

1- Identification of the substance/preparation and of the company/undertaking

- **PRODUCT NAME:** Leptomycin B
- **PRODUCT NUMBER:**
- **CAS #:** 87081-35-4
- **SYNONYMS:** LMB, Elactocin, CI-940, CL-1957A, PD-114720
- **MOLECULAR FORMULA:** C₃₃H₄₈O₆
- **MOLECULAR WEIGHT:** 540.74 g/mol
- **DETAILS OF THE MANUFACTURER:**

INSTITUTO BIOMAR, S.A.
PARQUE TECNOLÓGICO DE LEÓN PARCELA M10.4
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2- Composition/information on ingredients

Leptomycin B

3- Hazards identification

- **PHYSICAL/CHEMICAL HAZARDS:**
 - N/A
- **HUMAN HEALTH HAZARDS:**
 - May cause cancer.
 - May cause heritable genetic damage.
 - May cause irritation to eyes, mucous membranes, upper respiratory tract and skin.
 - May cause effect fertility and/or newborn and breastfed infants.
 - General anesthetic, coma, hallucinations and distorted perceptions
 - Arrhythmias, nausea or vomiting

4- First-aid measures

Description of first aid measures

- **AFTER INHALATION:**
 - Remove from exposure and move to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
- **AFTER INGESTION:**
 - Never give anything by mouth to an unconscious person. Get medical aid. Do not induce vomiting. If conscious and alert, rinse mouth with water.
- **AFTER SKIN CONTACT:**
 - In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. Wash clothing before reuse. Thoroughly clean shoes before reuse. Get medical attention
- **AFTER EYE CONTACT:**
 - Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.
- **AFTER AGGRAVATING CONDITIONS:**
 - N/A

Indication of any immediate medical attention and special treatment needed.

Indication of an antidote if applicable.

5- Fire-fighting measures

- **FLAMMABILITY OF THE PRODUCT:**
 - Material is non-combustible.
- **EXTINGUISHING MEDIA:**
 - Use water spray, dry chemical, carbon dioxide or appropriate foam
- **HAZARDOUS THERMAL (de) COMPOSITION PRODUCTS:**
 - These products are carbon oxides (CO, CO₂) and nitrogen oxides (NO, NO₂).
- **SPECIAL FIRE-FIGHTING PROCEDURES:**
 - Use extinguishing media appropriate to surrounding fire conditions.
 - Wear protective clothing to prevent contact with skin and eyes.
- **PROTECTION OF FIRE-FIGHTERS:**
 - Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

6- Accidental release measures

- **PERSONAL PRECAUTIONS PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:**
 - Use proper personal protective equipment. Avoid generating dusty conditions. Do not breathe dust, vapors, mist or gas. Provide ventilation. Evacuate personnel to safe areas.
- **SPILLS AND LEAKS**
 - Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

- Cover spillage with suitable absorbent material. Using non-spark tools, sweep up material and place in an appropriate container.
- **METHODS AND MATERIAL FOR CONTAINMENT AND CLEANING UP:**
 - Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete. For spill clean-up, wear suitable protective clothing, chemical resistant rubber gloves, rubber boots, and chemical safety goggles.

7- Handling and storage

- **HANDLING PRECAUTIONS FOR SAFE HANDLING:**
 - Avoid contact with eyes, skin, and clothing. Keep container tightly closed. Avoid ingestion and inhalation.
 - Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Use with adequate ventilation. Minimize dust generation and accumulation.
- **CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:**
 - Store in a tightly closed container. Protect from light. Store in a cool, dry, well-ventilated area away from incompatible substances. Store at -20°C.

8- Exposures controls / personal protection

- **ENGINEERING MEASURES:**
 - Use process enclosures, local exhaust ventilation or other engineering controls to keep airborne levels below recommended exposure limits. If user operation generates dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.
- **HYGIENE MEASURES**
 - Manipulate with all hygienic conditions and taking into consideration all security measures.
- **PERSONAL PROTECTIVE EQUIPMENT**
 - **Respiratory protection**
 - Use respirators and components tested and approved under appropriate government standards.
 - **Skin and body protection**
 - Lab coat. Choose the body protection according to the amount and concentration of the dangerous substance at the work place.
 - **Eyes Protection**
 - Wear appropriate protective eyeglasses or chemical safety goggles.

