



## MATERIAL SAFETY DATA SHEET

| Section I – Product Information           |                                  |                             |                       |
|---|----------------------------------|-----------------------------|-----------------------|
| <b>Product Name or Identity:</b>          | <b>Listeria Enrichment Broth</b> |                             |                       |
| <b>Manufacturer's Name:</b>               | Acumedia Manufacturers, Inc.     | <b>Emergency Phone No.:</b> | 517/372-9200          |
|   | 740 East Shiawassee              | <b>Fax No.:</b>             | 517/372-2006          |
|   | Lansing, Michigan 48912          | <b>e-mail:</b>              | foodsafety@neogen.com |
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| Section II – Hazardous Ingredients / Identity Information           |   |                                      |                                |
|---|---|--------------------------------------|--------------------------------|
| Hazardous Components:<br>(Specific Chemical Identity: Common Names) | OSHA PEL<br>(Permissible Exposure Limits) | ACGIH TLV<br>(Threshold Limit Value) | Toxicity Data LD <sub>50</sub> |
| Sodium Chloride, NaCl, Common salt                                  | N/A                                       | N/A                                  | ORL-RAT, 3000 mg/kg            |
| Potassium Phosphate   | N/A                                       | N/A                                  | SKN-RBT, >4640 mg/kg           |
| Nalidixic Acid  | N/A                                       | N/A                                  | ORL-MUS, 572 mg/kg             |
| Cycloheximide   | N/A                                       | N/A                                  | ORL-RAT, 2 mg/kg               |

| Section III – Physical Characteristics  |   |
|---|---|
| <b>Boiling Point:</b> 1413°C (Sodium Chloride)<br>2 g/l (Cycloheximide)   | <b>Specific Gravity (H<sub>2</sub>O = 1):</b> 2.16 g/cm <sup>3</sup> (Sodium Chloride)                |
| <b>Vapor Pressure (mm Hg.):</b> 865°C (Sodium Chloride)   | <b>Melting Point:</b> 119°C (Cycloheximide), 804°C (Sodium Chloride),<br>> 465° (Potassium Phosphate) |
| <b>Vapor Density (AIR = 1):</b> N/A   | <b>Evaporation Rate (Butyl Acetate = 1):</b> N/A  |
| <b>Solubility in Water:</b> Soluble (Sodium Chloride), 150 g/ 100 g cold water (Potassium Phosphate)  |   |
| <b>Appearance and Odor:</b> White powder. Characteristic odor. (Sodium Chloride), (Nalidixic Acid)<br>White, crystalline powder w/musky odor. (Cycloheximide), White crystals or powder, odorless (Potassium Phosphate) |   |

| Section IV – Fire and Explosion Hazard Data  |   |
|--|---|
| <b>Flash Point (Method Used):</b> Not applicable   | <b>Flammable Limits:</b> LEL (Lower Explosive Limit) - N/A<br>UEL (Upper Explosive Limit) - N/A |
| <b>Extinguishing Media:</b> Use sand, carbon dioxide or powdered extinguishing agent. Never use water.   |   |
| <b>Special Fire Fighting Procedures:</b> Fight larger fires with alcohol resistant foam. Firefighters should wear protective equipment and self-contained breathing apparatus. Remove contaminated clothing immediately. |   |
| <b>Unusual Fire and Explosion Hazards:</b> During heating or in case of fire, poisonous gases are produced.  |   |

| Section V – Reactivity Data   |                |   |   |
|---|----------------|---|---|
| <b>Stability:</b>   | Unstable       |   | Conditions to Avoid: Protect from light and moisture. |
|   | Stable         | X |   |
| <b>Incompatibility (Materials to Avoid):</b> Reacts with acids, alkalis, and oxidizing agents.  |                |   |   |
| <b>Hazardous Decomposition or Byproducts:</b> Phosphorus oxides (PO <sub>x</sub> ), Carbon monoxide (CO), Carbon dioxide (CO <sub>2</sub> ) and Nitrogen oxides (NO <sub>x</sub> ). |                |   |   |
| <b>Hazardous Polymerization:</b>  | May Occur      |   | Conditions to Avoid: Decomposes by alkalis.           |
|   | Will Not Occur | X |   |

