FireWall™

17 WP

Fungicide/Bactericide

This document has been prepared to meet the requirements of U.S. OSHA Hazard Communication Standard, 29, CFR 1910.1200.
The information contained herein is for the concentrate as packaged unless otherwise indicated.

MATERIAL SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

TRADE NAME: FireWall™ 17 WP fungicide/bactericide
PRODUCT NUMBER: 1004
EPA REGISTRATION NUMBER: 80990-4
ACTIVE INGREDIENT: Streptomycin Sulfate
CAS NUMBER: 3810-74-0
CHEMICAL NAME: *O*-2-deoxy-2-methylamino-alpha-L-glucopyranosyl-(1->2)-*O*-5-deoxy-3-C-formyl-alpha-L-lyxofuranosyl-(1->4)-N^3,N^3-diamidino-D-streptamine-sulfate (2:3)
ANSI COMMON NAME: Streptomycin
MOLECULAR FORMULA: $C_{42}H_{84}N_{14}O_{36}S_3$ (streptomycin sulfate)
CHEMICAL CLASSIFICATION: Antibiotic
USE: Control of bacterial diseases on agricultural crops and ornamental plants.
MANUFACTURER:
AgroSource, Inc.
P.O. Box 1341
Mountainside, New Jersey 07092-0341
U.S. A.
General Information:(908) 931-9001

EMERGENCY TELEPHONE NUMBERS:
IN CASE OF EMERGENCY CALL INFO TRAC
(800) 535-5053 or (352) 323-3500

SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS

Component	%w/w	CAS Number	OSHA PEL**	ACGIH TLV**
Streptomycin (Sulfate)	17	3810-74-0	Not Established	Not Established
Quartz		14808-60-7	0.1 mg/cu m Respirable Dust	0.1 mg/cu m Respirable Dust
Inert Ingredient		Not Available	3 mg/cu m Respirable Dust	3 mg/cu m Respirable Dust
Inert Ingredient		Not Available	10 mg/cu m Total Dust 5 mg/cu m Respirable Dust	10 mg/cu m Total Dust 5 mg/cu m Respirable Dust

Unidentified inert ingredients are proprietary and/or non-hazardous.
** Permissible Exposure Limits (PEL) & Threshold Limit Value (TLV) are 8-hour time weighted average (TWA).

SECTION 3 - HAZARD IDENTIFICATION

EMERGENCY OVERVIEW

IMMEDIATE CONCERNS:

- Free flowing light gray to tan powder
- Thermal decomposition and burning may form toxic by-products
- For large exposures or fires, wear personal protective equipment

POTENTIAL HEALTH EFFECTS: Effects from over exposure may result from either swallowing, inhaling or coming into contact with skin or eyes. Symptoms of streptomycin sulfate exposure include nausea, vomiting, dizziness/tingling of the face. Exposure may cause allergic reaction and anaphylaxis to occur in sensitive individuals. Eye contact may cause eye irritation. Streptomycin sulfate may cause sensitization. As with other antibiotics, it has the potential to change the micro flora of the intestine and allow overgrowth of non-susceptible organisms. Streptomycin sulfate can cause kidney damage and loss of hearing. Ear damage may manifest itself with symptoms of nausea, vomiting and vertigo. Streptomycin sulfate can cross the placental barrier and could cause hearing damage in the fetus.

MEDICAL CONDITIONS AGGRAVATED: Excessive exposure to any dust may aggravate pre-existing respiratory conditions. May cause allergic reaction and anaphylaxis to occur in individuals with allergic history.

SECTION 4 - FIRST AID MEASURES

EYE CONTACT: If in eyes, hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.

SKIN CONTACT: If on skin or clothing, take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes.

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

INGESTION: If swallowed, 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.

NOTES TO PHYSICIAN: In case of significant overexposure by accidental ingestion, monitor serum aminoglycoside concentration. Monitor renal and eighth cranial nerve function carefully. Obtain baseline serum creatinine and BUN in all cases of suspected toxicity. Be alert for possible intestinal obstruction.

