SAFETY DATA SHEET

Date Prepared: 11/13/2014
SDS No: SPE

Spectrum HBV

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Spectrum HBV
GENERAL USE: Disinfectant, Virucide, Fungicide
PRODUCT DESCRIPTION: Hospital Virucidal Disinfectant
PRODUCT CODE: SPE
CHEMICAL FAMILY: Quaternary Ammonium Chloride

MANUFACTURER
MISCO Products Corporation
1048 Stinson Drive
Reading, PA 19605
Emergency Phone: 610-926-4106
Customer Service: 800-548-4568
Transportation: 800-548-4568

24 HR. EMERGENCY TELEPHONE NUMBERS
CHEM-TEL (Medical and Transportation): 800-255-3924
POISON CONTROL CENTER (Medical): 800-222-1222

EPA REG. NO.: 10324-59-8325

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS
Health:
Acute Toxicity (Oral), Category 5
Skin Corrosion, Category 1C
Eye Corrosion, Category 1

Environmental:
Acute Hazards to the Aquatic Environment, Category 1

GHS LABEL

Corrosion
Environment

SIGNAL WORD: DANGER

HAZARD STATEMENTS
H302: Harmful if swallowed.
H314: Causes severe skin burns and eye damage.
H401: Toxic to aquatic life.
H290: May be corrosive to metals.

PRECAUTIONARY STATEMENT(S)

Prevention:
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P273: Avoid release to the environment.
P102: Keep out of reach of children.
P264: Wash thoroughly after handling.
P234: Keep only in original container.

Response:
P304+P340: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
P310: Immediately call a POISON CENTER or doctor/physician.
P301+P330+P331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310: Immediately call a POISON CENTER or doctor/physician.
P303+P361+P353: IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
P363: Wash contaminated clothing before reuse.
P391: Collect spillage.

Storage:
P405: Store locked up.

Disposal:
P501: Dispose of contents/container in accordance with local, state and federal regulations.

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE: Blue liquid

IMMEDIATE CONCERNS: Causes irreversible eye damage and skin burns.

POTENTIAL HEALTH EFFECTS

EYES: Corrosive, contact causes severe eye burns.

SKIN: Contact causes severe skin irritation and possible burns.

SKIN ABSORPTION: Harmful if absorbed through skin.

INGESTION: Harmful if swallowed.

REPRODUCTIVE TOXICITY

TERATOGENIC EFFECTS: None known.

CARCINOGENICITY: None known.

MUTAGENICITY: None known.

ROUTES OF ENTRY: Eye, skin, ingestion.

WARNING CAUTION LABELS: Irritant

PHYSICAL HAZARDS: None Expected.

3. COMPOSITION / INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Wt.%</th>
<th>CAS</th>
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<tbody>
<tr>
<td>n-Alkyl dimethyl benzy ammonium chloride (C12-C18)</td>
<td>2.25</td>
<td>68391-01-5</td>
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<tr>
<td>N-alkyl Dimethyl Ethyl Benzyl Ammonium Chloride (C12-C14)</td>
<td>2.25</td>
<td>68956-79-6</td>
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<tr>
<td>Nonylphenol Ethoxylate</td>
<td>0 - 5</td>
<td>9016-45-9</td>
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<tr>
<td>Tetrasodium ethylenediamine tetraacetate</td>
<td>0 - 5</td>
<td>64-02-8</td>
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<tr>
<td>Sodium Carbonate</td>
<td>0 - 5</td>
<td>497-19-9</td>
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<td>Dye</td>
<td>&lt; 0.1</td>
<td>N/A</td>
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<td>Fragrance</td>
<td>&lt; 1</td>
<td>N/A</td>
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<tr>
<td>Water</td>
<td>90</td>
<td>7732-18-5</td>
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</tbody>
</table>

4. FIRST AID MEASURES

EYES: Immediately flush eyes with water for at least 15 minutes, while holding eyelids open. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. Seek medical attention immediately.

SKIN: Remove contaminated clothing. Immediately flush with water followed by washing with mild soap. Seek medical attention.

INGESTION: Get immediate medical attention. Do not induce vomiting unless instructed to do so by poison center or physician.
INHALATION: Remove victim to fresh air and monitor. Seek medical advise if irritation persists.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

EYES: Severe burning sensation, damage marked by burns.
SKIN: Burning sensation, redness.

