentation is attached to the minutes.

**NFPA 1975 First Draft**

The technical committee reviewed and took action on the Public Input received. The committee also generated First Revisions and Committee Input.
NFPA 1855 Public Comments

The technical committee reviewed and took action on the public comments received. No committee comments were generated.

Document Update and review of revision cycle calendar

NFPA 1951 – NITMAM update, next revision cycle TBD
NFPA annual meeting is the week of June 10th, NITMAM’s will be heard June 13/14. Staff Liaison Trebisacci explained the process to the TC. The next edition of NFPA 1951 is scheduled to be issued by the NFPA Standards Council on August 9, 2012 with an effective date of August 24, 2012 (PDF available August 27).

Contaminated Water PCE NFPA 1953 (SC agenda Aug 2012, requesting F14 cycle)
The TC letter ballot passed and is currently being balloted with TCC. Comments supporting the work on this document should be sent to Standards Council prior to their August meeting.

Rope and Harness SCAM NFPA 1858 (SC agenda Aug 2012, requesting F14 cycle)
A proposed draft was completed by the task group. Progression on the draft is on hold until Standards Council provides direction on how SCAM documents will be processed.


A task group reviewed the document for errors that were identified upon publication to determine how they can be addressed within the NPFA process (Errata, FI, TIAs, short cycle, etc). A small group will meet prior to FDIC to draft the necessary TIA’s and determine if short cycling the document is the solution.

Old Business:

Chairman Cox reaffirmed the TC’s position regarding SCAM documents and will forward the recommendation to TCC Chairman Haskell.

New Business:

The next meeting will be held January 8-10, 2013. The location is TBD but Key West or southern Florida are the preferred locations. This meeting will be to review the Second Draft of NFPA 1975 and the First Draft of NFPA 1953.

Motion by Jack Reall, second by Jeremy Metz
To adjourn
Motion passed

Chairman Cox adjourned the meeting at 10:00 on 16 March 2012.
Respectfully submitted,

*Karen Lehtonen*

Karen Lehtonen, Secretary
TC on Special Operations Protective Clothing and Equipment
Military Requirements Relating to NFPA 1975

14 March 2012
Overview

- Current military requirements
  - Flammability
  - Comfort/Moisture Management
  - Insect Repellency
  - Antimicrobial
- Concerns with current melt/stick tests
  - NFPA 1975 – Oven Test
  - NFPA 2112/2113 – No Test
- Potential screening test

UNCLASSIFIED
Army Requirements

Flammability

- Inner Layers
  - Mounted Soldier
    - Previously - cotton, wool or aramid
    - Short term update – ASTM 6413, max 6” char
    - Longer term – no melt / no drip / no stick
  - Dismounted Soldier
    - No current requirement – issued cotton underwear & polyester thermal base layers
    - Longer term – combine with Mounted Soldier for no melt / no drip / no stick
- Issue – no quick, simple, inexpensive test for no melt / no drip / no stick
Army Requirements
Flammability

- **Outer Layers**
  - Mounted Soldier
    - All outer layers FR – Duty Uniform & Cold Weather
    - ASTM D6413 – Max char 4” to 5” depending on item
  - Dismounted Soldier
    - FR Duty Uniforms in Middle East
    - ASTM D6413 – Max char 4” to 5” depending on item
    - Developing FR soft shell jacket
  - Instrumented manikin requirements
    - ASTM F1930, 4 second exposure
    - Updating duty uniform requirement to max 35%
      predicted 2\textsuperscript{nd} + 3\textsuperscript{rd} degree burn (including head)
Army Requirements
Comfort

- **Inner layers**
  - Air Permeability – min 120 to 300 cfm
  - Moisture Management – multiple internal tests
    - Vertical wicking
    - Horizontal wicking
    - Water absorption

- **Duty uniform**
  - Air Permeability
    - Min being raised from 10 to 25 cfm for FR ACU
    - ACS – varies depending on location in garment
      - Mesh torso – min 240 cfm
      - Printed sleeves/sides – min 30 cfm
  - Moisture Management – mainly internal tests
Army Requirements
Insect Repellency

- Inner layers – not used
- Duty uniforms
  - Required for all woven uniforms, FR & non-FR
    - MIL-DTL-44411
    - Analysis for permethrin levels on fabric
    - Bite protection testing performed by USDA
    - Requirements stated for unwashed garments & after 20/50 laundering cycles
    - All treatment currently done on finished garments
  - Not currently required for Army Combat Shirt
    - Multiple fabrics in one garment
    - Effectiveness concerns give open knit fabric construction
Army Requirements
Antimicrobial