SECTION 5 - FIREFIGHTING MEASURES

EXTINGUISHING MEDIA: Water, CO_2, dry chemical

FIRE FIGHTING PROCEDURES: Wear full protective equipment including self-contained breathing apparatus. Evacuate non-essential personnel. If water is used to fight a fire, build a dike and collect the runoff. Do not use contaminated buildings and equipment until decontaminated.

FIRE AND EXPLOSION HAZARDS: None known. As with all dry powders, it is advisable to ground material equipment in contact with dry material to dissipate the potential buildup of static electricity.

FLASH POINT: Not Applicable

AUTO IGNITION TEMPERATURE: Not Available

FLAMMABILITY: Not Available; Limits - Not Applicable

HAZARDOUS DECOMPOSITION PRODUCTS ASSOCIATED WITH FIRE: Irritating and possibly toxic oxides of nitrogen, carbon and sulfur.

SECTION 6 - ACCIDENTAL RELEASE

SPILL AND DISPOSAL PROCEDURES: Control the spill at its source and prevent it from spreading, contaminating soil, or entering sewage or drainage systems or bodies of water. Clean up spills immediately and use suitable protective equipment (Section 8). Keep unnecessary persons away. If emergency response personnel are unavailable or unwarranted, clean up a solid spill by carefully sweeping up the material (avoid creating dust) and using a proper tool to place it into an appropriate disposal container. If liquid, cover the spill with an absorbing material and follow the same procedure used for a solid spill. Scrub the area with a hard water detergent. Pick up liquid with absorbent material and follow the same procedure used for a solid spill. Dispose of or treat all spill residues according to applicable local, state and federal regulations (Section 13). Use suitable protective equipment (Section 8). Follow fire prevention procedures (Section 5).

SECTION 7 - HANDLING AND STORAGE

ENGINEERING CONTROLS: Local exhaust ventilation sufficient to control dust is recommended.

HANDLING PROCEDURES AND EQUIPMENT: Avoid generating dust. Use respiratory protection in the absence of adequate ventilation controls (Section 8). Wash skin thoroughly after shift exposure. Keep containers closed when not in use. Clean up spills promptly (Section 6).

HANDLING AND STORAGE: Store in a cool, dry place and protect from moisture. Avoid contact with skin or eyes. Do not breathe dust or spray. Do not ingest. Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet. Do not store food, beverages or tobacco products in the storage area. Protect containers from damage. Use entire contents of packages, do not store open packages. Keep out of reach of children and domestic animals. For agricultural crop and ornamental plant use only.

SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION

NOTE: The following recommendations are for manufacturing, formulating or packaging the product. See the product label for commercial application procedures.

INHALATION: Use MSHA/NIOSH approved dust/mist respirator with any R, P, or HE filter. Do not breathe dust or spray.

SKIN CONTACT: Wear chemical resistant (e. g. nitrile or butyl) gloves, coveralls, socks and chemical resistant footwear. For overhead exposure, wear chemical resistant headgear.

EYE CONTACT: Safety glasses required. Use chemical splash goggles if potential exists for direct exposure to dust, splashes or sprays. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower.

INGESTION: Prevent eating, drinking, tobacco usage and cosmetic application in areas where there is potential for exposure. Wash thoroughly with soap and water after handling.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Free flowing, light gray to tan powder

ODOR: Odorless or a slight fermentation-like odor

MOLECULAR WEIGHT: 1457.3 (streptomycin sulfate)

SOLUBILITY IN WATER: Streptomycin sulfate is soluble in water (>20g/l).

PH: 6.3 +/- 0.8

VOLATILE COMPONENTS (% w/w): < 8% (water)

DENSITY (lb./cu ft): 41.2 loose, 56.2 compacted

BOILING POINT (degrees C/degrees F): Not applicable

FREEZING POINT (degrees C/degrees F): Not applicable

MELTING RANGE (degrees C/degrees F): Not available

VAPOR PRESSURE (mm Hg @ degrees C/degrees F): Not applicable

SECTION 10 - STABILITY AND REACTIVITY

STABILITY: Stable under normal storage and use conditions. Hygroscopic; moisture can cause decomposition.