INGESTION: Irritation of mouth, throat, along with stomach upset, vomiting.

INHALATION: Irritation of nose, throat and lungs with coughing, sneezing, possible difficulty breathing.

ACUTE TOXICITY: Corrosive to eyes. Causes moderate to severe skin irritation. Harmful if swallowed.

NOTES TO PHYSICIAN: Probable mucosal damage may contraindicate the use of gastric lavage.

5. FIRE FIGHTING MEASURES

FLAMMABLE CLASS: None
EXTINGUISHING MEDIA: Not required.
EXPLOSION HAZARDS: None
HAZARDOUS DECOMPOSITION PRODUCTS: Decomposition products may include: Carbon dioxide, Carbon monoxide, nitrogen oxides.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Avoid runoff into storm sewers and ditches which lead to waterways.
LARGE SPILL: Avoid walking in material. Prevent product from entering into stream, soil, storm sewer or other bodies of water.

ENVIRONMENTAL PRECAUTIONS

WATER SPILL: Avoid discharges into open waterways.
LAND SPILL: Avoid discharge to soil.
AIR SPILL: NA = Not Applicable

GENERAL PROCEDURES: Isolate spill or leak area immediately. Keep unauthorized personnel away. Do not touch or walk through spilled material. Prevent entry into waterways, sewers, or confined areas. Absorb with dry earth, sand or other non-combustible material and transfer to containers.

RELEASE NOTES: Product is toxic to fish and aquatic invertebrates.
SPECIAL PROTECTIVE EQUIPMENT: Eye protection, rubber gloves, rubber boots to protect feet.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: Do not contaminate water, food, or feed by storage or disposal.
HANDLING: Avoid contact with skin and eyes. Wash hands before eating, drinking, smoking or using toilet facilities.
STORAGE: Store only in original container. Do not reuse empty container. If a leaky container must be contained within another, mark the outer container to identify the contents. Store pesticides away from food, pet food, feed, and water sources. Keep this product under locked storage sufficient to make it inaccessible to children or persons unfamiliar with its proper use.
STORAGE TEMPERATURE: Store at ambient temperatures.
STORAGE PRESSURE: Store at ambient atmospheric pressure.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Chemical splash goggles.
SKIN: Rubber or other chemical resistant gloves.
RESPIRATORY: A respirator is not needed under normal and intended conditions of product use.
WORK HYGIENIC PRACTICES: Wash with soap and water after handling. Do not eat, drink or smoke while using product.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid
ODOR: Clean & Fresh
ODOR THRESHOLD: Not Established
COLOR: Blue
pH: 10.0 to 12.0
PERCENT VOLATILE: >90
FLASH POINT AND METHOD: None
FLAMMABLE LIMITS: N/A
AUTOIGNITION TEMPERATURE: NA = Not Applicable
VAPOR PRESSURE: 20 mm Hg at (68°F)
VAPOR DENSITY: ~ 1 Air = 1
BOILING POINT: 212°F; 100°C
FREEZING POINT: 32°F; 0°C
THERMAL DECOMPOSITION: Not Available
SOLUBILITY IN WATER: Complete
EVAPORATION RATE: (Water =1) 1.0
DENSITY: 8.67 at 20°C (68°F)
SPECIFIC GRAVITY: 1.039 grams/ml. at 20°C (68°F)
VISCOSITY: Water thin.
(VOC): None

10. STABILITY AND REACTIVITY

REACTIVITY: Yes
HAZARDOUS POLYMERIZATION: Will not occur.
CONDITIONS TO AVOID: Not Established
HAZARDOUS DECOMPOSITION PRODUCTS: None Expected.
INCOMPATIBLE MATERIALS: Strong oxidizers