- Not widely used
- Concerns about
  - Skin sensitivity – removed from FREE Layer 1
  - Effectiveness on garments worn for long period
- Items with current requirement
  - USMC FR Combat Ensemble Shirt – log 2 requirement for knitted torso only
  - US Army Lightweight Protective Hood – log 1 requirement for lining fabric

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Concerns with Current Melt/Stick Tests

- ASTM D6413 – Melt/Drip Observations
  - Very subjective – bits of falling char often reported as “flaming melt/drip”
  - Molten drips can damage burner

- NFPA Thermal Shrinkage/Stability
  - Oven test conditions not relevant to short duration threats like IED, flash fire or electric arc
  - Even aramid knits do not perform well
  - Safety concerns for test operators due to fumes
    - Natick Textile Material Evaluation & Testing lab will not run the test
  - Few 3rd party labs have capability for the test
Potential Test for Melt/Drip/Stick

- Based on ASTM D6413
- Cover back of specimen holder with foil
Potential Test for Melt/Drip/Stick

- Perform test per ASTM D6413
- Remove specimen from test chamber
- Slide foil and specimen from holder
Potential Test for Melt/Drip/Stick

- Observe for evidence of melting

- Lift corner of specimen to check for sticking
Potential Test for Melt/Drip/Stick

- Potential alternate version – 45° vs Vertical
- Need to evaluate with more fabrics
- May also be of interest for NFPA 2113
  - Specifies “non-melting” underwear
  - Does not state how to determine what is “non-melting”
- Given advancements in comfort & moisture management in blends, we need to have a realistic screening test to move beyond cotton, wool or aramid for underlayers

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Questions?

Celia Suratt Powell
Battelle Contractor / US Army NSRDEC
Warrior Equipment and Systems Division
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Thanks to
Clare King
Propel LLC
(401) 751-2216
www.propel-llc.com

Photos courtesy of POLARTEC®
Propel’s Relevant Experience

• Currently involvement in several projects related to fire resistant base layer for Fire Service and US Military.
  – “Effect of Base Layers on Physiological and Perceptual Responses to Exercise in Personal Protective Equipment”, Professor Denise Smith (PI), Department of Health and Exercise Sciences, Skidmore College, Saratoga Springs NY. Funded by DHA FEMA FP&S Grant.

• Sub-contractor support related to performance requirements and testing of textiles

• Developed FR yarns and textiles integrated into fielded US Army items
Soldier and Firefighter -
Same Need/Different Operational Modes

- Both Soldiers and Firefighters have an operational need for comfortable, durable, protective fire resistant clothing.
- Soldiers wear base layers (knits) and Duty Uniform (woven)
  - extended time frame (days or even weeks) without change of clothes
- Firefighters wear T shirt (knit) and Station Uniform (woven)
  - generally have easy access to change clothing
  - may change next to skin T shirt 2 to 3 times a shift

propel, LLC
Forward Thinking.
Non FR vs. Inherently Fire Resistant Base Layer

• Firefighter now typically wear a Cotton T Shirt that is comfortable and very inexpensive - $6 to $10 per shirt
  – Poor moisture management
• Synthetics have better moisture management, are more expensive and a poor choice for protection from burn injury
• Inherently fire resistant base layers are significantly more expensive @ $35-40 per shirt
  – Good moisture management
  – Good protection
• Cost vs. performance for Non FR vs. inherently FR
• Testing always adds to cost
Thermal Shrinkage Testing

- Next-to-Skin FR base layer fabrics are lightweight knit constructions with good air permeability for comfort and fit.
- Current NFPA 1975 standard (7.1) of no more than 10% shrinkage is consistent with the US Army requirements for woven textiles but is not consistent with that for Next-to-Skin knits.
- US Army’s only Next-to-Skin fabric Thermal Shrinkage requirement is 15% x 18% and NOT 10% x 10% as in NFPA 1975. (Fire Resistant Environmental Ensemble (FREE)).
- Heavier knits with tight constructions may be able to pass 10% shrinkage – but comfort and fit are compromised if used Next-to-Skin.
- Not extending Thermal Shrinkage to Next-to-Skin base layers is consistent with US Military approach.
TPP testing for Base Layers and Station Uniforms

- Thermal Protective Performance (TPP) testing is already used and well understood by the fire service (NFPA 1971)
- TPP has been adopted by US Military for base layers and the duty uniform
  - TPP of 7 for FR ACU
  - TPP range 6 to 10 for base layers
Comfort Testing – Air Perm vs. MVTR

