

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Mycoshield®
EPA Reg. No.: 55146-97
Synonyms: Oxytetracycline Calcium Complex; 2-Naphthacenecarboxamide, 4-(dimethylamino)-1,4,4A,5,5A,6,11,12A-octahydro-3,5,6,10,12,12A-hexahydroxy-6-methyl-1,11-dioxo, [4S-(4.alpha, 4A.alpha, 5.alpha, 5A.alpha, 6.beta, 12A.alpha.)] -, calcium complex
Product Type: Bactericide
Company Name: Nufarm Americas Inc. AGT Division
 150 Harvester Drive, Suite 200
 Burr Ridge, IL 60527
Telephone Numbers: For Chemical Emergency, Spill, Leak, Fire, Exposure, or Accident, Call CHEMTREC Day or Night: 1-800-424-9300
 For Medical Emergencies Only, Call 1-877-325-1840
Date of Issue: August 20, 2012 **Supersedes:** May 17, 2012
Sections Revised: 2, 7, 8

2. HAZARDS IDENTIFICATION

Emergency Overview:

Appearance and Odor: Light to dark brown fine powder.

Warning Statements: Keep out of reach of children. WARNING. Causes substantial but temporary eye injury. Harmful if absorbed through skin. Do not get in eyes, on skin, or on clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Do not breathe dust or spray mist.

Potential Health Effects:

Likely Routes of Exposure: Inhalation, eye and skin contact.

Eye Contact: Causes substantial but temporary eye injury.

Skin Contact: Slightly toxic and non-irritating based on toxicity studies. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

Ingestion: Slightly toxic based on toxicity studies.

Inhalation: Low inhalation toxicity.

Medical Conditions Aggravated by Exposure: Individuals with allergic (including antibiotics) history or pre-existing dermatitis should use extra care in handling this product.

See Section 11: TOXICOLOGICAL INFORMATION for more information.

Potential Environmental Effects:

Oxytetracycline Calcium is practically non-toxic to fish, invertebrates, birds and bees.

See Section 12: ECOLOGICAL INFORMATION for more information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS NO.	% BY WEIGHT
Oxytetracycline Calcium Complex	7179-50-2	31.5
Other Ingredients Including:		68.5
Diluent (contains)		
Crystalline silica as quartz	14808-60-7	
Kaolin Clay	1332-58-7	
Mica	12001-26-2	

4. FIRST AID MEASURES

If in Eyes: Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

If on Skin or Clothing: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15 to 20 minutes. Call a poison control center or doctor for treatment advice.

If Inhaled: Move person to fresh air. If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. Call a poison control center or doctor for further treatment advice.

If Swallowed: 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 the poison control center or doctor. Do not give anything by mouth to an unconscious person.

5. FIRE FIGHTING MEASURES

Flash Point: Not applicable

Autoignition Temperature: Not determined

Flammability Limits: Not determined

Extinguishing Media: Dry chemical, foam or carbon dioxide.

Special Fire Fighting Procedures: Firefighters should wear NIOSH/MSHA approved self-contained breathing apparatus and full fire-fighting turn out gear. Dike area to prevent runoff and contamination of water sources. Dispose of fire control water later.

Unusual Fire and Explosion Hazards: If water is used to fight fire, contain runoff, using dikes to prevent contamination of water supplies. Dispose of fire control water later.

Hazardous Decomposition Materials (Under Fire Conditions): Irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

National Fire Protection Association (NFPA) Hazard Rating:

Rating for this product: Health: 2 Flammability: 1 Reactivity: 0

Hazards Scale: 0 = Minimal 1 = Slight 2 = Moderate 3 = Serious 4 = Severe

6. ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear appropriate protective gear for the situation. See Personal Protection information in Section 8.

Environmental Precautions: Prevent material from entering public sewer systems or any waterways. Do not flush to drain. Large spills to soil or similar surfaces may necessitate removal of topsoil. The affected area should be removed and placed in an appropriate container for disposal.

Methods for Containment: Dike spill using absorbent or impervious materials such as earth, sand or clay. Collect and contain contaminated absorbent and dike material for disposal.

Methods for Cleanup and Disposal: If dry, sweep or scoop up material and place into container for disposal. If wet, pump any free liquid into an appropriate closed container. Collect washings for disposal. Decontaminate tools and equipment following cleanup. See Section 13: DISPOSAL CONSIDERATIONS for more information.

