MICROBIAL DEFENSE LABORATORIES

RAZOR ANTIMICROBIAL COATING

RAZOR™ Antimicrobial Coating provides an invisible microbiostatic coating to inhibit the growth of odor causing bacteria, bacteria which cause staining and discoloration, fungi (mold and mildew), and algae. This product does not protect users or others against food-borne or disease-causing bacteria.

Manufactured for: Microbial Defense Laboratories LLC

DIRECTIONS FOR USE

Approved commercial appliances used in homes, offices, automobiles, ship sails, buses and institutions e.g., schools, hospitals, daycare centers, churches, correctional facilities

It is a violation of Federal Law to use this product in a manner inconsistent with its labeling. Wear protective eyewear (goggles and face shield) and gloves when using this product. Dry treated areas and articles such as clothing before use. Remove children and pets from treated area until completely dry. Clean surfaces prior to application.

For Fogging Application- RAZOR™ Antimicrobial Coating can be applied to organic or inorganic substrates by fogging. All surfaces must be cleaned prior to fogging. Fogging is supplement to normal cleaning and practices. Fogging can be used in homes, offices, automobiles and institutions e.g., schools, hospitals, daycare centers, churches, correctional facilities.

1. Prior to fogging, remove and carefully protect all food products and packaging materials.
2. Fog areas using one gallon per 1000 cu. ft. of room area.
3. Allow surfaces to drain thoroughly and air dry before operations are resumed.

Dry substrates at temperatures from ambient to a maximum of 160˚C (320˚F) to effect complete condensation of silanol groups and to remove water, solvents and/or traces of methanol from hydrolysis. Optimum application and drying conditions, such as time and temperature, should be determined for each application before use. If necessary, reapply RAZOR™ Antimicrobial Coating every three months or when odor, staining and discoloration due to bacteria, mold stains, and mildew stains return.

For Pump Spray Application: Using pump sprayer, spray entire area 4”-6” from 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 of 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. RAZOR™ Antimicrobial Coating treats approximately 200 square feet per gallon.

When treating coarser substrates, more Razor may be required due to absorption. A fan may be used to assist in drying carpet.

For Commercial Spray Application: For commercial application equipment (i.e. carpet/upholstery steamers, rotary jet extraction cleaner and pressure sprayers) 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. Razor treats approximately 200 square feet per diluted gallon of water. When treating coarser substrates, more Razor may be required due to absorption. Dry carpet areas and surfaces before re-entry and dry articles before use. A fan may be used to assist in drying carpet.

For Dipping/Soaking Application: Use appropriate sized wash basin or tub for dipping/soaking the item you are treating. Use enough Razor solution to completely submerge item. 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 temperature or at temperatures to a maximum of 160˚C (320˚F) (for example in a clothes dryer. Remove excess liquid before attempting to dry in a clothes dryer.) If necessary, reapply RAZOR™ Antimicrobial Coating every three months or when odor, staining and discoloration due to bacteria, mold stains, and mildew stains return.

RAZOR™ Antimicrobial Coating when used as a concrete additive is added directly concrete preparation. Use 60 fluid ounces per cubic feet of concrete. Addition of RAZOR™ Antimicrobial Coating reduces deterioration of sewer pipes and manholes by inhibiting microbiologically induced corrosion.

Approved commercial and industrial applications

The active ingredient in RAZOR™ Antimicrobial Coating is effective against odor causing bacteria, bacteria which cause staining and discoloration, fungi (mold and mildew) and algae as a static agent.

RAZOR™ Antimicrobial Coating can be used as a final bacteriostatic finish on the following items to impart bacteriostatic/fungistatic (mold and mildew) and algaestatic activity:

Air Filters for furnaces, air-conditioners, air purification devices, automobiles, recirculating air handling systems, Air filters/materials, Bed sheets, blankets, and bedspreads, Buffer pads (abrasive and polishing), Carpets and draperies, Concrete additive for sewer pipes, manholes and concrete sewer structures; not to be used in treatment of storm drains, Fiberfill for upholstery, sleeping bags, apparel, where the fiber is cotton, natural down, nylon, polyester, rayon, or wool, Fiberglass duct board, Humidifier belts, Mattress pads and ticking, Me□ns underwear and outerwear, Polyurethane and cellulose foam for household, industrial, and institutional sponges and mops, Athletic and casual socks, Shoe insoles, Shower curtains, Throw rugs, Toweling made of 100 percent cotton, 100 percent polyester, and blends of the two fibers, Toilet tank and seat covers, Upholstery made of acetates, acrylics, cotton, fiberglass, nylon, polyester, polyethyiene, polyolefins, polyptopylene, rayon, spandex, vinyl, wool,

Vacuum cleaner bags and filters, Disposable wiping cloths that can be used for multiple purposes such as dusting or washing furniture, cars, walls, windows, floors, appliances, dishes, counter tops; the wiping cloths do not impart pesticide properties.

ENVIRONMENTAL HAZARDS

Commercial and industrial uses: This pesticide is toxic to fish. 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.

De-activation may be required during clean up if a spill occurs. De-activation of Razor can be achieved by the addition of anionic surfactant (such as soap, sulfonates, sulfates) in quantity equivalent to that of RAZOR™ Antimicrobial Coating.

STORAGE AND DISPOSAL

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

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

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

Container Handling: (containers intended for nonresidential users, smaller than 5 gallons) Non-refillable container. Do not reuse or refill this container. Triple rinse container promptly after emptying. 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. Dispose of rinsate as a pesticide waste. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

FOR MORE INFORMATION CONCERNING THIS PRODUCT, PLEASE CONSULT THE SAFETY DATA SHEET (SDS). THE SDS CAN BE OBTAINED BY WRITING MICROBIAL DEFENSE LABORATORIES LLC

IMPORTANT: WARRANTY AND DISCLAIMER INFORMATION

Microbial Defense Laboratories LLC warrants that the product conforms to its chemical description and is reasonably fit for the purposes stated in this bulletin when 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 bulletin instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to the seller, and buyer assumes the risk of any such use. MICROBIAL DEFENSE

LABORATORIES LLC SPECIFICALLY DISCLAIMS ANY OTHER EXPRESSED OR IMPLIED WARRANTY, INCLUDING THE WARRANTY OF MERCHANTABILITY

RAZOR Antimicrobial Coating

SECTION 1 : Identification of the substance/mixture and of the supplier

Product name : **RAZOR Antimicrobial Coating**

Manufacturer/Supplier Trade name:

Manufacturer/Supplier Article number: **RAZOR Antimicrobial Coating**

Recommended uses of the product and uses restrictions on use:

Manufacturer Details:

Microbial Defense Laboratories
San Antonio TX
210-410-5797

Emergency telephone number:

Infotrac 800-535-5053

SECTION 2 : Hazards identification

Classification of the substance or mixture:

Not classified for physical or health hazards under GHS.

Hazard statements:

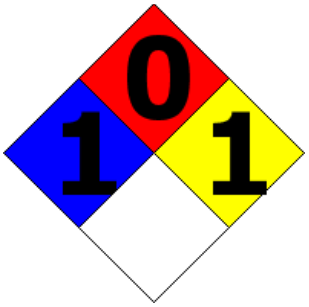
Precautionary statements:

If medical advice is needed, have product container or label at hand
Read label before use

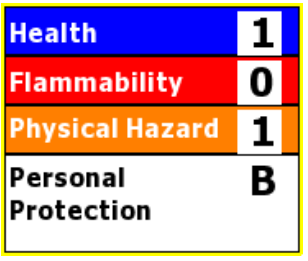
Other Non-GHS Classification:

WHMIS

NFPA/HMIS



NFPA SCALE (0-4)



HMIS RATINGS (0-4)

SECTION 3 : Composition/information on ingredients

Ingredients:		
CAS 27668-52-6	3-(Trihydroxysilyl) propyldimenhyloctadecyl ammonium chloride	<1 %
		Percentages are by weight

SECTION 4 : First aid measures

Description of first aid measures

After inhalation: Loosen clothing as necessary and position individual in a comfortable position.Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Get medical assistance ifcough or other symptoms appear.

After skin contact: Rinse/flush exposed skin gently using soap and water for 15-20 minutes. Seek medical advice ifdiscomfortorirritationpersists.

After eye contact: Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.

After swallowing: Rinse mouth thoroughly. Do not induce vomiting. Seek medical attention if irritation, discomfort, or vomiting persists. Never give anything by mouth to an unconscious person.

Most important symptoms and effects, both acute and delayed:

Irritation. headache. nausea. shortness of breath.

Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

SECTION 5 : Firefighting measures

Extinguishing media

Suitable extinguishing agents: Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

For safety reasons unsuitable extinguishing agents:

Special hazards arising from the substance or mixture:

Thermal decomposition can lead to release of irritating gases and vapors.

Advice for firefighters:

Protective equipment: Wear protective eyeware, gloves, and clothing. Refer to Section 8.Use NIOSH-approved respiratory protection/breathing apparatus.

Additional information (precautions): Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing.

SECTION 6 : Accidental release measures

Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure that air-handling systems are operational.

Environmental precautions:

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

Methods and material for containment and cleaning up:

Wear protective eyeware, gloves, and clothing. Refer to Section 8.Always obey local regulations. Containerize for disposal. Refer to Section 13.If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Keep in suitable closed containers for disposal.

Reference to other sections:

SECTION 7 : Handling and storage

Precautions for safe handling:

Avoid contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8.Follow proper disposal methods. Refer to Section 13.Do not eat, drink, smoke, or use personal products when handling chemical substances.

Conditions for safe storage, including any incompatibilities:

Store in a cool location. Keep away from food and beverages. Protect from freezing and physical damage. Provide ventilation for containers. Keep container tightly sealed. Store away from incompatible materials.

SECTION 8 : Exposure controls/personal protection

Control Parameters: No applicable occupational exposure limits

Appropriate Engineering controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

Respiratory protection: Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

Protection of skin: Select glove material impermeable and resistant to the substance .Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.

Eye protection: Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).Safety glasses or goggles are appropriate eye protection.

General hygienicmeasures: Perform routine housekeeping. Wash hands before breaks and at the end of work. Avoid contact with skin, eyes, and clothing. Before wearing wash contaminated clothing.

SECTION 9 : Physical and chemical properties

Appearance (physical	Clear, colorless liquid	**Explosion limit lower**: **Explosion limit upper**:	Not determined Not determined
Odor:	Mild	**Vapor pressure**:	Not determined
Odor threshold:	Not determined	**Vapor density**:	Not determined
pH-value:	Approx. 5.0	**Relative density**:	1.003
Melting/Freezing point:	Not determined	**Solubilities**:	Material is water soluble.
Boiling point/Boiling range:	Above 210F	**Partition coefficient (n- octanol/water)**:	Not determined
Flash point (closed cup):	Not determined	**Auto/Self-ignition temperature**:	Not determined

RAZOR Antimicrobial Coating			
Evaporation rate:	Not determined	**Decomposition temperature**:	Not determined

Flammability (solid,gaseous)	Not determined	**Viscosity**:	a. Kinematic:Not determined b. Dynamic: Not determined
Density: Not determined			

SECTION 10 : Stability and reactivity

Reactivity: Nonreactiveundernormalconditions.
Chemical stability: Stable under normal conditions.
Possible hazardous reactions: None under normal processing.
Conditions to avoid: Incompatible materials. Do not mix with cleaners, do not freeze, and avoid heat.
Incompatible materials: Sodium oxidizers
Hazardous decomposition products:

SECTION 11 : Toxicological information

Acute Toxicity: No additional information.	
Chronic Toxicity: No additional information.	
Corrosion Irritation: No additional information.	
Sensitization:	No additional information.
Single Target Organ (STOT):	No additional information.
Numerical Measures:	No additional information.
Carcinogenicity:	No additional information.
Mutagenicity:	No additional information.
Reproductive Toxicity:	No additional information.

SECTION 12 : Ecological information

Ecotoxicity Persistence and degradability:
Bioaccumulative potential:
Mobility in soil:
Other adverse effects:

SECTION 13 : Disposal considerations

Waste disposal recommendations:

Contact a licensed professional waste disposal service to dispose of this material Dispose of empty containers as unused product. Product or containers must not be disposed with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

SECTION 14 : Transport information

UN-Number

Not Regulated.

UN proper shipping name

Not Regulated.

Transport hazard class(es)
Packing group: Not Regulated
Environmental hazard:
Transport in bulk:
Special precautions for user:

SECTION 15 : Regulatory information

United States (USA)

SARA Section 311/312 (Specific toxic chemical listings):

None of the ingredients is listed

SARA Section 313 (Specific toxic chemical listings):

None of the ingredients is listed

RCRA (hazardous wastecode):

None of the ingredients is listed

TSCA (Toxic Substances Control Act):

All ingredients are listed.

CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients is listed

Proposition 65 (California):

Chemicals known to cause cancer:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for females:

None of the ingredients is listed

Chemicals known to cause reproductive toxicity for males:

None of the ingredients is listed

Chemicals known to cause developmental toxicity:

None of the ingredients is listed

Canada

Canadian Domestic Substances List (DSL):

All ingredients are listed.

Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients is listed

Canadian NPRI Ingredient Disclosure list (limit 1%):

None of the ingredients is listed

SECTION 16 : Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the

SDS contains all the information required by the Controlled Products Regulations. Note:. The responsibility toprovide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material .It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

GHS Full Text Phrases:

Abbreviations and acronyms:

IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
ACGIH: American Conference of Governmental Industrial Hygienists
CAS: Chemical Abstracts Service (division of the American Chemical Society)
NFPA: National Fire Protection Association (USA)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
DNEL: Derived No-Effect Level (REACH)
PNEC: Predicted No-Effect Concentration (REACH)
CFR: Code of Federal Regulations (USA)
SARA: Superfund Amendments and Reauthorization Act (USA)
RCRA: Resource Conservationand Recovery Act(USA)
TSCA: Toxic Substances Control Act (USA)
NPRI: National Pollutant Release Inventory (Canada)
DOT: US Department ofTransportation

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