• Air Permeability (ASTM D737) is a rapid, inexpensive and useful measure of comfort
  – Fabrics with higher air perm will provide more comfort and breathability
  – Moisture and heat escape with better air perm
  – US Army and USMC consistently use Air Perm for next to skin layers (200 to 300 cfm)

• Moisture Vapor Transmission Rate testing (e.g. ASTM E96) of base layers is
  – Much more costly than Air Perm testing
  – Generally used as test method for barrier properties e.g. breathable rain gear
  – Difficult to know where to set the standard
Commercial Challenges for Treating Textiles with Insect Repellant

• Insect Repellant processing can be done on textile roll goods BUT
  – Few US based processors with EPA certification to treat roll goods
  – Resistance by contractors to handling Permethrin treated roll goods due to health and safety concerns for workers

• US Military uses finished whole garments treatment process, BUT
  – there are a very limited number of processors
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Thanks to Celia Suratt Powell, US Army NSRDEC
**News Releases By Date**

"The North Face" Parent Company, "Saniguard" Marketers, and Califone Fined More Than $500,000 Over Antimicrobial Claims

Release Date: 05/06/2010
Contact Information: Nahal Mogharabi, 415-947-4307, mogharabi.nahal@epa.gov

(SAN FRANCISCO--5/6/10) The U.S. Environmental Protection Agency today announced that three California companies and one New Jersey firm will pay more than $500,000 to resolve cases involving unsubstantiated antimicrobial claims for commonly used products such as shoes, headphones and bathroom fixtures.

"EPA will take decisive action against companies making unverified public health claims," said Jared Blumenfeld, Regional Administrator of EPA's Pacific Southwest region. "Unless these products are registered with EPA, consumers have little or no information about whether their claims are accurate."

San Leandro, Calif.-based VF Outdoor, Inc., will pay $207,500 for allegedly making unsubstantiated public health claims such as providing "antimicrobial protection" and inhibiting the growth of "disease-causing bacteria" for more than 60 shoe products it sold—a violation of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA). The products were sold under The North Face label by VF Outdoor. Products discovered online and evidence found at a North Face retail store in San Francisco led EPA to issue a complaint against VF Outdoor in 2009.

EPA also recently fined Califone International, Inc., of San Fernando, Calif., $220,000 over unproven health claims for headphones. Califone, a designer and distributor of audiovisual equipment used in schools and other institutions, allegedly sold headphones claiming "to prevent the spread of bacteria, mold and mildew for student protection."

Additionally, EPA fined Component Hardware Group, Inc., of Lakewood, N.J., and John S. Dull Associates, Inc. (d/b/a Food Service Parts in Garden Grove, Calif.), $98,300 following an inspection conducted by the California Department of Pesticide Regulation. The inspection revealed evidence that the companies were selling and distributing Saniguard products with unverified claims that they control growth of bacteria and contain antimicrobial technology that controls growth of E. coli, salmonella, staph, and pseudomonas on treated surfaces. The Saniguard products allegedly marketed to hospitals and other industries include faucets, spigots, handles, light switch and socket covers, door push and pull plates, and food service hardware.

EPA's authority to assess penalties in these settlements stems from FIFRA, which requires that companies register pesticide products with EPA before making claims about their ability to control germs or pathogens. While the North Face, Califone, and Saniguard products all incorporated EPA-registered silver-based antimicrobial compounds to protect them against deterioration, they were never tested or registered to protect consumers against bacteria, fungus, mold, and/or mildew.
“We’re seeing more and more consumer products making a wide variety of antimicrobial claims,” said Katherine Taylor, associate director of the Communities and Ecosystems Division in EPA’s Pacific Southwest region. “Whether they involve shoes, headphones, or household fixtures, EPA takes these unsubstantiated public health claims very seriously.”

Under FIFRA, products that claim to kill or repel bacteria or germs are considered pesticides, and must be registered with the EPA prior to distribution or sale. The Agency will not register a pesticide until it has been tested to show that it will not pose an unreasonable risk when used according to the label directions. Consumers should be careful to look for the EPA registration number printed on product labels, and need to follow the label directions for use.

