



Boston BioProducts, Inc

425 Fortune Blvd.

Milford, MA 01757

SAFETY DATA SHEET

SECTION 1 - PRODUCT AND COMPANY IDENTIFICATION

- 1.1** PRODUCT NAME: Krebs-Ringer Solution (HEPES Buffered)
CATALOG # BSS-260
- 1.2** RECOMMENDED USE: Research Use or Further Manufacturing
- 1.3** COMPANY IDENTIFICATION: Boston BioProducts, Inc.
425 Fortune Blvd. Milford, MA 01757
- 1.4** EMERGENCY CONTACT: 1-800-535-5053
TOLL FREE NUMBER: 1-888-881-8691

SECTION 2 - HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS) and Classification under 2012 OSHA

Classification on available data it is not hazardous.

Signal word: None

Hazard statement(s): Not hazardous

Precautionary statements: None

P101	If medical advice is needed, have product container or label at hand
P102	Keep out of reach of children.
P501	Dispose of contents/ container to an approved waste disposal plant.

SECTION 3- COMPOSITION/INFORMATION ON INGREDIENTS

Composition: 120 mM Sodium Chloride, 5 mM Potassium Chloride, 2 mM Calcium Chloride Dihydrate, 25 mM Sodium Bicarbonate, 1 mM Magnesium Chloride Hexahydrate, 5.5 mM HEPES, 1 mM Dextrose (Glucose), pH 7.40 \pm 0.20.

Component	CAS Number	Concentration
Sodium Chloride	7647-14-5	0.70%
Potassium Chloride	7447-40-7	0.04%
Calcium Chloride Dihydrate	10035-04-8	0.03%
Sodium Bicarbonate	144-55-8	0.21%
Magnesium Chloride Hexahydrate	7791-18-6	0.02%
HEPES	7365-45-9	0.13%
Dextrose (Glucose)	50-99-7	0.02%
Water	7732-18-5	Rest

SECTION 4 - FIRST-AID MEASURES

4.1 Description of first aid measures

General advice: Consult a doctor and show this safety data sheet.



- i. **If inhaled:** Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.
- ii. **In case of skin contact:** Immediately wash skin with copious amounts of soap and water for at least 15 minutes. Remove contaminated clothing and shoes and wash before reuse. Consult a doctor.
- iii. **In case of eye contact:** Flush with copious amounts of water for at least 15 minutes. Consult a doctor.
- iv. **If swallowed:** Rinse mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Consult a doctor.

4.2 Most important symptoms and effects, both acute and delayed: To the best of our knowledge, the chemical, physical and toxicological properties have not been thoroughly investigated.

4.3 Indication of immediate medical attention and special treatment needed: Show this safety data sheet to the doctor in attendance. Immediate medical attention is required.

SECTION 5 - FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide

5.2 Special hazards arising from the substance or mixture: Carbon oxides, Sodium oxides.

5.3 Precautions for fire-fighters: Wear suitable protective clothing to prevent contact with skin and eyes and self-contained breathing apparatus.

5.4 Further information: No data available

SECTION 6 - ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment, and emergency procedures: Do not take action without suitable protective clothing - see section 8 of SDS. Evacuate personnel to safe areas. Ensure adequate ventilation. Avoid breathing vapors, mist, dust, or gas.

6.2 Environmental precautions: Do not let product enter drains.

6.3 Methods and materials for containment and cleaning up: Cover spillage with suitable absorbent material. Using non-spark tools sweep up material and place in an appropriate container. Decontaminate spill site with 10% caustic solution and ventilate area until after disposal is complete. Hold all material for appropriate disposal as described under section 13 of SDS.

6.4 Reference to other sections: For required PPE see section 8. For disposal see section 13.

SECTION 7 - HANDLING AND STORAGE

7.1 Precautions for safe handling: Use in a chemical fume hood, with air supplied by an independent system. Avoid inhalation, contact with eyes, skin, and clothing. Avoid the formation of dust and aerosols. Use in a well-ventilated area. Keep away from sources of ignition. Avoid prolonged or repeated exposure.