| Section VI – Health Hazard Data  |  |  |                    |
|--|--|--|--------------------|
| <b>Route(s) of Entry:</b>  | Inhalation? Yes  | Skin? Yes  | Ingestion? Yes     |
| <b>Health Hazards:</b><br>(Acute and Chronic)  | Toxic. Toxic if swallowed, inhaled, or absorbed through the skin. Irritating to eyes, respiratory system, and skin.  |  |                    |
| <b>Carcinogenicity:</b>  | NTP? No<br>(National Toxicology Program)   | IARC Monographs? No<br>(International Agency for Research in Cancer) | OSHA Regulated? No |
| <b>Signs and Symptoms of Exposure:</b> Irritant to skin, eyes, and mucous membranes. Possible risk of harm to the unborn child. May cause irritation of the respiratory tract with burning pain in the nose and throat, coughing, wheezing, shortness of breath and pulmonary edema. Allergic reactions in hypersensitive persons. Nalidixic Acid may cause allergic skin reactions.   |  |  |                    |
| <b>Medical Conditions Generally Aggravated by Exposure:</b> Possible risk of irreversible effects. Symptoms of poisoning may even occur after several hours; therefore medical observation is necessary for at least 48 hours after the accident. Possible carcinogen. Irritation, nausea, vomiting diarrhea, tremors, salivation and melena are signs of overexposure of Cycloheximide. Phosphates are slowly and incompletely absorbed when ingested. Chronic exposure of Sodium Phosphate may sequester calcium and cause calcium phosphate deposits in the kidney. |  |  |                    |
| <b>Emergency / First Aid Procedures:</b>   | General Information: Immediately remove contaminated clothing. Remove breathing apparatus only after contaminated clothing have been completely removed. In case of irregular breathing or respiratory arrest, provide artificial respiration. |  |                    |
|  | Ingestion: If swallowed, seek medical attention immediately.   |  |                    |
|  | Inhalation: Supply fresh air or oxygen. Seek medical attention immediately. In case of unconsciousness, place patient on side position for transportation. If required, provide artificial respiration.  |  |                    |
|  | Eye Contact: Rinse opened eye for at least 15 minutes under running water. Assure adequate flushing by separating eyelids with fingers. Seek medical attention.  |  |                    |
| Skin Contact: Wash with plenty of soap and water for at least 15 minutes. Seek medical attention.  |  |  |                    |

| Section VII – Precautions for Safe Handling and Use  |
|--|
| <b>Accidental Release Measures:</b> Wear suitable protective clothing. Keep respiratory protective device available. Remove contaminated clothing immediately. In case of fire use sand, carbon dioxide, or powdered extinguishing agent. Never use water. Avoid exposure to eyes, skin, and respiratory system.                                   |
| <b>Waste Disposal Method:</b> Dispose in accordance with all applicable federal, state, and local environmental regulations. This product should be disposed of in a special hazardous waste collection container.   |
| <b>Handling and Storing:</b> Keep container tightly closed. Protect from moisture and physical damage. Store away from oxidizing, acidic agents, and alkali material (caustic). Keep receptacle tightly sealed. Store only in the original receptacle. Containers may be hazardous when empty because they retain product residues (dust, solids). |
| <b>Other Precautions:</b> Prevent formation of dust. Do not breathe dust. Ensure good ventilation / exhaustion at the workplace. Avoid prolonged or repeated exposure.   |

| Section VIII – Control Measures  |   |              |
|--|---|--------------|
| <b>Respiratory Protection (Specify Type):</b> None required where adequate ventilation conditions exist. If airborne concentration is high, use an appropriate respirator or dust mask.  |   |              |
| <b>Ventilation:</b>  | Local Exhaust: 50 – 100 CFM                       | Special: N/A |
|  | Mechanical (General): N/A                         | Other: N/A   |
| <b>Protective Gloves:</b> Proper disposable gloves   | Eye Protection: Chemical resistant safety goggles |              |
| <b>Other Protective Clothing or Equipment:</b> Long-sleeved lab coat, safety shower and eye wash recommended.  |   |              |
| <b>Work / Hygienic Practices:</b> Follow the usual precautionary measures for handling chemicals / powder. Keep away from food and beverages. Immediately remove all soiled and contaminated clothing. Avoid contact with eyes, skin and clothing. |   |              |

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