SAFETY DATA SHEET

1. PRODUCT AND COMPANY IDENTIFICATION

Product Name: MICROBAN X-590 INSTITUTIONAL SPRAY
Product Code: LBD590XMLB-590
Customer Code: 221552000, 221553000

Other means of identification

Recommended Use: Professional Disinfectant
Uses advised against: Use only as stated on label.

Details of the supplier of the safety data sheet

Manufactured For / Distributed By
ProRestore Products
1016 Greentree Rd. #115
Pittsburgh, PA 15220
800-932-3030

Emergency telephone number

24 Hour Emergency Phone Number 1-800-535-5053

2. HAZARDS IDENTIFICATION

Classification

<table>
<thead>
<tr>
<th>Classification</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Acute toxicity - Oral</td>
<td>Not classified</td>
</tr>
<tr>
<td>Serious eye damage/eye irritation</td>
<td>Category 2</td>
</tr>
<tr>
<td>Specific target organ toxicity (single exposure)</td>
<td>Category 3</td>
</tr>
<tr>
<td>Flammable liquids</td>
<td>Category 3</td>
</tr>
</tbody>
</table>

Label elements

Emergency Overview

Warning

Hazard statements
Causes serious eye irritation
May cause drowsiness or dizziness

Flammable liquid and vapor
**Precautionary Statements - Prevention**
- Avoid breathing dust/fume/gas/mist/vapors/spray
- Use only outdoors or in a well-ventilated area
- Keep away from heat/sparks/open flames/hot surfaces. — No smoking
- Keep container tightly closed
- Ground/bond container and receiving equipment
- Use explosion-proof electrical/ventilating/lighting/equipment.
- Use only non-sparking tools
- Take precautionary measures against static discharge
- Wear protective gloves/protective clothing/eye protection/face protection
- Keep cool

**Precautionary Statements - Response**
- Specific Treatment (See Section 4 on the SDS)
  - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
  - IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.
  - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.
  - IF SWALLOWED: Rinse mouth. DO NOT induce vomiting. Drink plenty of water.

In case of fire: Use CO2, dry chemical, or foam for extinction.

**Precautionary Statements - Storage**
- Store in a well-ventilated place. Keep container tightly closed
- Store locked up

**Precautionary Statements - Disposal**
- Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

**Other Information**
Unknown Acute Toxicity

0% of the mixture consists of ingredient(s) of unknown toxicity

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>CAS No.</th>
<th>Weight-%</th>
<th>Trade Secret</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Propanol</td>
<td>67-63-0</td>
<td>10-30</td>
<td>*</td>
</tr>
<tr>
<td>Benzethonium Chloride</td>
<td>121-54-0</td>
<td>.1-1</td>
<td>*</td>
</tr>
<tr>
<td>2-Hydroxybiphenyl</td>
<td>90-43-7</td>
<td>.1-1</td>
<td>*</td>
</tr>
</tbody>
</table>

### 4. FIRST AID MEASURES

**First aid measures**

**General advice**
Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). If symptoms persist, call a physician.
Skin Contact  Wash off immediately with plenty of water. Immediate medical attention is not required. Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. If skin irritation persists, call a physician.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. If symptoms persist, call a physician. Rinse thoroughly with plenty of water for at least 15 minutes, lifting lower and upper eyelids. Consult a physician. Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing.

Inhalation Remove to fresh air. If symptoms persist, call a physician. Immediate medical attention is not required. Move to fresh air in case of accidental inhalation of vapors.

Ingestion Immediate medical attention is not required. Rinse mouth. Drink plenty of water. Do NOT induce vomiting. Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Call a physician.

Self-protection of the first aider Remove all sources of ignition. Use personal protective equipment as required.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

Unsuitable extinguishing media Do not use a solid water stream as it may scatter and spread fire.

Protective equipment and precautions for firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required. Keep people away from and upwind of spill/leak.

Environmental precautions Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system.

