

SAFETY DATA SHEET

SECTION 1 – PRODUCT AND COMPANY IDENTIFICATION

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|------------|---|---|
| 1.1 | PRODUCT NAME:
CATALOG #: | Paraformaldehyde (3.7%, Fixative Solution)
BM-158 |
| 1.2 | RECOMMENDED USE: | Research Use or Further Manufacturing |
| 1.3 | COMPANY IDENTIFICATION: | Boston BioProducts, Inc.
425 Fortune Blvd. Milford, MA 01746 |
| 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)

H315	Skin corrosion/irritation	Category 2
H317	Skin Sensitization	Category 1
H318	Serious eye damage	Category 1
H350	Carcinogenicity	Category 1A
H370	Specific target organ toxicity - single exposure	Category 1
H371	Specific target organ toxicity - single exposure	Category 2
H373	Specific target organ toxicity, repeated exposure	Category 2

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



Signal word: Danger
Hazard statement(s)

H315	Causes skin irritation
H317	May cause an allergic skin reaction
H318	Causes serious eye damage
H350	May Cause cancer
H370	Causes damage to organs.
H371	May Cause damage to organs.
H373	May cause damage to organs prolonged or repeated exposure

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.
P264	Wash skin thoroughly after handling
P270	Do not eat, drink or smoke when using this product.
P272	Contaminated work clothing should not be allowed out of the workplace.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302 + P352	IF ON SKIN: Wash with plenty of soap and water.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P311	IF exposed or concerned: call a POISON CENTER or doctor/ physician
P314	Get medical advice/attention if you feel unwell.
P321	Specific treatment (see. on this label).
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364	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, 10.1 mM sodium phosphate dibasic, 1.76 mM potassium phosphate monobasic, 2.7 mM potassium chloride, 137 mM sodium chloride, 3% Sucrose, pH 7.40 ± 0.15.

Component	CAS Number	Concentration (%)
Paraformaldehyde	30525-89-4	3.70%
Sodium Phosphate Dibasic	7558-79-4	0.14%
Potassium Phosphate Monobasic	7778-77-0	0.02%
Potassium Chloride	7447-40-7	0.02%
Sodium Chloride	7647-14-5	0.8%
Sucrose	57-50-1	3.00%
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 monoxide, Carbon dioxide.

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. **Short term:** 2-8° C and **Long term:** -20° C.

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:

- ❖ **ACGIH:** American Conference of Governmental Industrial Hygienists.
- ❖ **OSHA:** Occupational Safety and Health Administration.
- ❖ **NIOSH IDLH:** The National Institute for Occupational Safety and Health Immediately Dangerous to Life or Health.

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: Formaldehyde, Methanol, Carbon monoxide (CO), Carbon dioxide (CO₂).

Incompatibilities: Strong oxidizing agents, Strong acids, Strong bases.

Conditions to Avoid: Incompatible products. Heat, flames and sparks.

SECTION 11 - TOXICOLOGICAL INFORMATION

Acute Toxicity

Component	LD50 Oral	LD50 Dermal	LD50 Inhalation
Paraformaldehyde	800 mg/kg (Rat)	Not Listed	1070 mg/L (Rat) 4 h
Sodium Phosphate Dibasic	17 g/kg (Rat)	Not Listed	Not Listed

Carcinogenicity

Component	IARC	NTP	ACGIH	OSHA	Mexico
Paraformaldehyde	Group1(Carcinogenic to Humans)	Known (Carcinogen)	A2 (Suspected Human Carcinogen)	Listed	A2 (Suspected Human Carcinogen)

SECTION 12 - ECOLOGICAL INFORMATION



Ecotoxicity: Do not empty into drains

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

Results of PBT and vPvB assessment

Other adverse effects: Reacts with water to form toxic decomposition products.

Discharge into the environment must be avoided.

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.

Component	RCRA - U Series Wastes	RCRA - P Series Wastes
Paraformaldehyde	U122	-

SECTION 14 - TRANSPORT INFORMATION

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

SECTION 15 - REGULATORY INFORMATION

INTERNATIONAL INVENTORIES

INGREDIENT: WATER					CAS #:7732-18-5		EINECS: 231-791-2		
TSCA	DSL	NDSL	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Listed	Listed	-	-	-	Listed	-	Listed	Listed	Listed

INGREDIENT: Formaldehyde					CAS #:50-00-0		EINECS: 200-001-8		
TSCA	DSL	NDSL	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Listed	Listed	-	-	-	Listed	Listed	Listed	Listed	Listed

INGREDIENT: Sodium Phosphate Dibasic					CAS #:7558-79-4		EINECS: 231-448-7		
TSCA	DSL	NDSL	ELINCS	NLP	PICCS	ENCS	AICS	CHINA	KECL
Listed	Listed	-	-	-	Listed	Listed	Listed	Listed	Listed

INGREDIENT: Sodium Phosphate, Monobasic					CAS #:7558-80-7		EINECS: 231-449-2		
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
Yes	Yes	No	No	No

SARA 313



Component	CAS#	Weight %	SARA 313 – Threshold Values %
Paraformaldehyde	30525-89-4	3.7	0.1

Clean Water Act

Component	CWA – Hazardous Substances	CWA – Reportable Quantities
Paraformaldehyde	Listed	1000 lb
Sodium Phosphate Dibasic	Listed	5000 lb

Clean Air Act

Component	HAPS Data
Paraformaldehyde	Listed

OSHA

Component	Specifically Regulated Chemicals	Highly Hazardous Chemicals
Paraformaldehyde	2 ppm STEL 0.5 ppm Action Level 0.75 ppm TWA	TQ: 1000 lb

CERCLA

Component	Hazardous Substances RQs	CERCLA EHS RQs
Paraformaldehyde	1000 lb	1000 lb
Sodium Phosphate Dibasic	5000 lb	-

California Proposition 65: This product contains Proposition 65 chemicals.

Component	CAS#	California Prop. 65	Prop 65 NSRL	Category
Paraformaldehyde	30525-89-4	No data Available	No data Available	No data Available

HMIS Rating

Health hazard	Chronic Health Hazard	Flammability	Physical Hazard
3	*	4	0

NFPA Rating

Health Hazard	Fire Hazard	Reactivity Hazard
3	4	0

STATE RIGHT TO KNOW

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

US DEPARTMENT OF TRANSPORTATION

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

U.S. DEPARTMENT OF HOMELAND SECURITY: This product contains the following DHS chemicals



Boston BioProducts, Inc

425 Fortune Blvd.

Milford, MA 01757



Component	DHS Chemical Facility Anti-Terrorism Standard
Paraformaldehyde	No Data Available

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

Mexico - Grade: Slight Risk, Grade 2

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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