

SAFETY DATA SHEET

Section 1: Product and Company Information

Product Name: VersaTREK Myco Streptomycin

Product Use: For In Vitro Diagnostic Use

Product Code: 7120-30





MSDS Number: L-MSDS7120-1

Manufacturer: United States: TREK Diagnostic Systems
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Section 2: Hazards Identification

Personal Protective Equipment	NFPA Rating (USA)	European Classification	WHMIS (Canada)	Transportation
		 Harmful	 D2A	Not regulated

Emergency Overview: Harmful if swallowed. May cause harm to the unborn child.

Appearance, Colour and Odour: Solid white crystalline caked powder, freeze-dried, odourless.

USA: This product is a hazardous material as defined by 29 CFR1910.1200, OSHA Hazard Communication Evaluation.

Canada: This is a controlled product under WHMIS.

European Communities (EC): This preparation is considered dangerous and has been classified according to Directive 1999/33/EC and its adaptations. Classification: Harmful.

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Section 2: Hazards Identification, continued

Potential Health Effects: ACUTE (short term):**Relevant Route(s) of Exposure:** Skin and eye contact, Ingestion, Inhalation

The toxicological properties of this preparation have not been fully evaluated.

Inhalation: High concentrations of dust may cause irritation of the upper respiratory tract with symptoms such as coughing, sneezing and shortness of breath.**Ingestion:** Acute oral toxicity data is not available for this preparation. Streptomycin Sulfate is harmful if swallowed.**Skin:** Direct contact may cause mild skin irritation.**Eye:** Direct contact may cause mild irritation to the eyes.**CHRONIC (long term):** see Section 11 for additional toxicological data

Prolonged or repeated exposure to Streptomycin sulfate may cause allergic reactions in sensitive individuals. Exposure to Streptomycin sulfate may cause harm to the unborn child.

Medical Conditions Aggravated by Exposure: Not available**Interactions With Other Chemicals:** Not available**Potential Environmental Effects:** Not expected to cause adverse effects to water organisms.

Section 3: Composition and Ingredient Information

<u>Common Name</u>	<u>Chemical Name</u>	<u>CAS No.</u>	<u>Wt.%</u>	<u>EINECS / ELINCS</u>	<u>Symbol</u>	<u>Risk Phrases</u>
Methyl cycloheptaamylose	.beta.-Cyclodextrin, methyl ethers	128446-36-6	97.2	411-120-1	None*	None*
Streptomycin Sulfate salt	Streptomycin Sulfate	3810-74-0	2.8	223-286-0	Xn*	Repr. Cat. 2; R22-61*

Note: *This chemical substance is not classified in the Annex I of Directive 67/548/EEC.
See Section 8 of this MSDS for exposure limit data for these ingredients.
See Section 16 for the full text of the R-phrases above.

Section 4: First Aid Measures

Inhalation: If symptoms are experienced remove source of contamination or move victim to fresh air. Obtain medical advice.**Eye Contact:** Do not allow victim to rub eye(s). Let the eye(s) water naturally for a few minutes. Have victim look right and left, and then up and down. If particle/dust does not dislodge, flush with lukewarm, gently flowing water for 5 minutes or until particle/dust is removed, while holding the eyelid(s) open. If irritation persists, obtain medical attention. DO NOT attempt to manually remove anything stuck to eye(s).**Skin Contact:** Remove contaminated clothing, shoes and leather goods (e.g. watchbands, belts). Flush with lukewarm, gently flowing water for 5 minutes. If irritation persists, repeat flushing. Obtain medical advice. Completely decontaminate clothing, shoes and leather goods before reuse.**Ingestion:** Never give anything by mouth if victim is rapidly losing consciousness, or is unconscious or convulsing. Have victim rinse mouth thoroughly with water. Do not induce vomiting. If vomiting occurs naturally, have victim rinse mouth with water again. Immediately obtain medical advice.

SAFETY DATA SHEET**Section 5: Fire Fighting Measures**

Flammable Properties:	Not flammable
Suitable extinguishing Media:	Use extinguishing media appropriate for the surrounding fire. Dry chemical, water spray, chemical foam, carbon dioxide, water fog.
Unsuitable extinguishing Media:	Not applicable
Explosion Data:	As with any organic powder, high airborne dust concentrations may create a dust explosion hazard when exposed to sources of ignition.
Sensitivity to Mechanical Impact:	Not available
Sensitivity to Static Discharge:	Not available
Specific Hazards arising from the Chemical:	Carbon dioxide, carbon monoxide, nitrogen oxides, sulphur oxides and incompletely combusted hydrocarbons may be generated by thermal decomposition and combustion.
Protective Equipment and precautions for firefighters:	Firefighters should wear full protective gear including self-contained breathing apparatus when fighting chemical fires. Any water runoff should be minimized and contained.