Fact sheet on consumer products treated with pesticides: http://www.epa.gov/pesticides/factsheets/treatart.htm


For more information on pesticides, please visit: http://www.epa.gov/pesticides

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and join the LinkedIn group: http://www.linkedin.com/e/vgh/1823775/

Receive our News Releases Automatically by Email
Consumer Products Treated with Pesticides

Current as of August 2003
EPA 735-F-03-006

On This Page:
- Background
- Enforcement
- For More Information

Resources
- Questions On Pesticides?
  National Pesticide Information Center (NPIC)
  1-800-858-7378

Background

The presence of microorganisms (bacteria, fungi, and viruses) in or on various items has become of increased concern to consumers. In response to these concerns, many products (e.g., cutting boards, kitchen sponges, cat litter, toothbrushes, and juvenile toys) are being treated with antimicrobial pesticides. Antimicrobial pesticides are substances or mixtures of substances used to destroy or limit the growth of microorganisms, whether bacteria, viruses, or fungi -- many of which are harmful-on inanimate objects and surfaces.

Treated articles typically refers to articles or products that are treated with an antimicrobial pesticide to protect the articles or products themselves. The pesticides are usually added to the products (e.g., plastic shower curtain) during manufacture; however, they may be added after manufacture but before use of the article (e.g., incorporation of a pesticide in paint).

These treated products often make implied or explicit public health pesticidal claims to protect the public against harmful microorganisms.

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) requires the registration of any substance intended to prevent, destroy, repel, or mitigate pests. However, the Code of Federal Regulations prescribes the conditions under which an exemption from registration is allowed for treated articles or substances. It allows an exemption for:

Tips to Control Microorganisms

These are some common sense steps that consumers can take to reduce the spread of microorganisms. For example:
- Wash hands frequently and thoroughly, especially if you think you have been in contact with harmful microorganisms
- Wash surfaces that contact food (e.g., utensils, cutting boards, counter tops) with a detergent and warm water
- Wash children’s hands and toys regularly

An article or a substance treated with or containing a pesticide to protect the article or substance itself (for example, paint treated with a pesticide to protect the paint coating, or wood products treated to protect the wood against insects or fungus infestation), if the pesticide is registered for such use.
EPA grants the treated articles exemption for a non-public-health use of a pesticide that is intended to protect only the treated article or substance itself. Consumers may distinguish such products by the absence of the EPA's pesticide registration number (found on the product label) of the registered pesticide used for protecting the article itself. It should be noted here that the EPA registration number would also be absent from an illegal product that should be registered. Products that qualify for this exemption must display appropriate clarifying statements. For example:

- Claims for treated articles or substances are limited to the following statement, "This product contains a preservative (e.g., fungicide or insecticide) built-in or applied as a coating only to protect the product. An example of an acceptable label statement would be:
  - Antimicrobial properties are built-in to inhibit the growth of bacteria that may affect this product. The antimicrobial properties do not protect users or others against bacteria, viruses, germs, or other disease organisms. Always clean and wash this product thoroughly before and after each use.
- Treated kitchen accessories or other food contact articles such as a cutting board, high chair, or conveyor belt that may come in contact with food should carry an appropriately qualifying statement, such as:
  - This product does not protect users or others against food-born bacteria. Always clean and wash this product thoroughly before and after each use.
- Treated products such as bed pans and potty seats that involve potential human contact with bodily fluids or excrement (e.g., blood, vomit, saliva, urine, or feces) should carry an appropriate qualifying statement, such as:
  - This product does not protect users against bacteria, viruses or other disease organisms. Always clean and wash this product thoroughly before and after each use.
- In addition, it should be noted that:
  - The treated articles exemption is available only for the protection of the product and not for public health uses.
  - The preservative claim and qualifying statement on the product packaging (type, size color) must be given no greater prominence than other described product features.

Articles or products that claim to be effective in controlling microorganisms such as E.coli, S.aureus, Salmonella sp. or Streptococcus sp. must be registered as a pesticide. These articles or products make a public health claim that goes beyond the preservation of the treated article itself. EPA requires the submission of chemical data in support of the public health labeling claims and patterns of use of the product. If EPA determines that such a product is exempt from registration as a pesticide, the product may claim only that it contains a pesticidal preservative to protect the product itself. These pesticides are known as materials preservatives. In these cases, the pesticide is registered for the intended use, and the sole purpose of treatment is to protect the product itself. These pesticides are widely used in the manufacture of textiles, plastics, paper, adhesives, and coatings.

Any pesticide-treated product that is not registered by EPA must not make public health claims, such as "fights germs, provides antibacterial protection, or controls fungus." EPA's policy is predicated on the fact that no scientific evidence exists that these products prevent the spread of germs and harmful microorganisms in humans.

