

MATERIAL SAFETY DATASHEET (MSDS)

"CYLINDROSPERMOPSIN"

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SECTION I - Product Identification
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PRODUCT NAME: Cyindrospermopsin
DATE: 04/25/07
CAS #: 14345-90-8
SYNONYMS: CYN, CYL
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SECTION II – Composition Information
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CYLINDROSPERMOPSIN > 95%
NON HAZARDOUS INGREDIENTS < 5%
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SECTION III - Physical Data
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FORM / COLOR / ODOR: FREEZE DRIED MATERIAL, WHITE POWDER.
SOLUBILITY: SOLUBLE IN WATER.
SPECIFIC GRAVITY (20 °C): N AV
RELATIVE VAPOR DENSITY (AIR=1): N APP
VAPOR PRESSURE (20 °C): N APP
FLASH POINT: N AV
FLAMMABILITY LIMITS (%): N AV
AUTO IGNITION TEMPERATURE (°C): N AV
SOLUBILITY IN WATER (G/L): N AV
MELTING POINT/RANGE (°C): N AV
BOILING POINT/RANGE (°C): N APP
DECOMPOSITION POINT (°C): N AV
VISCOSITY: N APP

N AV = NOT AVAILABLE N APP = NOT APPLICABLE
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SECTION IV - Fire and Explosion Hazard Data
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SPECIFIC HAZARDS: COMBUSTIBLE SOLID.

FIRE FIGHTING FURTHER ADVICE: COMBUSTIBLE SOLID. ON BURNING MAY EMIT TOXIC FUMES. FIRE FIGHTERS TO WEAR SELFCONTAINED BREATHING APPARATUS AND SUITABLE PROTECTIVE CLOTHING IF RISK OF EXPOSURE TO VAPOUR OR PRODUCTS OF COMBUSTION.

SUITABLE EXTINGUISHING MEDIA: IF MATERIAL IS INVOLVED IN A FIRE USE, WATER FOG (OR IF UNAVAILABLE FINE WATER SPRAY), FOAM, DRY AGENT (CARBON DIOXIDE, DRY CHEMICAL POWDER).
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SECTION V - Health Hazard Data

INHALATION: REMOVE VICTIM FROM EXPOSURE - AVOID BECOMING A CASUALTY. REMOVE CONTAMINATED CLOTHING AND LOOSEN REMAINING CLOTHING. ALLOW PATIENT TO ASSUME MOST COMFORTABLE POSITION AND KEEP WARM. IF BREATHING IS LABORED AND PATIENT CYANOTIC (BLUE), ENSURE AIRWAYS ARE CLEAR AND HAVE A QUALIFIED PERSON GIVE OXYGEN THROUGH A FACEMASK. IF BREATHING HAS STOPPED APPLY ARTIFICIAL RESPIRATION AT ONCE. IN THE EVENT OF CARDIAC ARREST, APPLY EXTERNAL CARDIAC MASSAGE. SEEK IMMEDIATE MEDICAL ADVICE.

SKIN CONTACT: IF SKIN CONTACT OCCURS, IMMEDIATELY REMOVE CONTAMINATED CLOTHING AND WASH SKIN THOROUGHLY. IF SWELLING, REDNESS, BLISTERING OR IRRITATION OCCURS SEEK IMMEDIATE MEDICAL ASSISTANCE.

EYE CONTACT: IMMEDIATELY IRRIGATE WITH COPIOUS QUANTITIES OF WATER FOR 15 MINUTES. EYELIDS TO BE HELD OPEN. REMOVE CLOTHING IF CONTAMINATED AND WASH SKIN. SEEK IMMEDIATE MEDICAL ASSISTANCE.

INGESTION: RINSE MOUTH WITH WATER. GIVE PLENTY OF WATER TO DRINK. IF VOMITING OCCURS GIVE FURTHER WATER. GET TO A DOCTOR OR HOSPITAL QUICKLY.

NOTES TO PHYSICIAN: TREAT SYMPTOMATICALLY. THE USE OF ACTIVATED CARBON ADMINISTERED ORALLY MAY ASSIST IN REDUCING THE ADSORPTION OF THE MATERIAL.

SECTION VI - Stability and Reactivity Data

STABILITY: INCOMPATIBLE WITH OXIDIZING AGENTS.

