



## **SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION**

- ## **SECTION 2 - HAZARDS IDENTIFICATION**

**GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)**

**Hazard statement(s):**

**Precautionary statements:**

Page 1 of 7



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P321	Specific treatment (see supplemental first aid instructions on this label).
P363	Wash contaminated clothing before reuse.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

### **SECTION 3 - COMPOSITION/INFORMATION ON INGREDIENTS**

**Composition:** 20 mM HEPES, 20% Glycerol, 500 mM Potassium Chloride, 1.5 mM Magnesium Chloride, Phosphotungstic Acid Hydrate, pH 7.0 ± 0.15. Prepared in 18.2 megohms-cm ± 1 water and filtered through 0.22-micron filter.

<b>Component</b>	<b>CAS Number</b>	<b>Concentration (%)</b>
HEPES	7365-45-9	0.48%
Glycerol	56-81-5	20%
Potassium Chloride	7447-40-7	3.73%
Magnesium Chloride	7786-30-3	0.014%
Phosphotungstic Acid Hydrate (PTA)	12501-23-4	<b>NO INFORMATION</b>
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.

- If inhaled:** Remove to fresh air and monitor breathing. If breathing becomes difficult, give oxygen. If breathing stops, give artificial respiration. Consult a doctor.
- 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.
- In case of eye contact:** Flush with copious amounts of water for at least 15 minutes. Consult a doctor.
- 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:** No Data Available.

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



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**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**

- i. **Appropriate engineering controls:** Use in a fume hood where applicable. Ensure all engineering measures described under section 7 of SDS are in place. Ensure laboratory is equipped with a safety shower and eye wash station.

### **8.3 Personal protective equipment**

- i. **Eye/face protection:** Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).
- ii. **Skin protection:** Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166
- iii. **Body Protection:** Wear appropriate protective clothing. Complete suit protecting against chemicals, the type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.
- iv. **Respiratory Protection:** Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
- v. **Control of environmental exposure:** Do not let product enter drains

## **SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES**

### **Information on basic physical and chemical properties**

<b>Appearance</b>	Liquid	<b>Vapor Pressure</b>	No Data Available
<b>Odor</b>	No Data Available	<b>Vapor Density</b>	No Data Available



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<b>Odor Threshold</b>	No Data Available	<b>Relative Density</b>	No Data Available
<b>pH</b>	7.0	<b>Water Solubility</b>	No Data Available
<b>Melting / Freezing Point</b>	No Data Available	<b>Partition Coefficient</b>	No Data Available
<b>Initial Boiling Point Range</b>	No Data Available	<b>Auto-Ignition Temperature</b>	No Data Available
<b>Flash Point</b>	No Data Available	<b>Decomposition Temperature</b>	No Data Available
<b>Evaporation Rate</b>	No Data Available	<b>Viscosity</b>	No Data Available
<b>Flammability (Solid, Gas)</b>	No Data Available	<b>Explosive Properties</b>	No Data Available
<b>Upper / Lower Flammability Or Explosive Limits</b>	No Data Available	<b>Oxidizing Properties</b>	No Data Available

#### **SECTION 10 - STABILITY AND REACTIVITY**

**Stability:** Stable under recommended storage conditions.

**Hazardous Decomposition Products/ Hazardous Polymerization:** No Data Available.

**Incompatibilities:** Strong Oxidizing Agents.

#### **SECTION 11 - TOXICOLOGICAL INFORMATION**

##### **Acute Toxicity:**

LD50 Oral (Glycerol)	Rat – 12,600 mg/kg
LD50 Dermal (Glycerol)	Rabbit - > 10,000 mg/kg
LC50 Inhalation (Glycerol)	No data available.
LD50 Oral (Potassium Chloride)	No data available. (Potassium Chloride)
LD50 Dermal (Potassium Chloride)	No data available. (Potassium Chloride)
LC50 Inhalation (Potassium Chloride)	No data available. (Potassium Chloride)

##### **Skin Corrosion/Irritation:**

Skin – Rabbit (Glycerol)

Result: Mild skin irritation – 24 h (Glycerol)

No data available. (Potassium Chloride)

##### **Serious eye damage/eye irritation:**

Eyes – Rabbit (Glycerol)

Result: Mild eye irritation – 24 h (Glycerol)

No data available. (Potassium Chloride)

##### **Respiratory or skin sensitization:**

No data available. (Glycerol)

No data available. (Potassium Chloride)

##### **Germ cell mutagenicity:**

No data available. (Glycerol)

No data available. (Potassium Chloride)

##### **Carcinogenicity:**

IARC	Product and components are not regulated by the IARC.
ACGIH	Product and components are not regulated by the ACGIH.



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NTP	Product and components are not regulated by the NTP.
OSHA	Product and components are not regulated by OSHA.