**Enforcement**

FIFRA does not allow companies to make public health pesticidal claims for any product distributed or sold unless the product has been approved and registered by EPA or is covered by an exemption from registration. EPA is concerned about these claims because, in addition to being unlawful, they are also potentially harmful to the public (e.g., if people believe that a product has a self-sanitizing
quality, they may become lax in their hygiene practices). Practicing standard hygiene practices has been proven to prevent the transmission of harmful microorganisms and, therefore, reduce the possibility of public health risk.

In response to the marketing of unregistered pesticide-treated products with illegal, unsubstantiated public health claims, EPA has acted quickly and decisively to prohibit sales of such products. It will continue to be the Agency’s policy to take action against companies that make such illegal claims.

For More Information

To view or obtain an electronic copy of the guidance document (PR 2000-1), we invite you to visit EPA’s Web site at http://www.epa.gov/opppmsd1/PR_Notices, or call the Antimicrobials National Hotline at (703) 308-0127.
March 6, 2000

PESTICIDE REGISTRATION (PR) NOTICE 2000 - 1*

NOTICE TO MANUFACTURERS, FORMULATORS, PRODUCERS
AND REGISTRANTS OF PESTICIDE PRODUCTS

ATTENTION: Persons Responsible for Registration of Pesticide Products

SUBJECT: Applicability of the Treated Articles Exemption to Antimicrobial Pesticides

This notice clarifies current EPA policy with respect to the scope of the "treated articles exemption" in 40 CFR 152.25(a). This exemption covers qualifying treated articles and substances bearing claims to protect the article or substance itself. EPA does not regard this exemption as including articles or substances bearing implied or explicit public health claims against human pathogens. This notice addresses the types of claims which are not permitted for antimicrobial pesticide products exempt from registration under this provision and gathers together in one place guidance the Agency has offered in recent years on labeling statements which it believes would or would not be covered under this provision. This notice also explains the requirement that the pesticide in a treated article be "registered for such use."

This notice provides guidance to producers and distributors of pesticide treated articles and substances, and to producers and distributors of pesticides used as preservatives to protect treated articles from microbial deterioration.

I. BACKGROUND

EPA regulations in 40 CFR 152.25(a) exempt certain treated articles and substances from regulation under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) if specific conditions are met. The specific regulatory language is:

Section 152.25 Exemptions for pesticides of a character not requiring FIFRA regulation

"(a) Treated articles or substances. An article or substance treated with, or containing, a pesticide to protect the treated article or substance itself (for example, paint treated with a pesticide to protect

* This version makes corrections to the February 3, 2000 PR Notice 2000-1. Corrections in bold/italics or editorial deletions were made on pages 3, 4, 7, and 9.
the paint coating, or wood products treated to protect the wood against insect or fungus infestation),

if the pesticide is registered for such use."

Known as the "Treated Articles Exemption," section 152.25(a) provides an exemption from all requirements of FIFRA for qualifying articles or substances treated with, or containing a pesticide, if:

(1) the incorporated pesticide is registered for use in or on the article or substance, and;
(2) the sole purpose of the treatment is to protect the article or substance itself.

The exemption gives two examples of treatments that are intended to protect only the treated article or substance itself. In the first case, paint is being protected from deterioration of the paint film or coating. In the second case, wood is being protected from fungus or insect infestations which may originate on the surface of the wood. Pesticides used in this manner are generally classified as preservatives. Other pesticides are incorporated into treated articles because of their ability to inhibit the growth of microorganisms which may cause odors or to inhibit the growth of mold and mildew. Because of this treatment, it is claimed that a fresher and more pleasing surface can be maintained.

To qualify for the treated articles exemption, both conditions stated above must be met. If both are not met, the article or substance does not qualify for the exemption and is subject to regulation under FIFRA.

In recent years, the marketplace has experienced a proliferation of products that are treated with pesticides and bear implied or explicit public health claims for protection against bacteria, fungi and viruses, as well as specific claims against pathogenic organisms which may cause food poisoning, infectious diseases or respiratory disorders. Examples of such articles include toothbrushes, denture cleansers, children’s toys, kitchen accessories such as cutting boards, sponges, mops, shower curtains, cat litter, vacuum cleaner bags, pillows, mattresses and various types of finished consumer textiles. In many cases, these products have made public health claims that extend beyond the protection of the article itself, and thus, they do not qualify for the treated articles exemption.

