

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME(S): Bac-Master™

GENERAL USE: Antibiotic for Agricultural Control of Bacterial Diseases in Plants

PRODUCT DESCRIPTION: Tan powder with a fermentation-like odor

EPA Registration Number: 55146-80-5481

MSDS No.: 306_2

Date This Revision: 17 April, 2007

MANUFACTURER:

AMVAC CHEMICAL CORPORATION

4100 E. Washington Blvd.

Los Angeles, CA 90023-4406

Ph: 323-264-3910

FAX: 323-268-1028

EMERGENCY TELEPHONE NUMBERS:

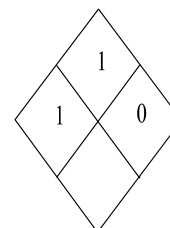
MANUFACTURER: 323-264-3910

TRANSPORTATION (24 HOURS)

CHEMTREC: 800-424-9300

OTHER (24 HOURS)

AMVAC: 323-264-3910



2. COMPOSITION/INFORMATION ON INGREDIENTS

COMPONENT	WT%	CAS No.
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)]	21.3%	3810-74-0
Inert Ingredients Includes traces of crystalline silica (quartz)	78.7%	N/A

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)

COMPONENT	HAZARD	OSHA PEL*	ACGIH TLV*
Streptomycin sulfate	Antibiotic	Not established	Not established
Diluent	Irritant, possible carcinogen	15 mg/m ³ (total dust); 5 mg/m ³ (respirable dust)	3 mg/m ³ (respirable dust)
Crystalline Silica	Irritant, carcinogen	0.1 mg/m ³ (respirable dust)	0.05 mg/m ³ (respirable silica)

* Exposure Limits 8 hrs. TWA

Bac-Master is a trademark of AMVAC Chemical Corporation, USA

3. **HAZARDS IDENTIFICATION**

EMERGENCY OVERVIEW:

CAUTION! Potential Dust Hazard! Harmful if absorbed through skin. Causes moderate eye irritation. Avoid contact with skin, eyes or clothing. May cause allergic skin reactions. Do not breathe dust or spray mist.

KEEP OUT OF REACH OF CHILDREN!

May be toxic to aquatic plants. Do not contaminate water bodies with this product.

POTENTIAL HEALTH EFFECTS

ROUTE(S) OF ENTRY: Contact with the skin, eyes and inhalation of vapors or spray mist are most likely routes of entry.

SIGNS OF ACUTE OVEREXPOSURE: Exposure may cause skin or eye irritation. A skin sensitization (allergic) reaction may occur in some individuals. Antibiotics have the potential to significantly change the microflora of the intestine and allow overgrowth of nonsusceptible organisms.

SIGNS OF CHRONIC OVEREXPOSURE: Same as acute.

MEDICAL CONDITIONS AGGRAVATED BY EXPOSURE: Preexisting skin diseases may be aggravated by exposure to this product.

4. **FIRST AID MEASURES**

EYES: Immediately flush the eyes with copious amounts of clear, cool running water for a minimum of 15 minutes. Hold the eyelids apart during the flushing to ensure rinsing of the entire surface of the eyes and lids with water. Contact a physician immediately. If there will be a delay in getting medical attention, rinse the eyes for at least another 15 minutes.

INHALATION: Remove victim to fresh air. If breathing has ceased, clear the victim's airway and start mouth-to-mouth artificial respiration. If breathing is difficult, give oxygen. Contact a physician immediately.

4. FIRST AID MEASURES, cont'd

INGESTION: Induce vomiting immediately by giving two glasses of water and giving Syrup of Ipecac according to directions on the bottle or by sticking finger down throat. Have the person sit up while vomiting to help prevent aspiration of the vomitus. Never give anything by mouth to an unconscious or convulsing person. Contact a physician immediately.

SKIN: Immediately flush all affected areas with large amounts of clear water for at least 15 minutes. Remove contaminated clothing. Do not attempt to neutralize with chemical agents. Wash clothing before reuse. If the clothing, including shoes, cannot be decontaminated, dispose of it as a hazardous waste. Contact a physician immediately.

NOTE TO PHYSICIANS: There is no specific antidote if this product is ingested. Be alert for possible intestinal obstruction. Treat symptomatically. An aqueous suspension of activated charcoal can be administered to absorb remaining toxicant. Monitor serum aminoglycoside concentration, renal and eighth cranial nerve function carefully. Obtain baseline serum creatinine and BUN. Observe for anaphylactic type reaction. Maintain good urine output (3 to 6 mL/kg/hr) with IV fluids. Hemodialysis or peritoneal dialysis should be considered in the presence of renal failure.

