

**MATERIAL SAFETY DATA SHEET**

R  
CAROLINA BIOLOGICAL

Revised: 09/05/00  
Replaces: None  
Printed: 08/04/02

**1. PRODUCT DESCRIPTION**

Product Name: Ringer Solution, Mammalian  
Product Code(s): 88-6521, 88-6523  
Size: 500 mL, 1 L  
Chemical Name: No data available  
CAS Number: See section 2  
Formula: See section 2  
Synonyms: None  
Distributor: Carolina Biological Supply Company  
2700 York Road  
Burlington, NC 27215

Chemical Information: 800-227-1150 (8am-5pm (ET) M-F)  
Chemtrec (Transportation Spill Response 24 hours): 800-424-9300

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Principle Hazardous Components: Sodium Chloride(cas#7647-14-5)0.684%  
Potassium Chloride(cas#7447-40-7)0.035%, Calcium Chloride, Dihydrate  
(cas#10035-04-8)0.037%, Magnesium Chloride(cas#7791-18-6)0.120%,  
Sodium Bicarbonate(cas#144-55-8)0.208%  
TLV and PEL units: None established

**3. HAZARD IDENTIFICATION**

Emergency Overview: This product is not expected to be a hazard under normal condition of use with adequate ventilation.

Potential Health Effects:

Eyes: May cause irritation.

Skin: May cause irritation.

Ingestion: May cause gastrointestinal discomfort.

Inhalation: May cause irritation to respiratory tract.

**4. FIRST AID MEASURES**

Emergency and First Aid Procedures:

Eyes - Flush with water for at least 15 minutes, raising and lowering eyelids occasionally. Get medical attention if irritation persists.  
Skin - Thoroughly wash exposed area for at least 15 minutes. Remove contaminated clothing. Launder contaminated clothing before reuse. Get medical attention if irritation persists.

Ingestion - If swallowed, if conscious, give plenty of water.

Immediately call a physician or poison control center. Never give anything by mouth to an unconscious person.

Inhalation - Remove to fresh air. Give oxygen if breathing is difficult; give artificial respiration if breathing has stopped. Keep person warm, quiet, and get medical attention.

**5. FIREFIGHTING PROCEDURES**

Flash Point(Method Used): N/A

NFPA Rating: None established

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

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self-contained breathing apparatus.  
Unusual Fire and Explosion Hazards: None

### **6. SPILL OR LEAK PROCEDURES**

Steps to be Taken 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.

### **7. SPECIAL PRECAUTIONS**

Precautions to be Taken in Handling or Storing: Store tightly closed in an area suitable for general chemical storage.

### **8. SPECIAL PROTECTION INFORMATION**

Respiratory Protection(Specify Type):

A NIOSH/MSHA chemical cartridge respirator should be worn if PEL or TLV is exceeded.

Ventilation:

Local Exhaust: No  
Mechanical(General): No  
Special: No  
Other: No

Protective Gloves:

Rubber, neoprene, PVC, or equivalent.

Eye Protection:

Splash proof chemical safety goggles should be worn at all times.

Other Protective Clothing or Equipment:

Lab coat, eye wash, and safety shower.

### **9. PHYSICAL DATA**

Molecular Weight: N/A  
Melting Point: Approximately 0 C  
Boiling Point: Approximately 100 C  
Vapor Pressure: Approximately 17.535 at 20 C  
Vapor Density(Air=1): N/A  
Specific Gravity(H2O=1): Approximately 1  
Percent Volatile by Volume: Approximately 98%  
Evaporation Rate(H2O=1): 1  
Solubility in Water: Completely soluble, product is an aqueous solution  
Appearance and Odor: Clear, colorless solution with no odor.

### **10. REACTIVITY DATA**

Stability: Stable  
Conditions to Avoid: None  
Incompatibility(Materials to Avoid): Water reactive materials.  
Hazardous Decomposition Products: None  
Hazardous Polymerization: Will not occur

### **11. TOXICITY DATA**

Toxicity Data:

Sodium chloride- LD50(oral-rat)- 3000 mg/kg, LD50 (ipr-mouse)-6614 mg/kg  
Potassium chloride-LD50(oral-rat)-2600 mg/kg, LD50(ivn-rat)-39mg/kg

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Calcium chloride, Dihydrate-LD50(ipr-mouse)-20,500 mg/kg  
Magnesium chloride-(1 M), LDLo(orl-mouse): 5,000 mg/kg  
Sodium Bicarbonate-LD50(orl-rat)4220 mg/kg

Effects of Overexposure:

Acute: See section 3

Chronic:

Potassium Chloride: Mutation data cited. Not listed as causing cancer by IARC, NTP, or OSHA.

Sodium chloride: Mutation data cited. Reproductive data cited. Not listed

as causing cancer by IARC, NTP or OSHA.

Calcium chloride, Dihydrate: No chronic effects data found. Not listed as

causing cancer by IARC, NTP or OSHA.

Magnesium sulfate: (1 M) Mutation data cited. Reproductive effects data cited. Not listed as causing cancer by IARC, NTP or OSHA.

Sodium bicarbonate: Reproductive effects data cited. Not listed as causing

cancer by IARC, NTP or OSHA.

Conditions Aggravated by Overexposure: No data available

Target Organs: No data available

Primary Route(s) of Entry: No data available

### 12. ECOLOGICAL DATA

EPA Waste Numbers: None

### 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.

### 14. TRANSPORT INFORMATION

Non-regulated

### 15. REGULATORY INFORMATION

EPA TSCA Status: On TSCA Inventory

Hazard Category for SARA Section 311/312 Reporting: Acute

Product or Components	SARA EHS Sec. 302 TPQ	SARA Sec. 313 Chemicals		CERCLA Sec. 103 RQ lbs.	RCRA Sec.
		Name	Chemical List Category		
261.33					

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Sodium Chloride	No	No	No	No	No
Potassium-Chloride	No	No	No	No	No
Calcium-Chloride, Dihydrate	No	No	No	No	No
Magnesium-Sulfate	No	No	No	No	No

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Sodium- Bicarbonate	No	No	No	No	No
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### **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