Other Information: Large spills may be reportable to the National Response Center (800-424-8802) and to state and/or local agencies.

7. HANDLING AND STORAGE**Handling:**

Do not get in eyes, on skin, or on clothing. Do not breathe dust or spray mist. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing/Personal Protective

Equipment (PPE) immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

Storage:

Store in a cool, dry area under lock and key. Post as a pesticide storage area. Always store pesticides in the original container. Store away from food, pet food, feed, seed, fertilizers, and veterinary supplies. Do not contaminate water, food, or feed by storage or disposal.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls:

Where engineering controls are indicated by specific use conditions or a potential for excessive exposure, use local exhaust ventilation at the point of generation.

Personal Protective Equipment:

Eye/Face Protection: To avoid contact with eyes, wear face shield, goggles or safety glasses with front, brow and temple protection. An emergency eyewash or water supply should be readily accessible to the work area.

Skin Protection: To avoid contact with skin, wear long pants, long-sleeved shirt, shoes plus socks, and chemical-resistant gloves made of waterproof material. An emergency shower or water supply should be readily accessible to the work area.

Respiratory Protection: Dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C) or a NIOSH approved respirator with any N, R, P or HE filter.

General Hygiene Considerations: Personal hygiene is an important work practice exposure control measure and the following general measures should be taken when working with or handling this material: 1) do not store, use and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored; 2) wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics or using the toilet.

Exposure Guidelines:

Component	OSHA		ACGIH		Unit
	TWA	STEL	TWA	STEL	
Oxytetracycline Calcium	NE	NE	NE	NE	
Crystalline silica as quartz	10 (R)	NE	0.025 (R)	NE	mg/m ³
Kaolin Clay	15 (T) 5 (R)	NE	2.0 (R)	NE	mg/m ³
Mica	20 mppcf (<1% crystalline silica)	NE	3.0 (R)	NE	mg/m ³

T = Total Dust
R = Respirable Fraction

NE = Not Established

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Light to dark brown fine powder.

Boiling Point:	Not applicable	Solubility in Water:	Slightly soluble
Density:	0.68 g/ml	Specific Gravity:	Not applicable
Evaporation Rate:	Not applicable	Vapor Density:	Not applicable
Freezing Point:	Not applicable	Vapor Pressure:	Not applicable
pH:	3.5 – 5.0	Viscosity:	Not applicable

Note: Physical data are typical values, but may vary from sample to sample. A typical value should not be construed as a guaranteed analysis or as a specification.

10. STABILITY AND REACTIVITY

Chemical Stability: This material is stable under normal handling and storage conditions.

Conditions to Avoid: Excessive heat and light.

Incompatible Materials: Strong acids and bases.

Hazardous Decomposition Products: Under fire conditions Irritating and possibly toxic gases may be generated by thermal decomposition or combustion.

Hazardous Reactions: Hazardous polymerization will not occur.

11. TOXICOLOGICAL INFORMATION

Toxicological Data:

Data from laboratory studies on this product are summarized below:

Oral: Rat LD₅₀: >5,000 mg/kg

Dermal: Rabbit LD₅₀: >2,000 mg/kg

Eye Irritation: Rabbit: Severely irritating

Skin Irritation: Rabbit: Non-Irritating

Skin Sensitization: Guinea Pigs: Mild sensitizer

Other Acute Effects: Oxytetracycline may cause severe allergic reactions (anaphylactic) in sensitive individuals.

Subchronic (Target Organ) Effects: For oxytetracycline, gastrointestinal irritation with nausea, epigastric pain and burning, vomiting, abdominal pain, transitory yellowish-brown discoloration of the tongue, anorexia and diarrhea have been reported following oral administration. Blood disorders (delay in coagulation) have also been reported. Possible hypersensitization and superinfections due to overgrowth of organisms not affected by the antibiotic agent. Three types of renal disease are associated with overexposure: Acute Non-Oliguric Renal Failure (individuals with pre-existing pancreatitis or fatty liver); Uremia (individuals with pre-existing impaired renal function) and Reversible Nephrotoxicity (due to outdated or degraded tetracyclines). Inhalation of excessive amounts of kaolin dust may produce coughing, sneezing and nasal irritation. Chronic exposure to mica may cause persistent cough, possible difficulty in breathing.