SECTION VII - Spill and Disposal Procedures

SMALL SPILLS: WEAR PROTECTIVE EQUIPMENT TO PREVENT SKIN AND EYE CONTAMINATION. AVOID INHALATION OF DUST. WIPE UP WITH ABSORBENT (CLEAN RAG OR PAPER TOWELS). COLLECT AND SEAL IN PROPERLY LABELED CONTAINERS OR DRUMS FOR DISPOSAL.

LARGE SPILLS: CLEAR AREA OF ALL UNPROTECTED PERSONNEL. AVOID ACCIDENTS, CLEAN UP IMMEDIATELY. WEAR PROTECTIVE EQUIPMENT TO PREVENT SKIN AND EYE CONTAMINATION AND THE INHALATION OF DUST. WORK UP WIND OR INCREASE VENTILATION. COVER WITH DAMP ABSORBENT (INERT MATERIAL, SAND OR SOIL). SODIUM HYPOCHLORITE MAY BE USED TO DEGRADE THE TOXIN. SWEEP OR VACUUM UP, BUT AVOID GENERATING DUST. COLLECT AND SEAL IN PROPERLY LABELED CONTAINERS OR DRUMS FOR DISPOSAL. IF CONTAMINATION OF CROPS OR WATERWAYS HAS OCCURRED ADVISE EMERGENCY SERVICES OR STATE DEPARTMENT OF AGRICULTURE. IF CONTAMINATION OF SEWERS OR WATERWAYS HAS OCCURRED ADVISE LOCAL EMERGENCY SERVICES.

SECTION VIII - Protective Equipment

CHEMICAL SAFETY GOGGLES, CHEMICAL RESISTANT GLOVES, NIOSH/MSHA- APPROVED REPIRATOR, SAFETY SHOWER AND EYE BATH, MECHANICAL EXHAUST REQUIRED, USE ONLY IN CHEMICAL FUME HOOD.

SECTION IX - Storage and Handling Precautions

STORAGE: STORE IN A COOL, DRY, WELL-VENTILATED AREA AND OUT OF DIRECT SUNLIGHT. STORE AWAY FROM FOODSTUFFS. STORE AWAY FROM INCOMPATIBLE MATERIALS AS DESCRIBED IN SECTION VI. KEEP CONTAINERS CLOSED WHEN NOT IN USE – CHECK REGULARLY FOR LEAKS.

HANDLING: AVOID SKIN AND EYE CONTACT AND INHALATION OF DUST.

SECTION X - Transportation Data and Additional Information

SHIPPING: TREAT AS A HAZARDOUS MATERIAL.

SECTION XI: TOXICITY DATA:

NO ADVERSE HEALTH EFFECTS EXPECTED IF THE PRODUCT IS HANDLED IN ACCORDANCE WITH THIS SAFETY DATA SHEET AND THE PRODUCT LABEL. SYMPTOMS OR EFFECTS THAT MAY ARISE IF THE PRODUCT IS MISHANDLED AND OVEREXPOSURE OCCURS ARE:

ACUTE EFFECTS

INHALATION: MATERIAL MAY BE TOXIC BY INHALATION. MATERIAL MAY BE AN IRRITANT TO MUCOUS MEMBRANES AND RESPIRATORY TRACT.

SKIN CONTACT: MATERIAL MAY BE TOXIC BY SKIN CONTACT, HOWEVER IT IS NOT EXPECTED TO BE READILY ABSORBED THROUGH THE SKIN. CONTACT WITH SKIN MAY RESULT IN IRRITATION.

EYE CONTACT: MAY BE AN EYE IRRITANT.

INGESTION: TOXIC IF SWALLOWED.

24HR INTRAPERITONEAL LD50 (MICE): 2.1 MG/KG

5-6 DAYS INTRAPERITONEAL LD50 (MICE): 0.2 MG/KG

PRODUCT IS CURRENTLY BEING TESTED FOR CARCINOGENICITY.

REFERENCES AVAILABLE UPON REQUEST.

MATERIAL SAFETY DATA SHEETS ARE PERIODICALLY REVIEWED AND MODIFIED AS NEW INFORMATION BECOMES AVAILABLE.