HAZARDOUS POLYMERIZATION: Should not occur.

HAZARDOUS DECOMPOSITION: High temperatures can cause decomposition to potentially toxic gases.

INCOMPATIBILITIES: Unstable in strong acids and alkalis.

STORAGE CONDITIONS: Hygroscopic, protect from moisture using airtight containers.

SECTION 11 - TOXICOLOGICAL INFORMATION

FIREWALL™ 17 WP:

Ingestion: Practically Non-Toxic. Oral LD_{50} (Rat) 9,000 mg/kg

Dermal: Slightly Toxic. Dermal LD_{50} (Rat) >2,000 mg/kg

Inhalation: Slightly Toxic. Inhalation LC_{50} (Rat) >2.72 mg/l air –4 hours

Eye Contact: Mildly Irritating (Rabbit)

Skin Contact: Slightly Irritating (Rabbit)

Dermal Sensitization: No evidence of sensitization was observed (Guinea Pig). See Section 3.

STREPTOMYCIN SULFATE:

Neurotoxicity: Streptomycin sulfate neurotoxic and ototoxic.

Reproductive Effects: Streptomycin sulfate auditory nerve damage in developing fetus.

Chronic/Subchronic Toxicity: Severe allergic reactions (anaphylactic) can occur. Clinical studies reported kidney and ear damage manifested by nausea, vomiting, dizziness, numbness/tingling of the face.

Carcinogenicity: Streptomycin sulfate not listed as a carcinogen by NTP, IARC, OSHA & ACGIH

Note: Crystalline silica (quartz and cristobalite); inhalation of high dust levels can cause pneumoconiosis, silicosis or pulmonary fibrosis. Listed by IARC as a Group 2A carcinogen (lung) based on limited evidence in humans and sufficient data in animals. Listed by the NTP as a substance reasonably anticipated to be a carcinogen.

Target Organs: Streptomycin sulfate - kidney, ear, skin; Inert ingredients - respiratory system

SECTION 12 - ECOLOGICAL INFORMATION

ENVIRONMENTAL FATE: Not available.

OTHER: This product is a pesticide. Avoid contact of spilled materials and runoff with soil and surface waterways.

SECTION 13 - DISPOSAL CONSIDERATION

DISPOSAL: Do not reuse product containers. Dispose of product containers, waste containers and residues according to local, state and federal health and environmental regulations.

Characteristic Waste: Not Applicable

Listed Waste: Not Applicable

SECTION 14 - TRANSPORT INFORMATION

U.S. DOT (Department of Transportation) CLASSIFICATION: Not regulated by DOT

SHIPPING FREIGHT DESCRIPTION: Insecticides or Fungicides, Agricultural, N. O. S.

ICAO/IATA CLASSIFICATION: Not available.

IMDG CLASSIFICATION: Not available.

SECTION 15 - REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT (TSCA): Streptomycin is listed in the TSCA inventory but is exempt. Subject to FIFRA.

RCRA HAZARDOUS WASTE CLASSIFICATION (40 CFR 261): Not Applicable.

CERCLA/SARA 302 REPORTABLE QUANTITY (RQ): None

EPCRA SARA Title III Classification:

Section 311/312: Acute Health Hazard & Chronic Health Hazard;
Section 313: Toxic Chemicals- Not Applicable.

SECTION 16 - OTHER INFORMATION

NFPA HAZARD RATINGS: Health 1, Flammability 1, Instability 0 (0-Minimal, 1-Slight, 2-Moderate, 3-Serious, 4-Extreme)

HMIS HAZARD RATINGS: Health 1, Flammability 1, Reactivity 0 (0-Minimal, 1-Slight, 2-Moderate, 3-Serious, 4- Severe)

IMPORTANT: While the descriptions, data and information contained in the Material Safety Data Sheet are presented in good faith and are believed to be accurate as of the date indicated, AgroSource, Inc. makes no warranty with respect hereto and disclaims all liability from reliance thereon. The Material Safety Data Sheet is provided for guidance only. Many factors may affect the product during processing, application or use. Therefore, it is recommended that packagers, handlers and users test to determine suitability under their specific conditions.

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