Carcinogenicity / Chronic Health Effects: Prolonged overexposure to oxytetracycline may cause effects to skin and digestive tract. Oxytetracycline did not cause cancer in laboratory animals. Long-term over-exposure to kaolin dust may affect the lungs. The diluent as a whole is not listed as a carcinogen. However, it does contain crystalline silica (e.g. quartz), a naturally occurring component. Inhalation of crystalline silica may cause pulmonary fibrosis (silicosis). Crystalline silica has been classified by IARC as carcinogenic to humans (Group 1), by the U.S. National Toxicology Program as a known human carcinogen and by ACGIH as a suspected human carcinogen (A2).

Reproductive Toxicity: None observed.

Developmental Toxicity: Adverse effects were reported in mother (severe hepatic damage) and fetus (retardation of skeletal developmental, discoloration of teeth and enamel hypoplasia).

Genotoxicity: None observed.

Assessment Carcinogenicity:

This product contains substances that are considered to be probable or suspected human carcinogens as follows:

Component	Regulatory Agency Listing As Carcinogen			
	ACGIH	IARC	NTP	OSHA
Crystalline Silica, Quartz	A2	1	Known	No

See Section 2: HAZARDS IDENTIFICATION for more information.

12. ECOLOGICAL INFORMATION

Ecotoxicity:

Data on Oxytetracycline:

96-hour LC ₅₀ Bluegill:	> 100 ppm	Bobwhite Quail Acute Oral LC ₅₀ :	>2,000 mg/kg
96-hour LC ₅₀ Rainbow Trout:	>116 ppm	Bobwhite Quail 8-day Dietary LC ₅₀ :	>5,620 ppm
48-hour LC ₅₀ Daphnia:	>102 ppm	Mallard Duck 8-day Dietary LC ₅₀ :	>5,620 ppm
48-hour Honey Bee LD ₅₀ :	100 µg/bee		

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method:

Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Open dumping is prohibited.

Container Handling and Disposal:

PLASTIC CONTAINERS:

Nonrefillable Containers 50 lbs or Less: Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 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. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

Nonrefillable Containers larger than 50 lbs: Nonrefillable container. Do not reuse or refill this container. **Triple rinse as follows:** Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 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. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or by other procedures approved by State and local authorities. Plastic containers are also disposable by incineration, or, if allowed by State and local authorities, by burning. If burned stay out of smoke.

PAPER BAGS: Nonrefillable container. Do not reuse or refill this container. Completely empty bag into application equipment. Then offer for recycling, if available, or dispose of empty bag in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

FIBER DRUMS WITH LINERS: Nonrefillable container. Do not reuse or refill this container. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application equipment. Then offer for recycling, if available, or dispose of liner in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke. If drum is contaminated and cannot be reused, dispose of it in the manner required for its liner.

14. TRANSPORTATION INFORMATION

Follow the precautions indicated in Section 7: HANDLING AND STORAGE of this MSDS.

DOT

Non Regulated – See 49 CFR 173.132(b)(3)

IMDG

Non Regulated – See IMDG 2.6.2.1.3

IATA

Non Regulated – See IATA 3.6.1.5.3

15. REGULATORY INFORMATION**U.S. Federal Regulations:****TSCA Inventory:** This product is exempted from TSCA because it is solely for FIFRA regulated use.**SARA Hazard Notification/Reporting:****Hazard Categories Under Criteria of SARA Title III Rules (40 CFR Part 370):** Immediate, Delayed**Section 313 Toxic Chemical(s):** None**Reportable Quantity (RQ) under U.S. CERCLA:** None**RCRA Waste Code:** None**State Information:**

Other state regulations may apply. Check individual state requirements.

California Proposition 65: WARNING. This product contains chemicals known to the State of California to cause cancer or birth defects or other reproductive harm.**16. OTHER INFORMATION**

This Material Safety Data Sheet (MSDS) serves different purposes than and DOES NOT REPLACE OR MODIFY THE EPA-ACCEPTED PRODUCT LABELING (attached to and accompanying the product container). This MSDS provides important health, safety and environmental information for employers, employees, emergency responders and others handling large quantities of the product in activities generally other than product use, while the labeling provides that information specifically for product use in the ordinary course.

Use, storage and disposal of pesticide products are regulated by the EPA under the authority of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) through the product labeling, and all necessary and appropriate precautionary, use, storage, and disposal information is set forth on that labeling. It is a violation of Federal law to use a pesticide product in any manner not prescribed on the EPA-accepted label.

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