



TWIN CHEMICALS, INC.

Specifications:

Durashield Microbiostat/Inhibitor 5 gallon Pail and 55 Gallon Drum

| | |
|---------------------|---|
| Appearance: | Pale yellow |
| Odor: | Odorless or Slight Alcohol |
| Boiling Point: | 212°F |
| Vapor Density: | 2.2 |
| pH: | 5 |
| Flash Point: | None |
| DOT Shipping Class: | 55 |
| Shipping Weight: | 5 gal. pail 40 lbs. 55 gal. drum 386 lbs. |
| Specific Gravity: | 1 |
| Solubility: | Complete |
| Coverage Rate: | Hand pump sprayer - 400-500sq ft. per gallon Airless Sprayer - 750-1000 sq. ft. per gallon |
| Reactivity: | Stable |
| HMIS Rating: | 0-0-0 |
| DOT Shipping Name: | Not DOT Regulated On containers less than 120 gallons |

**Twin-Chemicals
Atlanta, Georgia**

**(800) 442-4958
(770) 924-6147 fax**

www.twin-chemicals.com



DuraShield is Twin-Chem.'s highly effective microbiostat / inhibitor. It is designed to be effective against most types of microbes - bacteria, mold, mildew, fungus and algae. DuraShield creates a long lasting and durable microbiostatic coating that retards the re-establishment of odors & stains caused by bacteria, mold, mildew and algae while preventing the growth of mold, mildew and algae. Since DuraShield utilizes water-stabilized technology, it is non-flammable. DuraShield is chemically bonded and is not subject to leaching, offering superior surface protection. Malodors are attacked at their source, reducing odors. DuraShield is effective on a broad range of textiles and surfaces both interior and exterior. Labor Saving - DuraShield is easy to apply with a variety of simple techniques.

Directions:

1. Read and understand material safety data sheet when using this product.
2. Apply manually with a spray bottle, garden sprayer, airless sprayer or fogger. DuraShield can be applied to any surface compatible with water such as floors, ceilings, walls, upholstery, rugs, carpets duct-board, fiberglass HVAC systems, air purification equipment and air filters.
3. If spraying on any painted or dyed surface or materials, test for color fastness in a small inconspicuous area before using this product to insure satisfactory results.



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MATERIAL SAFETY DATA SHEET



800-442-4958 / 770-924-6147 fax
sales@twin-chemicals.com

PRODUCT

DuraShield

EMERGENCY TELEPHONE NUMBER

(800) 552-3787 (24 Hours) Certs

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME : DuraShield

CHEMICAL DESCRIPTION : Organosilane

COMPANY IDENTIFICATION : Twin-Chem., Inc.
6175 Hickory Flat Hwy. Suite 110-344
Canton, GA 30115
(800)442-4958 / (770)924-6147 fax

EMERGENCY TELEPHONE NUMBER : (800) 552-3787 (24 Hours) Certs

2. COMPOSITION/INFORMATION ON INGREDIENTS

Our hazard evaluation has identified the following chemical substance(s) as hazardous. Consult Section 15 for the nature of the hazard(s).

| Hazardous Substance(s) | CAS NO. | % Weight | TWA | STEL |
|---|------------|----------|--------|--------|
| 3-(Trimethoxysilyl)propyldimethyloctadecyl ammonim chloride | 27668-52-6 | 5% | N/A | N/A |
| Methanol (methyl alcohol) | 67-56-1 | <1.5% | 200ppm | 250ppm |
| Chloropropyltrimethoxysilane | 2530-87-2 | <3% | 0.1ppm | N/A |

The above information is not intended for use in preparing product specifications.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

Warning:

CAUSES SUBSTANTIAL BUT TEMPORARY EYE INJURY. HARMFUL IF ABSORBED THROUGH SKIN OR INHALED.

Do not get in eyes or on clothing. Avoid contact with skin or clothing, and avoid breathing vapor. Wear protective eyewear (goggles or face shield). Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash clothing before use.

PRIMARY ROUTES OF ENTRY :
Inhalation, skin contact, ingestion, and eye contact

POTENTIAL HEALTH EFFECTS :

EYES:
Direct contact will cause substantial but temporary eye injury.

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SKIN:

May cause slight irritation.

INGESTION :

Harmful if swallowed.

INHALATION :

Harmful if inhaled for long periods.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: Not known

CARGINOGENS:

OSHA: NO ACGIH: NO NTP: NO IARC: NO

SECTION 3 NOTES: None

The above listed potential effects of overexposure are based on actual data, results of studies performed upon similar compositions, component data, and/or expert review of the product.

4. FIRST AID MEASURES

EYES: Hold eye open and flush with a steady, gentle stream of water for 15-20 minutes. If present remove contact lenses after the first 5 minutes, then continue rinsing. Call a poison control center or doctor for treatment advice.

SKIN: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

INGESTION: Call a poison control center or doctor immediately for treatment advice. Have the 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. Have a copy of this MSDS available for the attending physician or hospital.

INHALATION: Move person to fresh air. If not breathing, give artificial respiration. Seek medical attention.

SECTION 4 NOTES: Treat the same as methyl alcohol poisoning.

5. FIRE FIGHTING MEASURES

FLAMMALBE LIMITS IN AIR :

UPPER: N/A

LOWER: N/A

FLASH POINT:

None

EXTINGUISHING MEDIA:

N/A

SPECIAL FIRE FIGHTING PROCEDURES:

N/A

UNUSUAL FIRE AND EXPOLSION HAZARDS:

N/A

HAZARDOUS DECOMPOSITION PRODUCTS:

N/A

SECTION 5 NOTES: None

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6. ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES :

Steps to be taken if material is released or spilled: Do not contaminate water, food, or fed by material. Disposal of collected product, residues, and clean-up materials may be governmentally regulated. Observe all applicable local, state, and federal waste management regulations. Mop, wipe, or soak up with absorbent and contain for salvage or disposal. Clean any remaining slippery surfaces by appropriate techniques, such as: several moppings or swabbings with appropriate solvents; washing with mild, caustic detergents or solutions, or high pressure steam for large areas. For non-silicones, use typical industrial cleaning materials. Observe any safety precautions applicable to the cleaning material being used. See applicable regulatory compliance information in section 15.