Section 6: Accidental Release Measures

Personal Precautions:	Wear adequate personal protective equipment as indicated in Section 8. Isolate spill area, preventing entry by unauthorized persons. Ventilate area of spill if there is excessive airborne dust.
Environmental Precautions:	Minimize entry of material into sewers and drainage systems. Refer to permit discharge limitations if applicable.
Methods for Containment:	Contain spill immediately. Scrape and scoop material into a secure container for disposal. Dry sweeping of dust is not recommended. Avoid raising dust.
Methods for Clean-up:	Avoid dust generation. Avoid inhalation of dust and contact with eyes and skin. Wear appropriate protective equipment. Maintain proper ventilation. If vacuum is used to collect dust, use an industrial vacuum cleaner with a high efficiency air filter. Do not dry-sweep. If sweeping is necessary, use dust suppressant. Do not use compressed air for clean up.

Section 7: Handling and Storage

Handling:	Ensure adequate ventilation in the workplace. Do not get on skin or in eyes. Do not ingest or inhale. Avoid generating dusts of this product. Wear all personal protective equipment as described in Section 8. Wash thoroughly with detergent and water after handling, before eating, drinking, smoking or using the toilet. Remove contaminated clothing and wash before reuse.
Storage:	Store between 2 - 8 °C (36 - 48°F) in a cool, dry well-ventilated area. Keep containers closed when not in use.

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Section 8: Exposure Controls and Personal Protection

<u>Ingredient</u>	<u>ACGIH TLV</u> <u>(8-hr. TWA)</u> <u>(mg/m³)</u>	<u>U.S. OSHA PEL</u> <u>(8-hr. TWA)</u> <u>(mg/m³)</u>	<u>Ontario TWAEV</u> <u>(mg/m³)</u>	<u>UK OEL</u> <u>(8-hr. TWA)</u> <u>(mg/m³)</u>
Streptomycin Sulfate salt	Not established	Not established	Not established	Not established
Methyl cycloheptaamylose	Not established	Not established	Not established	Not established
Particles Not Otherwise Classified/Regulated	3 (respirable) 10 (inhalable)	5 (respirable) 15 (total dust)	3 (respirable) 10 (inhalable)	None established

Engineering Controls: Use process enclosures, local exhaust ventilation, or other engineering controls to control sources of dust, mist or vapour.

Personal Protection:

Eye/Face Protection: Wear chemical safety goggles.

Skin Protection: Wear impervious gloves and protective lab coat to prevent skin exposure.

Respiratory Protection: When dust, mist or vapour concentrations in air exceed the occupational exposure guidelines, always wear respiratory protection. If respiratory protection is required, institute a complete respiratory protection program including selection, fit testing, training, maintenance and inspection.

A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 or Canadian Standards Association (CSA) Standard Z94.4-93 must be followed whenever workplace conditions warrant a respirator's use.

Work/Hygienic Practices:

At industrial sites have a safety shower and eye-wash fountain readily available in the immediate work area. Wash thoroughly immediately after exposure to product and at the end of the work-shift. Workers whose clothing has been contaminated by product should change into clean clothing promptly. Do not eat, smoke or drink where product is handled, processed, or stored. Wash hands carefully before eating, drinking or smoking.

Section 9: Physical and Chemical Properties

Physical State:	Solid	Flash Point & method:	Not applicable
Appearance, Colour and Odour:	White crystalline caked powder, freeze-dried, odourless	Autoignition Temperature:	Not applicable
Odour Threshold:	Not applicable	Flammability Limits in Air:	Not applicable
pH:	5.0 - 7.0 when re-hydrated with 25 ml water	Vapour Pressure:	Not applicable
Relative density: (water = 1)	Not applicable	Vapour Density: (Air = 1)	Not applicable
Partition coefficient: (n-octanol/water)	Not applicable	Evaporation Rate: (n-Butyl Acetate = 1)	Not applicable
Solubility:	Soluble in water	Boiling Point/Range:	Not applicable
Viscosity:	Not applicable	Freezing Point:	Not applicable
Decomposition Temperature:	Not available		

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Section 10: Stability and Reactivity

Chemical Stability:	Stable
Conditions to Avoid:	Avoid contact with incompatible materials.
Incompatible Materials:	Oxidizing agents
Hazardous Decomposition Products:	When heated to decomposition this material may release carbon dioxide, carbon monoxide, nitrogen oxides, sulphur oxides and incompletely burnt hydrocarbons.
Possibility of Hazardous Reactions:	Not available

Section 11: Toxicological Information

Acute Toxicity Data

<u>Product</u>	<u>LD₅₀ Oral (mg/kg)</u>	<u>LD₅₀ Dermal (mg/kg)</u>	<u>LC₅₀ Inhalation (4 hrs.)</u>
Methyl cycloheptaamylose	> 8 000 (rat)	Not available	> 2.95 mg/L (rat)
Streptomycin Sulfate salt	430 (rat)	Not available	Not available

Irritation:	Direct contact may cause mild irritation to eyes and skin.
Corrosivity:	Not available
Sensitization:	Prolonged or repeated exposure to Streptomycin sulfate may cause allergic reactions in sensitive individuals.
Neurological Effects:	Exposure to Streptomycin Sulfate may cause possible neurological effects (changes in vestibular functions).
Genetic Effects:	Not available
Reproductive Effects:	Not available
Developmental Effects:	Not available for the product. Exposure to Streptomycin Sulfate may cause harm to the unborn child. Streptomycin has been shown to cause total irreversible, inner ear damage in infants whose mothers received it during pregnancy. Aminoglycosides may cause kidney damage in the human fetus.
Target Organ Effects:	Ears, kidneys In studies with rats, ingestion of Streptomycin Sulfate caused changes to the kidneys/ureter/bladder tubules at doses greater than 548 gm/kg (lowest published toxic dose; continuous over 2 years).
Carcinogenicity:	No carcinogenic effects expected from exposure to this product during its intended use. The table below indicates whether or not each agency has listed any ingredient as a carcinogen.

