



SAFETY DATA SHEET

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

- | | | |
|------------|---|---|
| 1.1 | PRODUCT NAME: CATALOG #: | Paraformaldehyde (4%, Phosphate Buffer) BM-698 |
| 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: TOLL FREE NUMBER: | 1-800-535-5053 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)

| | | |
|------|--------------------|------------|
| H318 | Serious eye damage | Category 1 |
| H317 | Skin sensitization | Category 1 |
| H350 | Carcinogenicity | Category 2 |

2.2 GHS Label elements, including Hazard and Precautionary Statement(s)

Pictogram



Signal word: Danger

Hazard statement(s)

| | |
|------|--------------------------------------|
| H317 | May cause an allergic skin reaction. |
| H350 | May cause cancer. |
| H370 | Causes damage to organs (Eyes). |

Prevention, Response, Storage and Disposal Precautionary Statement(s)

| | |
|---------------------------|---|
| P201 | Obtain special instructions before use. |
| P202 | Do not handle until all safety precautions have been read and understood. |
| P260 | Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. |
| P280 | Wear protective gloves/ protective clothing/ eye protection/ face protection. |
| P303 + P361 + P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. |
| P305 + P351 + P338 + P310 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor. |



| | |
|-------------|---|
| P307 + P311 | IF exposed: Call a POISON CENTER or doctor/ physician |
| P362 | Take off contaminated clothing and wash before reuse. |
| P405 | Store locked up. |
| P501 | Dispose of contents/ container to an approved waste disposal plant. |

SECTION 3- COMPOSITION/INFORMATION ON INGREDIENTS

Composition: 4% Paraformaldehyde, Mixture of 100 mM Sodium Phosphate Dibasic and Sodium Phosphate Monobasic, pH 7.40 ± 0.20.

| Component | CAS Number | Concentration |
|---|-----------------------|---------------|
| Paraformaldehyde | 30525-89-4 | 4.00% |
| Sodium Phosphate Dibasic Anhydrous/ Sodium Phosphate Monobasic Anhydrous | 7558-79-4 / 7558-80-7 | 1.42% |
| 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: 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.

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

| | | | |
|---------------------------------|-------------------------|------------------------------|-------------------|
| 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 | No Data Available |
| 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: No Data Available.

Incompatibilities: Strong Oxidizing Agents.

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute Toxicity:

Product Information

Oral LD50: Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

Dermal LD50: Based on ATE data, the classification criteria are not met. ATE > 2000 mg/kg.

Vapor LC50: Based on ATE data, the classification criteria are not met. ATE > 20 mg/l.

Component Information

Paraformaldehyde, 4% in PBS.

| Component | LD50 Oral | LD50 Dermal | LC50 Inhalation |
|--------------------------|------------------------|--------------------|--|
| Water | - | Not listed | Not listed |
| Paraformaldehyde | LD50 = 800 mg/kg (Rat) | Not listed | LC50 = 1070 mg/m ³ (Rat) 4h |
| Sodium Phosphate Dibasic | LD50 = 17 g/kg (Rat) | Not listed | Not listed |

SECTION 12 - ECOLOGICAL INFORMATION

Ecotoxicity:

| Component | Freshwater Algae | Freshwater Fish | Microtox | Water Flea |
|--------------------|-------------------------|---|-------------------|---------------------|
| Paraformaldehyde | Not listed | >10 mg/L 96h | No Data Available | EC50 = 42 mg/L 24 h |
| Sodium Chloride | Not listed | Pimephals prome: LC50: 7650 mg/L/96h | No Data Available | EC50: 1000 mg/L/48h |
| Potassium Chloride | EC50: 2500 mg/L/72 h | Lepomis macrochirus: LC50: 1060 mg/L /96h Pimephales promelas: LC50: 750-1020 mg/L/96h | No Data Available | EC50: 825 mg/L/48h |

Persistence and degradability/ Bioaccumulative potential/ Mobility in soil: No data available

Results of PBT and vPvB assessment: 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.

SECTION 14 - TRANSPORT INFORMATION

| DOT | TDG | IATA | IMDG/IMO |
|---|---------------|---|--|
| UN Number: 2213 Proper Shipping Name: Paraformaldehyde Class: 4.1 Packing Group: III Reportable Quantity (RQ): 1000 lbs Poison Inhalation Hazard: No  | Not regulated | UN Number: 2213 Proper Shipping Name: Paraformaldehyde Class: 4.1 Packing Group: III  | UN Number: 2213 Proper Shipping Name: PARAFORMALDEHYDE Class: 4.1 Packing Group: III EMS-No: F-A, S-G  |

SECTION 15 - REGULATORY INFORMATION

USA Federal Regulation

SARA 313/SARA 311/312 HAZARDOUS CATEGORIZATION: Not Applicable

Clean Water Act:

| Component | CWA – Hazardous Substances | CWA – Reportable Quantities | CWA – Toxic Pollutants | CWA – Priority Pollutants |
|--------------------------|----------------------------|-----------------------------|------------------------|---------------------------|
| Paraformaldehyde | X | 1000 lb | - | - |
| Sodium Phosphate Dibasic | X | 5000 lb | - | - |

Clean Air Act: Not Applicable

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

California Proposition 65: This product does not contain any Proposition 65 chemicals.

STATE RIGHT TO KNOW

| Component | Massachusetts | New Jersey | Pennsylvania | Illinois | Rhode Island |
|--------------------------|---------------|------------|--------------|----------|--------------|
| Water | - | - | X | - | - |
| Paraformaldehyde | X | X | X | - | X |
| Sodium phosphate dibasic | X | X | X | - | - |

HMIS Rating

| Health hazard | Chronic Health Hazard | Flammability | Physical Hazard |
|---------------|-----------------------|--------------|-----------------|
| 2 | | 1 | 0 |

NFPA Rating

| Health Hazard | Fire Hazard | Reactivity Hazard |
|---------------|-------------|-------------------|
| 2 | 1 | 0 |



Boston BioProducts, Inc

425 Fortune Blvd.

Milford, MA 01757



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).

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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