5. FIRE FIGHTING MEASURES

FLAMMABLE PROPERTIES

Flash Point:	Not applicable
Autoignition Temperature:	Not available
Flammable Limits:	
Lower flammable limit:	Not applicable
Upper flammable limit:	Not applicable
Flammability:	This product will burn only in the presence of direct flame (NFPA rating = 1)

EXPLOSIVITY

Mechanical Impact:	Not explosive
Static Discharge:	Has not been tested

HAZARDOUS COMBUSTION PRODUCTS: During a fire, irritating and possibly toxic gases may be generated by thermal decomposition or combustion. Contact with the fumes and vapors should be avoided by staying upwind and by wearing impervious clothing and positive pressure self-contained breathing apparatus.

EXTINGUISHING MEDIA: Foam, dry chemical, carbon dioxide, water spray (fog).

5. FIRE FIGHTING MEASURES, cont'd

FIRE FIGHTING INSTRUCTIONS: Evacuate nonessential personnel from the area. Keep upwind. Wear self-contained breathing apparatus and impervious clothing, including gloves and eye protection. Clean all clothing before reuse. Severely contaminated clothing cannot be adequately decontaminated, and must be disposed as a hazardous waste. Shower with soap and water after contact with this product.

6. ACCIDENTAL RELEASE MEASURES

GENERAL: Evacuate personnel and thoroughly ventilate the area. Due to the presence of a fine dust, this material can be an inhalation hazard, as well as a skin and eye hazard. Use adequate ventilation and appropriate personal protective equipment(See Section 8). Keep bystanders upwind and away from the spill.

SMALL SPILL: Cover with absorbent (clay, sawdust, straw, kitty litter, etc.) to prevent dust clouds when sweeping or vacuuming. Sweep into an open drum or vacuum. Decontaminate the area and equipment with dilute alkali or ammonia (less than 5% solution) and detergent. Flush the area with water. Absorb and sweep or vacuum into the same open drum. Close the drum and dispose of material as a hazardous waste.

LARGE SPILL: Dike the spill to prevent contamination of local water sources. Sweep or vacuum the solids into the original container or into a drum. Take care not to create dust clouds of toxic material. Clean the area as described for a small spill.

7. HANDLING AND STORAGE

HANDLING: Wear appropriate personal protective equipment (PPE, Section 8). Prevent skin contact. Do not breathe fumes or dust. Wash thoroughly and change clothes after handling. Keep product away from food, drink, cosmetics, and tobacco products. See product label or contact your local or national agricultural regulatory department for more detailed handling procedures.

STORAGE: Do not contaminate water, food or feed by storage or disposal. Store product in a cool, dry, locked place out of reach of children. Store in original container.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: A well-ventilated area, local exhaust ventilation, or other engineering controls are recommended for handling this product.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION, cont'd

RESPIRATORY PROTECTION: A NIOSH/MSHA (USA) or equivalent approved air-purifying respirator equipped with organic vapor cartridges or canisters may be used under certain circumstances where airborne concentrations may exceed exposure limits. For emergency and other conditions where the exposure limit may be greatly exceeded, use an approved positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. See label or contact your distributor for more complete instructions.

SKIN PROTECTION: Where contact is likely, wear chemical-resistant (such as nitrile or butyl) gloves, coveralls, socks and chemical-resistant footwear. For overhead exposure, wear chemical-resistant headgear. Always wash hands, face, and arms with soap and clean water before eating, drinking, using cosmetics, smoking, or going to the toilet. For more information see the product label or contact your distributor.

EYE PROTECTION: Safety glasses are needed whenever one is working with chemicals. Where eye contact is likely, use chemical splash goggles. See label or contact your distributor for more complete instructions.

OTHER PROTECTION: A safety shower and eyewash station must be present and working whenever personnel are working with this product.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Solid
APPEARANCE:	Tan powder
ODOR:	Fermentation-like odor.
ODOR THRESHOLD:	None established
BOILING POINT:	Not available
FREEZING/MELTING POINT:	Not available
SPECIFIC GRAVITY:	0.227 g/mL
BULK DENSITY:	14 lb/ft ³
VAPOR PRESSURE (mm/Hg):	Not applicable
VAPOR DENSITY:	Heavier than air
PERCENT VOLATILE BY VOL:	Not applicable
SOLUBILITY (Water):	Inerts are dispersible in water, while the active ingredient (Streptomycin sulfate) is soluble in water
SOLUBILITY (Other):	This product is partially soluble in alcohols, ketones, and esters.
PARTITION COEFFICIENT (O/W):	Not applicable
pH (5% in water):	4.7
EVAPORATION RATE:	Not applicable

10. STABILITY AND REACTIVITY

CHEMICAL STABILITY (Conditions to avoid): This product is stable under normal use and storage conditions.

INCOMPATIBILITY: Avoid strong oxidizers, strong acids, strong bases, heat, and sources of ignition.

HAZARDOUS DECOMPOSITION PRODUCTS: Heating product to decomposition will cause emission of acrid smoke and fumes of carbon oxides.

HAZARDOUS POLYMERIZATION: This product will not polymerize.