Methods and material for containment and cleaning up

Methods for containment Prevent further leakage or spillage if safe to do so. Pick up and transfer to properly labeled containers. Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Soak up with inert absorbent material.

7. HANDLING AND STORAGE
Precautions for safe handling

Advice on safe handling

Ensure adequate ventilation, especially in confined areas. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. All equipment used when handling the product must be grounded. Use with local exhaust ventilation. Use personal protective equipment as required. Do not breathe dust/fume/gas/mist/vapors/spray.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep tightly closed in a dry and cool place. Keep in properly labeled containers. Keep containers tightly closed in a cool, well-ventilated place.

Incompatible materials

None known based on information supplied.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Guidelines

This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH TLV</th>
<th>OSHA PEL</th>
<th>NIOSH IDLH</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Propanol</td>
<td>STEL: 400 ppm</td>
<td>TWA: 400 ppm</td>
<td>IDLH: 2000 ppm</td>
</tr>
<tr>
<td>67-63-0</td>
<td>TWA: 200 ppm</td>
<td>TWA: 980 mg/m³</td>
<td>TWA: 400 ppm</td>
</tr>
<tr>
<td></td>
<td>(vacated) TWA: 400 ppm</td>
<td>(vacated) TWA: 980 mg/m³</td>
<td>(vacated) STEL: 500 ppm</td>
</tr>
<tr>
<td></td>
<td>(vacated) STEL: 1225 mg/m³</td>
<td>TWA: 980 mg/m³</td>
<td>(vacated) STEL: 1225 mg/m³</td>
</tr>
</tbody>
</table>

NIOSH IDLH Immediately Dangerous to Life or Health

Other Information

Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

Appropriate engineering controls

Engineering Controls

Showers, Eyewash stations & Ventilation systems

Individual protection measures, such as personal protective equipment

Eye/face protection

Wear safety glasses with side shields (or goggles).

Skin and body protection

No special technical protective measures are necessary.

Respiratory protection

If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

General Hygiene

When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.
9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
<th>Remarks • Method</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical state</td>
<td>Liquid</td>
<td></td>
</tr>
<tr>
<td>Appearance</td>
<td>Opaque</td>
<td></td>
</tr>
<tr>
<td>Color</td>
<td>Green</td>
<td></td>
</tr>
<tr>
<td>Odor</td>
<td>Pleasant</td>
<td></td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No Information available</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.5 - 7.5</td>
<td></td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>.96</td>
<td></td>
</tr>
<tr>
<td>Viscosity</td>
<td>Water Thin</td>
<td></td>
</tr>
<tr>
<td>Melting point/freezing point</td>
<td>No Information available</td>
<td></td>
</tr>
<tr>
<td>Flash point</td>
<td>27 °C 77 °F</td>
<td></td>
</tr>
<tr>
<td>Boiling point / boiling range</td>
<td>No Information available</td>
<td>/</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Same as water</td>
<td></td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Flammability Limits in Air</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Upper flammability limit</td>
<td>No Information available</td>
<td></td>
</tr>
<tr>
<td>Lower flammability limit</td>
<td>No Information available</td>
<td></td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>No Information available</td>
<td></td>
</tr>
<tr>
<td>Vapor density</td>
<td>No Information available</td>
<td></td>
</tr>
<tr>
<td>Water solubility</td>
<td>Miscible in water</td>
<td></td>
</tr>
<tr>
<td>Partition coefficient</td>
<td>No Information available</td>
<td></td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No Information available</td>
<td></td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No Information available</td>
<td></td>
</tr>
<tr>
<td>Density Lbs/Gal</td>
<td>8</td>
<td></td>
</tr>
<tr>
<td>VOC Content (%)</td>
<td>25.29</td>
<td></td>
</tr>
</tbody>
</table>

10. STABILITY AND REACTIVITY

Reactivity
No data available

Stability
Stable under recommended storage conditions.

Possibility of Hazardous Reactions
None under normal processing.

Conditions to avoid
Heat, flames and sparks.

Incompatible materials
None known based on information supplied.