<u>Ingredient</u>	<u>ACGIH</u>	<u>IARC</u>	<u>NTP</u>
Methyl cycloheptaamylose	Not listed	Not listed	Not listed
Streptomycin Sulfate	Not listed	Not listed	Not listed

ACGIH: (American Conference of Governmental Industrial Hygienists)

IARC: (International Agency for Research on Cancer).

NTP: (National Toxicology Program)

SAFETY DATA SHEET**Section 12: Ecological Information**

Ecotoxicity:	Methyl cycloheptaamylose: 96-hour LC ₅₀ <i>Oncorhynchus mykiss</i> – >5700 mg/L 72-hour LC ₅₀ <i>Selenastrum capricornutum</i> – 5700 mg/L 48-hour EC ₅₀ <i>Daphnia magna</i> – 267 mg/L Streptomycin Sulfate: 96-hour LC ₅₀ <i>Oncorhynchus mykiss</i> – >180 mg/L 48-hour EC ₅₀ <i>Daphnia magna</i> – 650 mg/L Not expected to cause adverse effects to water organisms.
Persistence/Degradability:	Methyl cycloheptaamylose – Modified OECD Screening Test; 9% degree of elimination is 28 days (not easily biodegradable).
Bioaccumulation/Accumulation:	Methyl cycloheptaamylose – bioaccumulation is not expected to occur, log P _{OW} ≤ 3.0.
Mobility:	Not available

Section 13: Disposal Considerations

<u>Waste Disposal Method:</u>	Do NOT dump into any sewers, on the ground or into any body of water. Store material for disposal as indicated in Section 7 Handling and Storage.
<u>USA:</u>	Dispose of in accordance with local, state and federal laws and regulations.
<u>Canada:</u>	Dispose of in accordance with local, provincial and federal laws and regulations.
<u>EC:</u>	Waste must be disposed of in accordance with relevant EC Directives and national, regional and local environmental control regulations. For disposal within the EC, the appropriate code according to the European Waste Catalogue (EWC) should be used.

Section 14: Transport Information

Canadian Transportation of Dangerous Goods (TDG):	Not regulated
U.S. Hazardous Materials Regulation (DOT 49CFR):	Not regulated
IMO Classification:	Not regulated
Marine Pollutants:	None
ICAO/IATA Classification:	Not regulated

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Section 15: Regulatory Information

USA

TSCA Status: All component substances of this mixture are listed on the TSCA inventory. .beta.-Cyclodextrin, methyl ethers is listed with Flag P (indicates a commenced Premanufacturing Notices Number (PMN) substance).

SARA Title III:
Sec. 302/304: None
Sec. 311/312: Chronic
Sec. 313: None
CERCLA RQ: None

California Proposition 65: Chemicals known to the State of California to cause developmental toxicity: Streptomycin Sulfate.

Canada

This product has been classified in accordance with the hazard criteria of the *Controlled Products Regulations* and the MSDS contains all the information required by the *Controlled Products Regulations*.

WHMIS Classification: D2A – Materials causing other toxic effects (Streptomycin Sulfate - teratogen)

NSNR Status (New Substance Notification Regulations): All substances in this preparation are listed on the DSL.

NPRI Substances (National Pollutant Release Inventory): There are no NPRI reportable ingredients in this product.

EC Classification for the Substance/Preparation:

Symbol:



Harmful

Risk Phrases: R22: Harmful if swallowed.
R61: May cause harm to the unborn child.

Safety Phrases: S37: Wear suitable gloves.
S53: Avoid exposure - obtain special instructions before use.

European Inventories: All substances in this preparation are listed in EINECS.

Other International Inventories:

Australia: All component substances are present on the Inventory of Chemical Substances (AICS).

China: All component substances are present on the Chemical Inventory.

Japan: Streptomycin Sulfate is listed on the Japanese Pharmacopoeia Listing, Synthetics.

Korea: Inventory - Existing and Evaluated Chemical Substances: Methyl-b-cyclodextrin is present, 99-3-1190; Streptomycin Sulfate is present, KE-09605.

New Zealand: All component substances are present on the Chemical Inventory.

Philippines: All component substances are present on the inventory of Chemicals and Chemical Substances (PICCS).

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Section 16: Other Information

NFPA Hazard Rating

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Disclaimer: While LEHDER Environmental Services Limited believes that the data set forth herein is accurate, as of the date hereof, LEHDER makes no warranty with respect thereto and expressly disclaims all liability for reliance thereon. Such data is offered solely for your consideration, investigation and verification.

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