11. TOXICOLOGICAL INFORMATION

The information below is for the active ingredient, Streptomycin sulfate.

INGESTION:	Oral LD ₅₀ (rat):	>5000 mg/kg
INHALATION:	Inhalation LC ₅₀ (rat):	>2.72 mg/L (4 hr)
DERMAL:	Skin LD ₅₀ (rabbit):	>2000 mg/kg
IRRITATION:	Eye irritation:	Mildly irritating
	Skin irritation:	Slightly irritating
SENSITIZATION:	Skin sensitization:	Not a skin sensitizer (guinea pig)

TERATOGENICITY: Auditory nerve damage in the developing fetus has been observed in studies using Streptomycin sulfate.

MUTAGENICITY: No information is available.

CARCINOGENICITY: None observed for Streptomycin sulfate. Inhalation of crystalline silica at high dust levels can cause pneumoconiosis, silicosis or pulmonary fibrosis. Because of this IARC has listed crystalline silica as a group 2A carcinogen and NTP recognizes crystalline silica as a substance reasonably anticipated to be a carcinogen.

REPRODUCTIVE TOXICITY: No information is available.

TOXICOLOGICALLY SYNERGISTIC PRODUCTS: No data available.

12. ECOLOGICAL INFORMATION

GENERAL: No data is available for the toxic effects of Streptomycin on fish and wildlife. It is suspected that it may be harmful to aquatic plants. Keep out of any body of water. Do not contaminate water when disposing of equipment washwaters or wastes. Notify authorities if any exposure to the general public or environment occurs or is likely to occur.

13. DISPOSAL CONSIDERATIONS

WASTE DISPOSAL: Pesticide wastes may be acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate may be a violation of local or national laws. If these wastes cannot be disposed by use according to label or other regulatory instructions, contact your nearest local or national waste regulatory agency for guidance.

CONTAINER DISPOSAL: Dispose of all containers as a hazardous waste. Check with the appropriate National or local agencies to determine currently applicable regulations for your area.

14. TRANSPORTATION INFORMATION

DOT CLASS:	Not regulated
UN NUMBER:	None
IMDG CLASS (sea):	Not regulated
MARINE POLLUTANT:	No
PACKING GROUP:	None
HAZARD LABEL(s):	None
PROPER SHIPPING NAME(s):	Not regulated
REPORTABLE QUANTITY:	None

PACKAGING

GENERAL DESCRIPTION: 2 lb bags (6 per box)

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: This product is registered under EPA/FIFRA in the United States. It is a violation of Federal Law to use this product in any manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.

SARA TITLE III DATA

Section 311 & 312 Hazard Categories:

Immediate Health Hazard:	Yes
Delayed Health Hazard:	Yes
Fire Hazard:	No
Reactive Hazard:	No
Sudden Pressure Release Hazard:	No

Section 302 Extremely Hazardous Substances: None

Section 313 Toxic Chemicals: None

CERCLA/EPCRA Reportable Quantities (RQ): None

15. REGULATORY INFORMATION, cont'd

STATE REGULATIONS:

CALIFORNIA (Proposition 65): This product may contain trace amounts of respirable crystalline silica, known to the State of California to cause cancer. This product contains streptomycin sulfate, a chemical known to the State of California to cause reproductive toxicity.

16. OTHER INFORMATION

MSDS Status:

Date This Revision: 17 April, 2007

Date Previous Revision: 12 May, 2004

Person Responsible for Preparation: Gary A. Braden

Reasons for Revision: Annual review. Formatting changes were made throughout the MSDS. No other changes were made.

DISCLAIMER: This information is provided for the limited guidance to the user. While AMVAC believes that the information is, as of the date hereof, reliable, it is the user's responsibility to determine the suitability of the information for its purposes. The user is advised not to construe the information as absolutely complete since additional information may be necessary or desirable when particular, exceptional, or variable conditions or circumstances exist (like combinations with other materials), or because of applicable regulations. No express or implied warranty of merchantability or fitness for a particular purpose or otherwise is made hereunder with respect to the information or the product to which the information relates.

ABBREVIATIONS:

ACGIH	-	American Conference of Governmental Industrial Hygienists
CERCLA	-	Comprehensive Environmental Response, Compensation, and Liability Act
DOT	-	Department of Transportation
EPA	-	Environmental Protection Agency
FIFRA	-	Federal Insecticide, Fungicide, and Rodenticide Act
IARC	-	International Agency for Research on Cancer
IATA	-	International Air Transport Association
IMDG	-	International Maritime Dangerous Goods
NTP	-	National Toxicology Program
OSHA	-	Occupational Safety and Health Agency
PEL	-	Permissible Entry Level
SARA	-	Superfund Amendments and Reauthorization Act
TLV	-	Threshold Limit Value
TSCA	-	Toxic Substances Control Act
TWA	-	Time Weighted Average (8 hour)