II. TYPES OF ANTIMICROBIAL CLAIMS

A. Public Health Claims

Because consumers have long associated the following widely used claims and references to microorganisms harmful to humans with products providing public health protection, EPA considers an article or substance to make a public health claim if any of the following claims are made either explicitly or implicitly:

1. A claim for control of specific microorganisms or classes of microorganisms that are directly or indirectly infectious or pathogenic to man (or both man and animals). Examples of specific microorganisms include *Mycobacterium tuberculosis*, *Pseudomonas aeruginosa*, *E. coli*, *HIV*,
2. A claim for the product as a sterilant, disinfectant, virucide or sanitizer, regardless of the site of use of the product, and regardless of whether specific microorganisms are identified.

3. A claim of “antibacterial,” “bactericidal,” or “germicidal” activity or references in any context to activity against germs or human pathogenic organisms implying public health related protection is made.

4. A claim for the product as a fungicide against fungi infections or fungi pathogenic to man, or the product does not clearly indicate it is intended for use against non-public health fungi.

5. A claim to control the spread of allergens through the inhibition or removal of microorganisms such as mold or mildew.

6. A non-specific claim that the product will beneficially impact or affect public health by pesticidal means at the site of use or in the environment in which applied.

7. An unqualified claim of “antimicrobial” activity. Refer to Unit IV.C.

B. Non-Public Health Claims

EPA considers a product to make a non-public health claim if any of the following applies:

1. A claim to inhibit the growth of mildew on the surface of a dried paint film or paint coating.

2. A claim to inhibit microorganisms which may cause spoilage or fouling of the treated article or substance.

3. A claim to inhibit offensive odors in the treated article or substance.

4. EPA considers terms such as “antimicrobial,” “fungistatic,” “mildew-resistant,” and “preservative,” as being acceptable for exempted treated articles or substances provided that they are properly, and very clearly, qualified as to their intended non-public health use. Refer to Unit IV.C. Use of these terms in product names or elsewhere in the labeling in bolder text than accompanying information may render such qualifications inadequate.

III. PAST EPA LABELING CLAIMS INTERPRETATIONS

A. Odor and Mildew-Resistant Properties May Be Claimed

Over the past twenty-five years the Agency has issued several interpretations concerning the
exemption from FIFRA regulations of certain types of antimicrobial treated article claims associated with mildew-resistant paint, films and coatings. In the same period, EPA has also issued other interpretations concerning certain types of odor-resistant antimicrobial treated article claims.

During this period there has been widespread dissemination and adoption by the antimicrobial pesticide product community of these EPA interpretations regarding mildew-resistant and odor-resistant claims under the “treated articles exemption.” Furthermore, the Agency continues to treat these general types of claims as covered by the term “to protect the treated article or substance itself” because mitigation of these non-public health related organisms can contribute to the protection of the appearance and maintenance of the intended useful life of the treated article or substance. Because during this period, there has also been widespread misinterpretation of EPA’s guidance, the Agency has developed a representative set of statements designed to clarify its position in this area. Consequently, if they otherwise qualify for the exemption, properly labeled treated articles and substances bearing claims such as those described under Unit IV.B. continue to be eligible for the treated articles exemption.

B. Product Names May Not Contain Public Health Claims

The Agency regards trademarked product names of treated articles or substances [or references to trademarked names of registered pesticides] as potential sources of public health claims that could render a product ineligible for the “treated articles exemption” just as could other direct or indirect public health claims on or in a product’s packaging or in its labeling or advertising literature. The Agency has maintained this position in enforcement actions against pesticide-treated articles, such as pesticide-treated cutting boards and other items, which bore names suggesting health or other benefits beyond mere preservation of the treated article itself. In determining the eligibility of a treated article or substance for the exemption, the Agency will examine the product name, its context, labeling claims and other related elements on a case-by-case basis.

IV. TREATED ARTICLE LABELING CLAIMS

Products treated with antimicrobial pesticides with claims such as those described in Section A below are likely to not be acceptable under the “treated articles exemption” because they imply or express protection that extends beyond the treated article or substance itself. Products treated with antimicrobial pesticides registered for such use and which only bear claims for protection of the article or substance itself such as those described in Section B below are likely to be acceptable and eligible for the “treated articles exemption”, assuming all other conditions have been met. Section C below contains examples of appropriate qualifying and prominence statements which have been extracted from multiple enforcement proceedings dealing with claims that can be made for treated articles without obtaining registration.