Hazardous Decomposition Products
None known based on information supplied.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

<table>
<thead>
<tr>
<th>Route</th>
<th>Effect</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inhalation</td>
<td>No data available.</td>
</tr>
<tr>
<td>Eye contact</td>
<td>Severely irritating to eyes.</td>
</tr>
<tr>
<td>Skin Contact</td>
<td>Prolonged contact may cause redness and irritation.</td>
</tr>
<tr>
<td>Ingestion</td>
<td>May be harmful if swallowed.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Propanol</td>
<td>= 1870 mg/kg (Rat)</td>
<td>= 4059 mg/kg (Rabbit)</td>
<td>= 72600 mg/m³ (Rat) 4 h</td>
</tr>
</tbody>
</table>
Octylphenol Ethoxylate 9036-19-5 = 1700 mg/kg (Rat) = 4190 mg/kg (Rat)

Information on toxicological effects

Symptoms
No Information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Sensitization
No Information available.

Germ cell mutagenicity
No Information available.

Carcinogenicity
The table below indicates whether each agency has listed any ingredient as a carcinogen.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>ACGIH</th>
<th>IARC</th>
<th>NTP</th>
<th>OSHA</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Propanol 67-63-0</td>
<td>-</td>
<td>Group 3</td>
<td>-</td>
<td>X</td>
</tr>
<tr>
<td>2-Hydroxybiphenyl 90-43-7</td>
<td>-</td>
<td>Group 3</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

_IARC (International Agency for Research on Cancer)_
Not classifiable as a human carcinogen

_OSHA (Occupational Safety and Health Administration of the US Department of Labor)_
X - Present

Reproductive toxicity
No Information available.

STOT - single exposure
No Information available.

STOT - repeated exposure
No Information available.

Chronic toxicity
Avoid repeated exposure.

Target organ effects
EYES, Respiratory system, Skin.

Aspiration hazard
No Information available.

Numerical measures of toxicity - Product Information

Unknown Acute Toxicity
0% of the mixture consists of ingredient(s) of unknown toxicity

The following values are calculated based on chapter 3.1 of the GHS document

12. ECOLOGICAL INFORMATION

Ecotoxicity

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>Algae/aquatic plants</th>
<th>Fish</th>
<th>Crustacea</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Propanol 67-63-0</td>
<td>1000: 96 h Desmodesmus subspicatus mg/L EC50 1000: 72 h Desmodesmus subspicatus mg/L EC50</td>
<td>9640: 96 h Pimephales promelas mg/L LC50 flow-through 11130: 96 h Pimephales promelas mg/L LC50 static 1400000: 96 h Lepomis macrochirus µg/L LC50</td>
<td>13299: 48 h Daphnia magna mg/L EC50</td>
</tr>
<tr>
<td>2-Hydroxybiphenyl 90-43-7</td>
<td>0.85: 72 h Desmodesmus subspicatus mg/L EC50</td>
<td>3.4: 96 h Pimephales promelas mg/L LC50 flow-through 2.74: 96 h Lepomis macrochirus mg/L LC50 2.75: 96 h Oncorhynchus mykiss mg/L LC50 5.8: 96 h Poecilia reticulata mg/L LC50 static</td>
<td>1 - 2.5: 48 h Daphnia magna mg/L EC50 Static</td>
</tr>
</tbody>
</table>

Persistence and degradability
No Information available.

Bioaccumulation
No Information available.
2-Propanol
67-63-0
0.05
2-Hydroxybiphenyl
90-43-7
3.18

Other adverse effects
This pesticide is toxic to fish and aquatic invertebrates.
Do not discharge effluent containing this product into lakes, streams, ponds, estuaries, oceans or other water unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit and the permitting authority has been notified in writing prior to the discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State water board or Regional office of the EPA.

13. DISPOSAL CONSIDERATIONS

Waste treatment methods
Disposal of wastes
70385-4 Pesticide Disposal:
To avoid wastes, use all material in this container by application according to label directions. If wastes cannot be avoided, off remaining product to a waste disposal facility or pesticide disposal program (often such programs are run by state or local governments or by industry).