11. TOXICOLOGICAL INFORMATION

ACUTE

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ORAL LD₅₀ (rat)</th>
<th>DERMAL LD₅₀ (rabbit)</th>
<th>INHALATION LC₅₀ (rat)</th>
</tr>
</thead>
<tbody>
<tr>
<td>n-Alkyl dimethyl benzyl ammonium chloride (C12-C18)</td>
<td>&gt; 1890 mg/kg (rat)</td>
<td>&gt; 2000 mg/kg (rabbit)</td>
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<tr>
<td>N-alkyl Dimethyl Ethyl Benzyl Ammonium Chloride (C12-C14)</td>
<td>&gt; 500 mg/kg (rat)</td>
<td>&gt; 2000 mg/kg (rabbit)</td>
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<tr>
<td>Nonylphenol Ethoxylate</td>
<td>16000 mg/kg (rat)</td>
<td>4490 mg/kg (rabbit)</td>
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<td>Tetrasodium ethylenediamine tetraacetate</td>
<td>3030 mg/kg (rat)</td>
<td>&gt; 5000 mg/kg (rabbit)</td>
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<tr>
<td>Sodium Carbonate</td>
<td>~ 4090 mg/kg (rat)</td>
<td>N/A</td>
<td>~ 5750 mg/l</td>
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</table>

DERMAL LD₅₀: > 2000 mg/kg male and female rabbits.
ORAL LD₅₀: > 1890 mg/kg Male and Female rats.
EYE EFFECTS: Corrosive to eyes. Permanent damage may occur.
SKIN EFFECTS: Corrosive to skin.
CARCINOGENICITY
  IARC: No products were found.
CORROSIVITY: Corrosive
GENETIC EFFECTS: No known significant effects or critical hazards.
REPRODUCTIVE EFFECTS: No known significant effects or critical hazards.
TARGET ORGANS: No known significant effects or critical hazards.
MUTAGENICITY: No known significant effects or critical hazards.

12. ECOLOGICAL INFORMATION

ENVIRONMENTAL DATA: Not Established
ECOTOXICOLOGICAL INFORMATION: This product is toxic to fish and aquatic invertebrates.
AQUATIC TOXICITY (ACUTE): Not Established
CHEMICAL FATE INFORMATION: This product is biodegradable.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Attempt to use product completely in accordance with intended use. Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture or rinsate is a violation of federal law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste Representative at your local office, or the nearest EPA regional office for guidance.
FOR LARGE SPILLS: Consult with local and state authorities for large volume disposal.
EMPTY CONTAINER: Triple rinse container promptly after emptying. Fill container 1/4 full with water and recap. Shake for 10 seconds. Drain and repeat. Offer for recycling if available or puncture and dispose in a sanitary landfill, or by other procedures approved by state and local authorities.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)
  PROPER SHIPPING NAME: Not regulated.
  PLACARDS: None
  LABEL: None
  U.S. CUSTOMS HARMONIZATION NUMBER: 3808.94.0000
AIR (ICAO/IATA)
  SHIPPING NAME: Not regulated.
VESSEL (IMO/IMDG)
  SHIPPING NAME: Not regulated.

15. REGULATORY INFORMATION

UNITED STATES
DOT LABEL SYMBOL AND HAZARD CLASSIFICATION
SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)
  311/312 HAZARD CATEGORIES: Health - Acute
  FIRE: No PRESSURE GENERATING: No REACTIVITY: No ACUTE: Yes CHRONIC: No
  313 REPORTABLE INGREDIENTS: No listed substance
  302/304 EMERGENCY PLANNING
    EMERGENCY PLAN: No listed substance
TSCA (TOXIC SUBSTANCE CONTROL ACT)
  TSCA REGULATORY: All ingredients are listed on the TSCA Chemical Inventory.
STATES WITH SPECIAL REQUIREMENTS

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<th>Chemical Name</th>
<th>Requirements</th>
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<td>Nonylphenol Ethoxylate</td>
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<td>New Jersey Right To Know Substance</td>
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<tr>
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<td>New Jersey Right To Know Substance</td>
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CALIFORNIA PROPOSITION 65: No listed substance

FIFRA (FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT): Regulated

16. OTHER INFORMATION

PREPARED BY: Regulatory Affairs Department     Date Prepared: 11/13/2014

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MANUFACTURER DISCLAIMER: This company cannot anticipate all conditions of handling and use of this product. Therefore, this company accepts no responsibility for results obtained by the application of this information, or the safety and suitability of the product either alone or in combination with other products. It is the responsibility of the employer and/or user to provide a safe workplace, using health and safety information contained herein as a guide. This company will accept no liability for damages or losses incurred from the improper handling and use of this product.