A. Examples of Labeling Claims That the Agency is Likely to Consider Unacceptable Under the Exemption
The following examples are not intended to be an all-inclusive listing of unacceptable treated article labeling claims. If persons are not sure whether their antimicrobial pesticides are covered by the provisions of this section, the Agency encourages them to request a written opinion from the Antimicrobials Division at one of the addresses listed under Unit VII.

These examples represent claims or types of claims for a treated article that would lead to a requirement to register the article as a pesticide product.

- Antibacterial
- Bactericidal
- Germicidal
- Kills pathogenic bacteria.
- Effective against E. coli and Staphylococcus.
- Reduces the risk of food-borne illness from bacteria.
- Provides a germ-resistant surface.
- Provides a bacteria-resistant surface.
- Surface kills common gram positive and negative bacteria.
- Surface controls both gram positive and negative bacteria.
- Surface minimizes the growth of both gram positive and negative bacteria.
- Reduces risk of cross-contamination from bacteria.
- Controls allergy causing microorganisms.
- Improves indoor air quality through the reduction of microorganisms.

**B. Examples of Labeling Claims the Agency is Likely to Consider Acceptable Under the Exemption**

The following examples are not intended to be an all-inclusive listing of acceptable treated article labeling claims. If persons are not sure whether their antimicrobial pesticides are covered by the provisions of this section, the Agency encourages them to request a written opinion from the
Antimicrobials Division at one of the addresses listed under Unit VII.

1. Mold and Mildew Resistant Claims

- This article has been treated with a fungistic agent to protect the product from fungal growth.
- Mildew Resistant - treated with a fungistic agent to protect the paint itself from the growth of mildew.
- Mildew Resistant - This paint contains a preservative which inhibits the growth of mildew on the surface of the paint film.
- Mildew Resistant - Extends useful life of article by controlling deterioration caused by mildew.
- Algae Resistant - This article contains a preservative to prevent discoloration by algae.
- A fungistic agent has been incorporated into the article to make it resistant to stain caused by mildew.
- Article treated to resist deterioration by mold fungus.
- Article treated to resist deterioration from mildew.
- The fungistic agent in this article makes it especially useful for resisting deterioration caused by mildew.
- Dry coating of this paint mildew resistant.
- Dried paint film resists mold fungus.
- Dry enamel coating resists discoloration from mildew.
- Cured sealant is mildew resistant.
- Dried film resists stains by mold.
- A mold or mildew resisting component has been incorporated in this article to make its dry film mildew resistant.
- Specially formulated to resist mildew growth on the paint film.
- Gives mildew-resistant coating.
The mildew resistance of this outside house paint film makes it especially useful in high humidity areas.

- Retards paint film spoilage.
- Resists film attack by mildew.

2. Odor Resistant Claims

- This product contains an antimicrobial agent to control odors.
- This product contains an antimicrobial agent to prevent microorganisms from degrading the product.
- Resists Odors - This product has been treated to resist bacterial odors.
- Inhibits the growth of bacterial odors.
- Resists microbial odor development.
- Retards the growth and action of bacterial odors.
- Guards against the growth of odors from microbial causes.
- Guards against degradation from microorganisms.
- Reduces odors from microorganisms.
- Odor-resistant.
- Acts to mitigate the development of odors.

C. Antimicrobial Qualifying and Prominence Considerations

EPA does not believe that claims such as “antimicrobial,” “fungistatic,” “mildew-resistant,” and “preservative” or related terms are consistent with the intent of 40 CFR 152.25(a) if they are: (1) part of the name of the product; or (2) not properly qualified as to their intended non-public health use. Examples of permissible statements would include, but not be limited to: “Antimicrobial properties built in to protect the product” and “Provides mildew-resistant dried paint coating.” All references to the pesticidal properties and the required qualifying statements should be located together, should be printed in type of the same size, style, and color, and should be given equal prominence. Moreover, such references should not be given any greater prominence than any other described product feature.
In addition, treated articles or substances intended for microbial odor control or article preservation in areas where food-borne or disease-causing organisms may be present have the potential to create the impression that the article provides protection against food-borne and disease-causing bacteria. This potential should be addressed through very careful narrowing and qualification of the non-public health claims. A complete assurance that there is no misleading impression could be achieved through use of language like: “This product does not protect users or others against food-borne (or disease-causing) bacteria. Always clean this product thoroughly after each use.” or “This product does not protect users or others against bacteria, viruses, germs or other disease organisms. Always clean this product thoroughly after each use.”