**Reproductive toxicity:**

No data available. (Glycerol)

No data available. (Potassium Chloride)

**Specific target organ toxicity – single exposure:**

No data available (Glycerol)

No data available (Potassium Chloride)

**Specific target organ toxicity – repeated exposure:**

No data available (Glycerol)

No data available (Potassium Chloride)

**Aspiration hazard:**

No data available (Glycerol)

No data available (Potassium Chloride)

**Additional Information:**

RTECS: MA8050000 (Glycerol)

Prolonged or repeated exposure may cause:, Nausea, Headache, Vomiting,  
Kidney - Irregularities - Based on Human Evidence

RTECS: TS8050000. (Potassium Chloride)

Product can cause: Hyperkalemia, Nausea, Vomiting, Abdominal pain, Diarrhea, Constipation,  
Paresthesia, Thirst, Dizziness, Rash, Pruritus, Weakness, Muscle cramps, minor psychiatric  
changes, minor visual changes.

**SECTION 12 - ECOLOGICAL INFORMATION**

**Toxicity:**

No data available (Glycerol)

No data available (Potassium Chloride)

**Aquatic toxicity:**

No data available (Glycerol)

Species: Fathead minnow (Pimephales promelas). Exposure: 96 hours. Results: LC50 880 mg/l. (Potassium Chloride)

Species: Fathead minnow (Pimephales promelas). Exposure: 7 days. Results: Mortality NOEC 500 mg/l. (Potassium Chloride)

Species: Fathead minnow (Pimephales promelas). Exposure: 7 days. Results: Mortality LOEC 1,000 mg/l. (Potassium Chloride)

Species: Water Flea (Daphnia magna). Exposure: 48 hours. Results: EC50 > 440 mg/l. (Potassium Chloride)

**Persistence and degradability:**

No data available (Glycerol)

No data available (Potassium Chloride)

**Bioaccumulative potential:**

No data available (Glycerol)

No data available (Potassium Chloride)

**Mobility in soil:**

No data available (Glycerol)

No data available (Potassium Chloride)



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**Results of PBT and vPvB assessment:**

PBT/vPvB assessment not available as chemical safety assessment is not required/was not conducted. (Glycerol)  
PBT/vPvB assessment not available as chemical safety assessment is not required/was not conducted. (Potassium Chloride)

**Other adverse effects:**

No data available (Glycerol)  
No data available (Potassium Chloride)

**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.

**SECTION 14 - TRANSPORT INFORMATION**

<b>DOT</b>	<b>TDG</b>	<b>IATA</b>	<b>IMDG/IMO</b>
Not regulated (Glycerol) Not regulated (Potassium Chloride)	Not regulated (Glycerol) Not regulated (Potassium Chloride)	Not regulated (Glycerol) Not regulated (Potassium Chloride)	Not regulated (Glycerol) Not regulated (Potassium Chloride)

**SECTION 15 - REGULATORY INFORMATION**

**USA Federal Regulation**

**SARA 302 Components:**

This product and components are not subject to the reporting requirements of SARA Title III, Section 302. (Glycerol)  
This product and components are not subject to the reporting requirements of SARA Title III, Section 302. (Potassium Chloride)

**SARA 313 Components:**

This product does not contain any components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313. (Glycerol)  
This product does not contain any components with known CAS numbers that exceed the threshold reporting levels established by SARA Title III, Section 313. (Potassium Chloride)

**SARA 311/312 HAZARDOUS CATEGORIZATION:**

Chronic Health Hazard (Glycerol)  
No SARA Hazard. (Potassium Chloride)

**Clean Water Act:**

No Data Available (Glycerol)  
No Data Available (Potassium Chloride)

**Clean Air Act:** Not Applicable

**TSCA 12(b)/ OSHA/ CERCLA:** Not Applicable

**California Proposition 65:**

This product does not contain any Proposition 65 chemicals. (Glycerol)



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This product does not contain any Proposition 65 chemicals. (Potassium Chloride)

**STATE RIGHT TO KNOW**

Components	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Glycerol (CAS-No: 56-81-5)	Listed	Listed	Listed	-	-
Potassium Chloride (CAS-No: 7447-40-7)	-	Listed	Listed	-	-

**HMIS Rating**

Health hazard	Chronic Health Hazard	Flammability	Physical Hazard
<b>1</b>		<b>1</b>	<b>0</b>

**NFPA Rating**

Health Hazard	Fire Hazard	Reactivity Hazard
<b>0</b>	<b>1</b>	<b>0</b>

**US DEPARTMENT OF TRANSPORTATION**

REPORTABLE QUANTITY (RQ)	DOT MARINE POLLUTANT	DOT SEVER MARINE POLLUTANT
<b>No</b>	<b>No</b>	<b>No</b>

**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).**

**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.

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