73085-4 Container Disposal:
Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. If recycling is not available, puncture and dispose of in a sanitary landfill, or incineration, or if allowed by state and local authorities, by burning. If burned, stay out of smoke.

Contaminated packaging
Do not reuse container.

US EPA Waste Number
D001

This product contains one or more substances that are listed with the State of California as a hazardous waste.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Hazardous Waste Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Propanol</td>
<td>Toxic Ignitable</td>
</tr>
</tbody>
</table>

14. TRANSPORT INFORMATION

Note: The basic description below is specific to the container size. This information is provided for at a glance DOT information. Please refer to the container and/or shipping papers for the appropriate shipping description before tendering this material for shipment. For additional information, please contact the distributor listed in section 1 of this SDS.

U.S. Department of Transportation (USDOT)

4x1 Gallon Case
Compound Cleaning Liquid, NOI, LTD QTY (LTDY)

Pails & Drums (<119 Gallons)
UN1993, FLAMMABLE LIQUID, NOS, (CONTAINS ISOPROPA NOL), 3, III (HM-FS3A)

DOT Notes
This SDS is a universal document for all package/container sizes. This product is a PG III and MAY be transported under 49CFR as a “Limited Quantity or LTD QTY” in 4x1 gallon or smaller packages. Refer to package markings and/or shipping paper for an accurate basic description.

15. REGULATORY INFORMATION

International Inventories

<table>
<thead>
<tr>
<th>TSCA</th>
<th>DSL/NDSL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Complies</td>
<td>Complies</td>
</tr>
</tbody>
</table>
US Federal Regulations

**SARA 313**
Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>SARA 313 - Threshold Values %</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Propanol - 67-63-0</td>
<td>1.0</td>
</tr>
</tbody>
</table>

**SARA 311/312 Hazard Categories**

- Acute health hazard: Yes
- Chronic Health Hazard: No
- Fire hazard: Yes
- Reactive Hazard: No
- Sudden release of pressure hazard: No

**CWA (Clean Water Act)**
This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

**CERCLA**
This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations

**California Proposition 65**
This product contains chemicals known to the state of California to cause cancer, or birth defects or other reproductive harm.

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>California Proposition 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Hydroxybiphenyl - 90-43-7</td>
<td>Carcinogen</td>
</tr>
</tbody>
</table>

U.S. State Right-to-Know Regulations

<table>
<thead>
<tr>
<th>Chemical Name</th>
<th>New Jersey</th>
<th>Massachusetts</th>
<th>Pennsylvania</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-Propanol - 67-63-0</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>2-Hydroxybiphenyl 90-43-7</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
<tr>
<td>Propylene Glycol 57-55-6</td>
<td>X</td>
<td>-</td>
<td>X</td>
</tr>
</tbody>
</table>

**U.S. EPA Label Information**

**EPA Pesticide Registration Number** 70385-4

**EPA Statement**
This chemical is a pesticide product registered by the Environmental Protection Agency and is subject to certain labeling requirements under federal pesticide law. These requirements differ from the classification criteria and hazard information required for safety data sheets, and for workplace labels of non-pesticide chemicals. Following is the hazard information as required on the pesticide label:

**EPA Pesticide Label**

**WARNING** May be harmful if swallowed (inhaled or absorbed through the skin). Do not breathe vapors (dust or spray mist). Do not get in eyes, on skin or on clothing. May cause eye (and skin) irritation.
Additional information
No Information available.

16. OTHER INFORMATION

<table>
<thead>
<tr>
<th>Health hazards</th>
<th>Flammability</th>
<th>Physical hazards</th>
<th>Personal protection</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>3</td>
<td>0</td>
<td>B</td>
</tr>
</tbody>
</table>

Prepared By Regulatory Department
Issue Date 23-Mar-2015
Revision Date 24-Mar-2015

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet