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Systems Integration Group, Inc.

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ACCEPTED

Technical Bulletin

APR - 7 1997

Microban additive "B" for Air Filtration

Registration No. 42182-1
EPA Reg. No. 42182-1

EPA Reg. No. 42182-1

Directions for use:

It is a violation of federal law to use this product in a manner inconsistent with its labeling.

FOR THE PROTECTION OF THE AIR FILTER OR THE AIR FILTRATION MEDIA AGAINST ODOR CAUSING BACTERIA AND FOR "BACTERIOSTATIC/FUNGISTATIC ACTIVITY IN THE PRESENCE OF MOISTURE. The levels of active ingredient by weight should not be greater than 5,000 ppm. The use of the Microban can be incorporated directly into the synthetic materials (e.g. Polypropylene, Acrylic, Acetate, Polyester, Polyethylene, etc.) or as a coating on the finished product or the finished media.

SEE PRINCIPAL LABEL FOR COMPLETE PRECAUTIONARY INFORMATION AND STORAGE AND HANDLING INSTRUCTIONS. All applicable directions, restrictions, and precautions on the principal label are to be followed.

Microban Products Company
11515 Vanstory Drive Suite 110
Huntersville, N.C. 28078

Microban

Microban

MICROBAN

Plastic Additive "B"

A preservative, bacteriostatic agent for use in the manufacture of polymer plastic and latex products.

Active Ingredients:

5-Chloro-2-(2,4-dichlorophenoxy) phenol 99 %
Inert Ingredients 1 %

Directions for Use

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

This additive is to be used only for compounding of *proprietary and/or patented resin formulations under written agreement and in accord with specific instructions issued by Microban Products Company.* Specific directions for reformulation will be found in technical bulletins supplied by **Microban Products Company.**

Precautionary Statements

Keep Out of Reach of Children

Hazards to Humans and Animals

DANGER

Harmful if swallowed or inhaled. Do not breathe dust. Do not get in eyes, on skin or on clothing. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

Statement of Practical Treatment:

If inhaled: Remove victim to fresh air.

If swallowed: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger. Do not induce vomiting or give anything by mouth to an unconscious person.

If in eyes: Flush with plenty of water. Call a physician if irritation persists.

If on skin: Wash with plenty of soap and water. Get medical attention if irritation persists.

Storage and Disposal

Store below 130°F. Do not contaminate water, food or feed by storage or disposal. Wastes from the use of this product may be disposed of on site or at an approved waste disposal facility. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then dispose of liner in a sanitary landfill or by incineration if allowed by State and local authorities. Drum cannot be reused; dispose of in the same manner.

For minor spills, shovel into approved disposal container; vacuum contaminated areas. Avoid creating dusty conditions. Take special care to avoid contamination of equipment and facilities during clean up procedures and disposal of wastes.

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 Pollution 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.

EPA Reg No. 42182-1

EPA Est No. 42182-NC-6

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Ammendment 12/09/94

ADDITIONAL LIST OF END PRODUCTS FOR MICROBAN ADDITIVE "B"

Polypropylene, Acetate, Polyethylene, Styrene, ABS, PVC, Nylon, Urethane, Acrylic, Epoxy polymers and films from these polymers the level of additive is incorporated at a percent ranging from 0.15% to 0.5% by weight of the final product; the additive may be incorporated directly into the polymer or as a coating on the final product:

PRODUCTS

Combs & brushes
 Tray liners
 Medical & dental trays
 Food service trays ✓
 Containers for cosmetics
 Tooth brush handles ✓
 Toilet seats
 Toilets & urinals
 Portable toilets
 Menu materials
 Tray holders
 Personnel cards(credit cards,drivers license,etc.)
 Currency
 Garbage cans
 Garbage bags & trash can liners
 Paper & paperboard products
 Toys
 Cutting boards ✓
 Floor coverings(wax,sealers,coatings)
 Door & floor mats
 Tile(wall & floor) & grout
 Flooring(concrete,epoxy,component fibers,& coatings of urethane,epoxy,etc)
 Storage containers (for clothing, instruments, electronics, food & condiments)
 Counter & table tops
 Food distribution carts
 Conveyor belts ✓
 Exercise & gym equipment
 Furniture coverings
 Playground equipment & furniture
 Metallic coatings for
 plumbing fixtures
 door handles
 serving utensils
 bed pans
 floor drains
 grease traps
 Mop buckets
 Mops & mop components
 Agricultural & mulch films
 Floral containers
 Wheels for medical carts