7.2 Conditions for safe storage, including any incompatibilities: Store in cool, well-ventilated area. Keep away from direct sunlight. Keep container tightly sealed until ready for use. Keep in a dry place.

7.3 Specific end use(s): Use in a laboratory fume hood where possible.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters: Contains no substances with occupational exposure limit values.



8.2 Exposure Controls/Personal Protection

- i. **Respiratory Protection:** This product does not contain any hazardous materials and no protective equipment is needed.
- ii. **Control of environmental exposure:** None required.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Appearance	Clear, Colorless Liquid	Vapor Pressure	No Data Available
Odor	No Data Available	Vapor Density	No Data Available
Odor Threshold	No Data Available	Relative Density	No Data Available
pH	7.40 ± 0.20	Water Solubility	Soluble
Melting / Freezing Point	No Data Available	Partition Coefficient	No Data Available
Initial Boiling Point Range	No Data Available	Auto-Ignition Temperature	No Data Available
Flash Point	No Data Available	Decomposition Temperature	No Data Available
Evaporation Rate	No Data Available	Viscosity	No Data Available
Flammability (Solid, Gas)	No Data Available	Explosive Properties	No Data Available
Upper / Lower Flammability or Explosive Limits	No Data Available	Oxidizing Properties	No Data Available

SECTION 10 - STABILITY AND REACTIVITY

Stability: Stable under recommended storage conditions.

Hazardous Decomposition Products/Hazardous Polymerization: None known, based on information available.

Incompatibilities: No Data Available.

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute Toxicity		
LD50 Oral	LD50Dermal	LC50 inhalation
Not Listed	Not Listed	Not Listed

Other adverse effects: No data available

Chronic Toxicity: There are no known carcinogenic chemicals in this product.

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity Persistence and degradability/ Bioaccumulative potential: Disposal safe

Results of PBT and vPvB assessment/ Mobility in soil: No data available

Other adverse effects: No data available

Chronic Toxicity: There are no known carcinogenic chemicals in this product.

SECTION 13 - DISPOSAL CONSIDERATIONS

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state, and local requirements.



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SECTION 14 - TRANSPORT INFORMATION

DOT	TDG	IATA	IMDG/IMO
Not regulated	Not regulated	Not regulated	Not regulated

SECTION 15 - REGULATORY INFORMATION

INTERNATIONAL INVENTORIES

TSCA	DSL	NDSL	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Listed	Listed	-	-		Listed	Listed	Listed	Listed	Listed

USA FEDERAL REGULATION

SARA 311/312 HAZARDOUS CATEGORIZATION

Acute Health Hazard	Chronic Health Hazard	Fire Hazard	Sudden Release of Pressure Hazard	Reactive Hazard
-	No	No	No	No

TSCA 12(b)/ CERCLA/OSHA/ SARA 313/ Clean Water Act/ Clean Air Act: Not Applicable
California Proposition 65: This product does not contain any Proposition 65 chemicals.

HMIS Rating

Health hazard	Chronic Health Hazard	Flammability	Physical Hazard
0	0	0	0

NFPA Rating

Health Hazard	Fire Hazard	Reactivity Hazard
0	0	0

STATE RIGHT TO KNOW

Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
-	Listed	Listed	-	-

US DEPARTMENT OF TRANSPORTATION

REPORTABLE QUANTITY (RQ)	DOT MARINE POLLUTANT	DOT SEVER MARINE POLLUTANT
No	No	No

U.S. DEPARTMENT OF HOMELAND SECURITY: This product does not contain any DHS chemicals.

Canada: This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the SDS contains all the information required by the CPR.

This SDS complies with the requirements of Regulation (EC)



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SECTION 16 - OTHER INFORMATION

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Boston BioProducts, Inc. shall not be held liable for any damage resulting from handling or from contact with the above product. This product is sold for laboratory research and development purposes use only.

Revised: 2025