9- Physical and chemical properties

- **PHYSICAL STATE:**
 - Colorless liquid (supplied in solution)
- **COLOR:**
 - Colorless
- **MOLECULAR WEIGHT:**
 - 540.74 g/mol
- **SOLUBILITY:**
 - Soluble in EtOH, MeOH and insoluble in water. Supplied dissolved in anhydrous ethanol.
- **MELTING POINT:**
 - For batch specific information, please see CoA (certificate of analysis).
- **EXPLOSIVE PROPERTIES:**
 - Risk of explosion of the product in presence of mechanical impact. Not available.
 - Risk of explosion of the product in presence of static discharge. Not available.

10-Stability and reactivity

- **STABILITY:**
 - Stable under recommended storage conditions.
- **REACTIVITY:**
 - N/A
- **CHEMICAL STABILITY:**
 - N/A
- **THERMAL DECOMPOSITION:**
 - N/A
- **INCOMPATIBILITIES**
 - Protect from light. Protect from heat.
 - Strong oxidizing agents.
- **HAZARDOUS DECOMPOSITION PRODUCTS:**
 - Carbon monoxide, carbon dioxide and nitrogen oxides upon thermal decomposition.

11-Toxicological information

- **RTECS#:**
 - 64-17-5 (Ethanol)
See actual entry in RTECS for complete information.
- **ACUTE TOXICITY:**
 - LD50 IPR-RAT 3600µg/Kg

- LD50 ORL-RAT 7060 mg/Kg
- **CHRONIC TOXICITY:**
 - N/A
- **OTHER TOXIC EFFECTS ON HUMANS:**
 - Prolonged or repeated contact with skin may cause: defatting, dermatitis.
 - Contact with eyes may cause: redness, blurred vision, tears.
- **CARCINOGENIC EFFECTS:**
 - Tumorigenic: equivocal tumorigenic agent by RTECS criteria. Liver: tumors. Blood: Lymphomas including Hodgkin's disease.
- **MUTAGENIC EFFECTS:**
 - Germ cell mutagenicity: no data available.
- **REPRODUCTION TOXICITY:**
 - Reproductive toxicity – human – female – oral: effects on newborn: apgar score (human only), other neonatal measures or effects, and drug dependence
- **POTENTIAL HEALTH EFFECTS**
 - **Inhalation:**
 - May be harmful if inhaled.
 - May cause respiratory tract irritation.
 - **Skin:**
 - May cause skin irritation
 - May be toxic if absorbed through the skin.
 - **Eyes:**
 - May cause eye irritation.
 - **Ingestion:**
 - Toxic if swallowed.
 - **Target Organs:**
 - Eyes; Respiratory system; Skin; CNS; Circulatory System; Reproductive System.

12-Ecological information

- **ECOTOXICITY:**
 - N/A. Treat as potentially toxic if released into the environment.
- **TOXICITY OF THE PRODUCTS OF BIODEGRADATION:**
 - N/A

13-Disposal considerations:

- **METHODS OF DISPOSAL: WASTE OF RESIDUES, CONTAMINATED PACKAGING:**
 - Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state and

local environmental regulations. Contaminated packaging must be disposed of as unused product.

14-Transport information

UN-Number 1230

UN proper shipping name ADR/RID: 6.1 (Ethanol solution)

IMDG: 6.1 (Ethanol solution)

IATA: 6.1 (Ethanol solution)-

Transport hazard class(es) 6.1

Packing group II

Environmental hazards: Not determined

Marine pollutant: Not determined

Special precautions for user: Not applicable.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code: Not applicable

15-Regulatory information

SYMBOL, ABBREVIATION AND DESCRIPTION OF HAZARD

Carc Cat 3: Chemicals that may cause cancer or increase its incidence.

F: Chemicals that may catch fire in contact with air, only need brief contact with an ignition source, have a very low flash point or evolve highly flammable gases in contact with water.



RISK PHRASES

R11 Highly flammable

R23/24/25 Toxic by inhalation, in contact with skin and if swallowed

R39/23/24/25 Toxic: danger of very serious irreversible effects through inhalation, in contact with skin and if swallowed

SAFETY PHRASES

S16 Keep away from sources of ignition - No smoking

S22 Do not breathe dust

S24/25 Avoid contact with skin and eyes

S36/37/39 Wear suitable protective clothing, gloves and eye/face protection

S45 In case of accident or if you feel unwell seek medical advice immediately (show the label where possible)

S9 Keep container in a well-ventilated place

16-Other information

It is the user's responsibility to determine the suitability of this information for adoption of necessary safety precautions. ***This product is intended for research use only*** and should be handled and used only by experienced personnel. Instituto Biomar S.A shall not be held liable for any damage resulting from the use of this product.