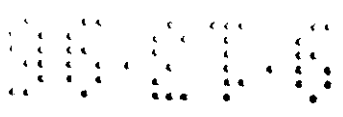
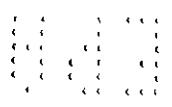
ammendment 01/09/95

ADDITIONAL LIST OF END PRODUCTS FOR MICROBAN ADDITIVE "B"

Polypropylene, Nylon, Acrylic, Acetete, Polyester, Rayon, Polyethylene fibers and blends of these fibers with natural fibers; the level of additive is incorporated at a percent ranging from 0.15% to 0.5% by weight of final product; the additive may be incorporated directly into the fiber or as a finish for the product:

PRODUCTS

- Hairbrushes
- Tooth brush bristles ✓
- Brushes
- Wall coverings
- Garment bags
- Blanket bags
- Cubicle curtains
- Window curtains & draperies
- Shower curtains
- Awnings(indoor & outdoor)
- Mops
- Industrial brushes & brooms
- Paper mulch
- Silage wraps
- Conveyor belts ✓
- Exercise equipment
- Blankets



Amendment -11/9/94

ADDITIONAL LIST OF END PRODUCTS FOR MICROBAN ADDITIVE "B"

Polypropylene, Nylon, Acrylic, Acetate, Polyester, Rayon, Polyethylene fabrics and blends of these fibers with natural fibers; the level of additive is incorporated at a percent ranging from 0.1% to 0.15% by weight of the fabric; the additive may be incorporated directly into the fiber or as a finish for the fabric:

PRODUCTS

- Hosiery & socks
- Shoes, shoe innersoles & linings
- Carpets & rugs
- Dresses
- Athletic wear
- Running gear
- Sweatshirts
- Uniforms
- Apparel trimmings & linings
- Medical & dental clothing
- Food service uniforms
- Starting team Uniforms
- Sportswear
- Gloves(non-medical)
- Aprons(food service, home)
- Intimate apparel(underwear)
- Wet suits
- Furniture fabrics
- Mattress & pillow ticking
- Covers for table tops
- Table cloths, napkins
- Covers for counter tops
- Linens(towels,sheets, pillowcases,mattress covers, etc.)
- Gowns(medical & consumer)
- Bibs
- Food service wipes(towels)
- Incontinence care products(diapers & underpads)

11/9/94

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PRODUCTION OF END PRODUCT

In the subsequent extrusion of film, yarn or fiber or in molding finished shapes, the pellets (concentrate) are then metered into a larger quantity of base resin, at a specified let-down ratio to provide the desired level for the end product. The level of Additive to be incorporated varies according to the nature of the product and the desired duration of the antibacterial capability. In the case of the currently proposed end products (see separate listing), the level of Additive is specified in the range of 0.5 - 1.0% by weight.

Throughout this procedure, operators should use protective gloves and respirators. All refuse should be put into drums and incinerated in accordance with EPA regulations.

All containers of finished Microban concentrates must bear the appropriate labels which are furnished by Microban Products Co.

PHYSICAL AND CHEMICAL PROPERTY OF ACTIVE INGREDIENT

VOLATILITY

Measured by differential thermal analysis, Microban Plastic Additive "B" does not decompose below 280-290°C. Volatilization may occur at elevated temperature.

STABILITY

Microban Plastic Additive "B" does not decompose under normal storage conditions and its thermal stability is excellent.

LEACHABILITY

Microban Plastic Additive "B" is practically insoluble in water. The solubility of Microban Plastic Additive "B" is 0.0010 g/100g in water at 20°C and 0.0039 g/100g in water at 50°C.

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