V. ADDITIONAL INFORMATION

A. Registration of Treated Articles Making Public Health Claims

Treated articles or substances with implied or explicit public health claims or which otherwise fail to qualify for exemption are pesticide products subject to all requirements of FIFRA. They may not be legally sold or distributed unless they are registered with EPA or unless such claims have been removed and the article otherwise qualifies for exemption. To obtain a registration, an applicant must submit acceptable data supporting all the proposed claims under which the product will be marketed and meet all other applicable registration requirements. Refer to 40 CFR Parts 152, 156, and 158.

The Agency currently has no established protocols for the development of data to support public health claims on treated articles for which registration is sought. Acceptable protocols for product testing reflecting actual use conditions need to be submitted and approved by EPA prior to the development of these data. As part of this review process, the Agency will require that these protocols be independently validated for accuracy and reproducibility. Antimicrobial treated articles requiring registration must meet the same efficacy performance standards that are required for corresponding antimicrobial public health products. For any questions regarding the need for registration or the registration requirements for specific treated articles or substances, contact the Antimicrobials Division at the address listed under Unit VII.

B. The Term “Registered for Such Use”

In order to qualify for the treated articles exemption, 40 CFR 152.25(a) specifies that an article or substance must be treated with, or contain, a pesticide to protect the treated article or substance itself. The terms “treated with, or containing, a pesticide” and “if the pesticide is registered for such use” in 40 CFR 152.25(a) refer to actual incorporation or adding of an antimicrobial pesticide specifically registered for that use. To qualify under the “treated articles exemption” (assuming the article or substance otherwise qualifies), it is not sufficient that the antimicrobial pesticidal substance in the treated article merely resemble or have activity like a registered pesticide. The antimicrobial pesticide in the treated article or substance must be present in the article or substance solely as the result of
incorporating an antimicrobial pesticide which is registered for treating the specific article or substance.

Because of the wide range of exposure scenarios associated with the use of treated articles such as cutting boards and conveyor belts used in the food processing industry, and the wide range of household consumer uses, the Agency has interpreted 40 CFR 152.25(a) to mean that the registration and the labeling of the antimicrobial pesticide intended for incorporation into the treated article or substance needs to include specific listings of the articles or substances that may be treated. Accordingly, in registration actions over the past several years, EPA has not permitted broad general use patterns, such as the preservation of hard surfaces, plastics, adhesives or coatings for the registered pesticide. Instead, it has required that specific listings such as toys, kitchen accessories and clothing articles be reflected in the product registration and labeling as a prerequisite for incorporation of the pesticide into an article or substance under 40 CFR 152.25(a).

VI. EFFECTIVE DATE AND PROCEDURES

In order to remain in compliance with FIFRA and avoid regulatory or enforcement consequences as described here and below, it is the Agency’s position that producers, distributors, and any other person selling or distributing pesticide treated articles and substances not in compliance with the Agency’s interpretation of 40 CFR 152.25(a), as clarified by this notice, need to bring their products, labeling and packaging, any collateral literature, advertisements or statements made or distributed in association with the marketing (sale or distribution) of the treated article or substance into full compliance with the regulation as clarified by this notice as soon as possible.

Because some of the elements of this interpretation may not have been well understood by the regulated community, the Agency expects that some companies may need up to a year in order to comply with these elements that have been clarified by this notice. Therefore, for the present, the Agency is following the approach set forth in the April 17, 1998 Federal Register (63 FR 19256). Although non-public health claims for microbial odor control and mold and mildew claims associated with deterioration, discoloration, and staining were not specifically mentioned in the April 17, 1998 Federal Register, such claims are also consistent with the enforcement approach set forth in that notice, as well as with this guidance, provided that they are properly, and very clearly, qualified as to their non-public health use. The Agency will begin to rely on the guidance provided in this Notice on February 11, 2001. Products in commerce after that date which make statements, etc. that do not reflect the clarification offered in this notice would risk being considered out of compliance with 40 CFR 152.25(a).

VII. ADDRESSES

By mail:
Antimicrobials Division (7510C)
U. S. Environmental Protection Agency
1200 Pennsylvania Avenue, NW
Washington, D. C. 20460-0001
By courier:
Antimicrobials Division (7510C)
U. S. Environmental Protection Agency
Room 300, Crystal Mall 2
1921 Jefferson Davis Highway
Arlington, VA 22202-4501

VIII. FOR FURTHER INFORMATION CONTACT

If you have questions about the content of this notice, you should contact Debra Edwards at (703) 308-7891.

/signed/

Marcia E. Mulkey, Director
Office of Pesticide Programs