RINGER SOLUTION, MAMMALIAN

Section 1 - Product Description

Product Name: Ringer Solution, Mammalian
Product Code(s): 88-6521, 88-6523
Size: 500 mL, 1 L
Chemical Name: N/A
CAS Number: See Section 3
Formula: See Section 3
Synonyms: N/A
Distributor: Carolina Biological Supply Company, 2700 York Road, Burlington, NC  27215
Chemical Information: 800-227-1150 (8am-5pm (ET) M-F) Chemtrec 800-424-9300 (Transportation Spill Response 24 hours)

Section 2 - Hazard Identification

Emergency Overview: Non-Hazardous under normal use.
Potential Health Effects:
Eyes: May cause irritation.
Skin: May cause irritation to skin.
Ingestion: May cause gastrointestinal discomfort.
Inhalation: May cause irritation to respiratory tract.

Section 3 - Composition / Information on Ingredients

Principal Hazardous Components: Sodium Bicarbonate (CAS#144-55-8) 0.208%; Magnesium Chloride (CAS#7791-18-6) 0.120%; Calcium Chloride, Dihydrate (CAS#10035-04-8) 0.037; Potassium Chloride (CAS#7447-40-7) 0.035%; Sodium Chloride (CAS#7647-14-5) 0.684%
TLV units: N/A
PEL units: N/A

Section 4 - First Aid Measures

Emergency and First Aid Procedures:
Eyes - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
Skin - After contact with skin, take off immediately all contaminated clothing, and wash immediately with plenty of ... (Water, unless specified as a water reactive material).
Ingestion - If swallowed, rinse mouth with water (only if the person is conscious).
**Inhalation** - In case of accident by inhalation: remove casualty to fresh air and keep at rest.

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### Section 5 - Firefighting Procedures

Flash Point (Method Used): N/A  
NFPA Rating:  
  Health: 0  
  Fire: 0  
  Reactivity: 0  
Extinguisher Media: Use media suitable to extinguish surrounding fire.  
Flammable Limits in Air % by Volume: N/A  
Autoignition Temperature: N/A  
Special Firefighting Procedures: Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus.  
Unusual Fire and Explosion Hazards: N/A

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### Section 6 - Spill or Leak Procedures

Steps to Take in Case Material Is Released or Spilled: Ventilate area of spill. Eliminate all sources of ignition. Remove all non-essential personnel from area. Clean-up personnel should wear proper protective equipment and clothing. Absorb material with suitable absorbent and containerize for disposal.

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### Section 7 - Special Precautions

Precautions to Take in Handling or Storing: Keep container tightly closed in a cool, well-ventilated place.

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### Section 8 - Protection Information

Respiratory Protection (Specify Type): None needed under normal conditions of use with adequate ventilation. A NIOSH/MSHA chemical cartridge respirator should be worn if PEL or TLV is exceeded.  
Ventilation:  
  Local Exhaust: Yes  
  Mechanical(General): Yes  
  Special: No  
  Other: No  
Protective Gloves: Natural rubber, Neoprene, PVC or equivalent.  
Eye Protection: Splash proof chemical safety goggles should be worn.  
Other Protective Clothing or Equipment: Lab coat, apron, eye wash, safety shower.

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### Section 9 - Physical Data

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Molecular Weight</td>
<td>N/A</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>Approximately 100 °C</td>
</tr>
<tr>
<td>Vapor Density(Air=1):</td>
<td>N/A</td>
</tr>
<tr>
<td>Percent Volatile by Volume:</td>
<td>Approximately 98%</td>
</tr>
<tr>
<td>Solubility in Water:</td>
<td>Soluble</td>
</tr>
<tr>
<td>Melting Point</td>
<td>Approximately 0 °C</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>Approximately 17.535 at 20 °C</td>
</tr>
<tr>
<td>Specific Gravity (H2O=1):</td>
<td>Approximately 1</td>
</tr>
<tr>
<td>Evaporation Rate (BuAc=1):</td>
<td>1</td>
</tr>
<tr>
<td>Appearance and Odor:</td>
<td>Colorless, odorless solution.</td>
</tr>
</tbody>
</table>

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### Section 10 - Reactivity Data

Stability: Stable  
Conditions to Avoid: N/A  
Incompatibility (Materials to Avoid): Water-reactive Material,  
Hazardous Decomposition Products: N/A
Hazardous Polymerization: Will not occur

Section 11 - Toxicity Data

Toxicity Data: (Sodium Bicarbonate) orl-rat LD50  4220 mg/kg
(Magnesium chloride) orl-rat LD50  8100 mg/kg
(Calcium chloride, Dihydrate) orl-rat LD50  1000 mg/kg
(Potassium chloride) orl-rat LD50  2600 mg/kg
(Sodium chloride) orl-rat LD50  3000 mg/kg

Effects of Overexposure:
Acute: See Section 2
Chronic: Not listed as a carcinogen by IARC, NTP or OSHA.

Conditions Aggravated by Overexposure: N/A
Target Organs: N/A
Primary Route(s) of Entry: N/A

Section 12 - Ecological Data

EPA Waste Numbers: N/A

Section 13 - Disposal Information

Waste Disposal Methods: Dispose in accordance with all applicable Federal, State and Local regulations. Always contact a permitted waste disposer (TSD) to assure compliance.

Section 14 - Transport Information

DOT Proper Shipping Name: N/A

Section 15 - Regulatory Information

EPA TSCA Status: On TSCA Inventory
Hazard Category for SARA Section 311/312 Reporting: Acute

Name List: Chemical Category:
Sodium Bicarbonate - No Sodium Bicarbonate - No
Magnesium Chloride - No Magnesium Chloride - No
Calcium Chloride, Dihydrate - No Calcium Chloride, Dihydrate - No
Potassium Chloride - No Potassium Chloride - No
Sodium Chloride - No Sodium Chloride - No

CERCLA Section 103 RQ(lb.): Sodium Bicarbonate - No
Magnesium Chloride - No
Calcium Chloride, Dihydrate - No
Potassium Chloride - No
Sodium Chloride - No

RCRA Section 261.33: Sodium Bicarbonate - No
Magnesium Chloride - No
Calcium Chloride, Dihydrate - No
Potassium Chloride - No
Sodium Chloride - No
Section 16 - Additional Information

The information provided in this Material Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the Material Safety Data Sheet. Any employer must carefully assess the applicability of any information contained herein in regards to the particular use to which the employer puts the material.

Glossary
ACGIH    American Conference of Governmental Industrial Hygienists
CAS Number    Chemical Services Abstract Number
CERCLA    Comprehensive Environmental Response, Compensation, and Liability Act
DOT    U.S. Department of Transportation
IARC    International Agency of Research on Cancer
N/A    Not Available
NTP    National Toxicology Program
OSHA    Occupational Safety and Health Administration
PEL    Permissible Exposure Limit
ppm    Parts per million
RCRA    Resource Conservation and Recovery Act
SARA    Superfund Amendments and Reauthorization Act
TLV    Threshold Limit Value
TSCA    Toxic Substances Control Act