SECTION 6 NOTES: See Section 8 fo Personal Protective Equipment for Spills.

7. HANDLING AND STORAGE

HANDLING : Wear appropriate personal protective eqipment. (See Section 8)

STORAGE: Store in orginal closed container in a secure area inaccessible to children and away from food or feed.

OTHER PRECUATIONS: Do not freeze product

SECTION 7 NOTES: None

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Local exhaust and General exhaust recommended.

RESPIRATORY PROTECTION: Use respiratory protection unless adequate local exhaust ventilation is provided or air sampling data shows exposures are within recommended exposure guidelines. Industrial Hygiene Personnel can asist in judging the adequacy of exsiting engineering controls. A suitable respirator would be a self-contained breathing apparatus (SCBA) or other supplied respirator.

EYE PROTECTION: Wear protective eyewear (goggles, face shield, or safety glasses with side shields.)

SKIN PROTECTION: Chemical protective gloves are recommended. (suitable gloves: SilverShield®, 4H®, Viton®)

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE Pale yellow, slightly viscous liquid at 25°C

APPEARANCE Liquid

ODOR Odorless or slight alcohol

SPECIFIC GRAVITY (@68°F/20°C): 1.0g/ml

SOLUBILITY IN WATER Complete

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| | |
|------------------|-------------------------|
| pH | 5 |
| FREEZING POINT | Not available |
| BOILING POINT | Not available |
| MELTING POINT | Not available |
| VAPOR PRESSURE | Not available |
| VISCOSITY | (@ 68°F/20°C): 393 mPas |
| VOLATILE CONTENT | (>0.1 mm Hg): <10% |

SECTION 9 NOTES: None

10. STABILITY AND REACTIVITY

STABILITY: Under normal conditions this material is stable

HAZARDOUS POLYMERIZATION : Hazardous polymerization will not occur.

CONDITIONS TO AVOID : None

INCOMPATIBLE MATERIALS TO AVOID : Acids, alkalis, strong oxidizing agents, and anionic surfactants

SECTION 10 NOTES: Water, moisture, or air can cause hazardous vapors to form.

11. TOXICOLOGICAL INFORMATION

The following results are for the product.

ROUTES OF ENTRY: Inhalation, Skin Contact, Ingestion, Eye Contact

TOXICITY: Eye Irritation: Mildly irritating to eyes (Rabbit)

SECTION 11 NOTES: None

12. ECOLOGICAL INFORMATION

ECOTOXICOLOGICAL EFFECTS : 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 requirements of the National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product into sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or regional office of the EPA.

SECTION 12 NOTES: None

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13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Do not contaminate water, food, or feed by storage and disposal. If these wastes cannot be disposed of by use according to the label instructions, contact your State Pesticide or Environmental Control Agency of the Hazardous Waste Representative at the nearest EPA regional office for guidance.

SECTION 13 NOTES: Contaminated products/soil/water may be RCRA/OSHA hazardous waste. Inactivation of solutions containing MicroRid DuraShield may be accomplished by addition of an anionic surfactant or detergent in quantity equivalent to that of MicroRid DuraShield solution. Container disposal: (plastic) Triple rinse (or equivalent), then offer for recycling or reconditioning, puncture and dispose of in a sanitary landfill, incineration, or by burning (if allowed by the state and local authorities). If burned, stay out of smoke.

14. TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION: Not regulated

SECTION 14 NOTES: None

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS:

TSCA (Toxic Substances Control Act) Status: All components of this product are listed on the TSCA inventory of chemical substances.

CERCLA (COMPREHENSIVE RESPONSE COMPENSATION, AND LIABILITY ACT):

Methanol: 5000.00 LB RQ

SARA 302 COMPONENTS – 40 CFR 355 APPENDIX A: None

311/312 HAZARD CATEGORIES:

Acute: No

Chronic: No

Fire: No

Pressure: No

Reactive: No

313 REPORTABLE INGREDIENTS: Methanol

STATE REGULATIONS:

California

Warning: This product contains the following chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause cancer.

None

Warning: This product contains the following chemical(s) listed by the State of California under the Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65) as being known to cause birth defects or other reproductive harm.

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None

Massachusetts
Methanol

New Jersey
3-(Trimethoxysilyl)propyldimethyloctadecyl ammonium chloride
Methanol; #1222
Chloropropyl trimethozysilane

Pennsylvania
3-(Trimethoxysilyl)propyldimethyloctadecyl ammonium chloride
Methanol; #1222
Chloropropyl trimethozysilane

INTERNATIONAL REGULATIONS: European Inventory of Existing Commercial Chemical EINECS registry number for 3-(trimethoxysilyl)propyldimethyloctadecyl ammonium chloride is 248-595-8. (EINECS No. 248-595-8)

SECTION 15 NOTES: None

16. OTHER INFORMATION

PREPARATION INFORMATION: Prepared by Twin-Chem., Inc.

DISCLAIMER: This information is offered in good faith as typical values and not as a product specification. No warranty, expressed or implied is hereby made. The recommended industrial hygiene and safe handling procedures are believed to be generally applicable. However, each user should review these recommendations in the specific context of the intended use and determine whether they are appropriate.

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