

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Agri-Mycin® 17 Agricultural Streptomycin**
Synonyms: Streptomycin Sulfate; O-2-deoxy-2-methylamino-alpha-L-glucopyranosyl-(1->2)-O-5-deoxy-3-C-formyl-alpha-L-lyxofuranosyl-(1->4)-N3, N3-diamidino-D-streptamine-sulfate (2:3)
EPA Reg. No.: 55146-96
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: May 3, 2012 **Supersedes:** March 28, 2007
Sections Revised: 2, 4, 7, 8, 13, 14

2. HAZARDS IDENTIFICATION**Emergency Overview:**

Appearance and Odor: Tan colored powder with a fermentation-like odor.

Warning Statements: Keep out of reach of children. CAUTION. Harmful if absorbed through skin. Causes moderate eye irritation. Do not breathe dust or spray mist. Avoid contact with eyes, skin, or clothing. This material is not used for medical, veterinary or human purposes.

Potential Health Effects:

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

Eye Contact: Causes moderate eye irritation. May cause pain, redness and tearing.

Skin Contact: Slightly toxic and slightly irritating based on toxicity studies. A skin sensitization (allergic) reaction may occur in some individuals.

Ingestion: Slightly toxic based on toxicity studies. May cause digestive tract irritation.

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. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

See Section 11: TOXICOLOGICAL INFORMATION for more information.

Potential Environmental Effects:

Streptomycin is practically non-toxic to birds, freshwater invertebrates and honeybees and slightly toxic to fish.

See Section 12: ECOLOGICAL INFORMATION for more information.

3. COMPOSITION / INFORMATION ON INGREDIENTS

COMPONENT	CAS NO.	% BY WEIGHT
Streptomycin Sulfate	3810-74-0	22.4
Other Ingredients Including:		77.6
Diluent (contains)		
Crystalline silica as quartz	14808-60-7	
Kaolin Clay	1332-58-7	
Mica	12001-26-2	

4. FIRST AID MEASURES

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 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 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.

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.

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: 1 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 breathe dust or spray mist. Avoid contact with eyes, skin, or clothing. Users should wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing. Remove Personal Protective

Equipment (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:

Keep tightly closed. Store at a cool temperature when possible, and with minimum exposure to the atmosphere. 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 chemical goggles or shielded safety glasses. 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, socks, shoes 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	
Streptomycin Sulfate	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 mg/m ³ (R)	NE	

T = Total Dust

R = Respirable Fraction

NE = Not Established

9. PHYSICAL AND CHEMICAL PROPERTIES
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Appearance and Odor: Tan colored powder with a fermentation-like odor.

Boiling Point: Not applicable

Density: 1.00 g/ml

Evaporation Rate: Not applicable

Freezing Point: Not applicable

pH: 4.67 @ 25°C

Solubility in Water: Soluble

Specific Gravity: Not applicable

Vapor Density: Not applicable

Vapor Pressure: Not applicable

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: Moisture. Use airtight containers to protect from moisture.

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

Inhalation: Rat 4-hr LC₅₀: >2.72 mg/l

Eye Irritation: Rabbit: Mildly irritating

Skin Irritation: Rabbit: Slightly irritating

Skin Sensitization: Not a contact sensitizer in guinea pigs following repeated skin exposure.

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

Subchronic (Target Organ) Effects: Clinical studies reported kidney damage and ear damage manifested by nausea, vomiting, dizziness, numbness/tingling of face. 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 streptomycin may cause effects to kidneys, ears and skin. Streptomycin did not cause cancer in laboratory animals. Long-term overexposure 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: Streptomycin may cause auditory nerve damage in the developing fetus.

Developmental Toxicity: None observed.

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 Streptomycin:

96-hour LC₅₀ Bluegill: > 180 ppm

96-hour LC₅₀ Rainbow Trout: >180 ppm

Bobwhite Quail Acute Oral LC₅₀: >2,000 mg/kg

Bobwhite Quail 8-day Dietary LC₅₀: >5,620 ppm

Mallard Duck 8-day Dietary LC₅₀: 4,640 ppm

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.

Container Handling and Disposal:

Nonrefillable bags of granular or dry formulation: 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. Do not burn unless allowed by state and local ordinance. If burned, stay out of smoke.

Nonrefillable Containers 5 gallons 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. Do not burn unless allowed by state and local ordinance. If burned, stay out of smoke.

Nonrefillable containers larger than 5 Gallons: 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. Do not burn unless allowed by state and local ordinance. If burned, stay out of smoke.

14. TRANSPORTATION INFORMATION

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

DOT

Non Regulated

IMDG

Non Regulated

IATA

Non Regulated

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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