

BBC Biochemical

MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Information

Common Name: Powdered•Formalin™	Code: 8000, 8001, MA0102005A, 8006, MA0102006A, MA0102003A, 8011, MA0102007A, MA0102004A, MA0102008A
Supplier: BBC Biochemical	MSDS#: 8000, 8001, MA0102005A, 8006, MA0102006A, MA0102003A, 8011, MA0102007A, MA0102004A, MA0102008A
Synonym: Not Available	Validation Date: 4-13-09
Trade Name: Not Available	Print Date: 4-13-09
Material Uses: Not Available	Responsible Name: Dr. B
Manufacturer: BBC Biochemical PO Box 1320 409 Eleanor Lane Mount Vernon, WA 98273 1-800-635-4477	In Case of Emergency: 1-800-424-9300 Chemtrec USA 1-202-483-7616 Chemtrec Intrl 1-800-635-4477

Section 2. Composition and Information on Ingredients

Name	CAS#	% by Weight	Exposure Limits
1) Paraformaldehyde	30525-89-4	Percentage composition is	OSHA TWA: 1ppm, STEL: 2ppm
2) Select Buffer	With held as trade secret	With held as a trade secret.	PEL: 2mg/m3 TWA
3) Formaldehyde	50-00-0	Off Gas	OSHA TWA: 0.75 ppm STEL: 2ppm

Section 3. Hazards Identification

Physical State and Appearance	White Powder
Emergency Overview	Danger! May be fatal if swallowed, inhaled or absorbed through skin. Causes irritation to skin, eyes and respiratory tract. Sensitizer. Suspect cancer hazard. Emits formaldehyde gas, may cause cancer. Combustible solid.
Routes of Entry	Eye contact, inhalation, ingestion, skin contact.
Potential Acute Health Effects	
Eyes	Irritation, may cause permanent damage. Exposure to high vapor concentrations or contact with dust causes tearing and severe irritation. Contact with dust can cause severe burns.
Skin	Irritation. Contact with dust causes drying, cracking and scaling.
Inhalation	Irritation to nose, throat and respiratory system. May cause inflammation of lining of nose, throat, and lungs with bronchopneumonia and edema possible from extremely irritating exposure.
Ingestion	May cause allergic reaction. Irritation to throat and respiratory system. Severe stomach pains will follow with possible loss of consciousness.
Potential Chronic Health Effects	Prolonged and repeated contact causes a hardening or tanning effect. Repeated exposure may also cause allergic dermatitis or asthma. May harm the kidneys.
Medical Conditions Aggravated by Overexposure/Overexposure/Signs/Symptoms	

Section 4. First Aid Measures

Eye Contact	Immediately flush thoroughly with water for at least 15 minutes. Get medical attention immediately.
Skin Contact	Wash thoroughly with soap and water. Remove contaminated clothing at once (launder before reuse); discard contaminated shoes. Get medical attention immediately.
Inhalation	Remove to fresh air; give artificial respiration if breathing has stopped.
Ingestion	Induce vomiting of conscious patient immediately by giving 2 glasses of water and pressing finger down throat. Get immediate medical attention.
Notes to Physician	Not available.

Section 5. Fire Fighting Measures

Flammability of the Product	Combustible solid.
Auto-ignition Temperature	300°C (572°F)
Flash Points	70°C (158°F) Closed Cup
Flammable Limits	By volume in air: Lower = 7%, Upper = 73%
Products of Combustion	Not available.
Fire Hazards in Presence Of Various Substances	Not available.
Explosion Hazards in Presence of Various Substances	Thermal decomposition produces toxic fumes.
Fire Fighting Media and Instructions	CO ₂ , foam, water. Wear self-contained breathing apparatus and protective clothing.
Protective Clothing (Fire)	
Special Remarks on Fire Hazards	In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.
Special Remarks on Explosion Hazards	

Section 6. Accidental Release Measures

Small Spill and Leak	Eliminate ignition sources. See section 8 for appropriate personal protective equipment. Contain spill with dikes of soil or nonflammable absorbent to minimize contaminated area. If fire potential exists, blanket spill with alcohol type aqueous film-forming foam or use water fog stream to disperse vapors. Avoid run-off into storm sewers and ditches leading to waterways. If required, notify state and local authorities. Place leaking containers in well-ventilated area. Neutralize with sulfamic acid or sodium bisulfite. Clean up spills by sweeping. Keep unnecessary people away; isolate hazard area and deny entry. Stay upwind; keep out of low areas. Isolate for 800 meters or 0.5 miles in all directions if tank, rail car, or tank truck is involved in fire. Assess the spill situation, as the spill may not evolve large amounts of hazardous airborne contaminants in many outdoor spill situations. It may be advisable in some cases to simply monitor the situation until spilled product is removed.
Large Spill and Leak	Same as above.

Section 7, Handling and Storage

Handling	Wear protective gloves and chemical safety glasses when handling. Use with adequate ventilation. Keep containers closed when not in use. Avoid breathing dust and vapor. Avoid generation of excess dust. Paraformaldehyde decomposes to formaldehyde vapor when exposed to moisture. Use precautions against formaldehyde exposure when opening containers or entering a poorly ventilated storage area. Caution: Flexible intermediate bulk containers can build static electrical charge while contents are being emptied or filled. Do not allow contents to free fall in areas where potential flammable air-vapor or air-dust mixtures exist. Use proper grounding procedures when transferring. For example, use of a grounded intermediate hopper or conveyor is recommended. Do not allow any ungrounded conducting objects such as equipment, tools, rings, watches, etc. in the work area.
Storage	Store in cool dry place with adequate ventilation. Keep away from other combustibles, acids, or oxidizing agents.

Section 8. Exposure Controls / Personal Protection

Engineering Controls	
Personal Protection	
Eyes	Safety glasses with side shields must be worn at all times.
Body	Impervious protective clothing must be worn to prevent skin contact.
Respiratory	If workplace exposure limit(s) of product or any component is exceeded (see TLV/PEL), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your safety supplier). Engineering and/or administrative controls should be implemented to reduce exposure. Material must be handled or transferred in an approved fume hood or with adequate ventilation.
Hands	Neoprene, nitrile or equivalent gloves.
Feet	Not available.
Personal Protection in	Safety glasses with side shields, impervious protective clothing, respirator if necessary and neoprene,

Case of a Large Spill	nitrile or equivalent gloves.
Product Name	Exposure Limits
1) Paraformaldehyde	OSHA PEL: 0.5ppm Action Level, 0.75ppm TWA, 2ppm STEL, Cancer-Suspect Agent
2) Select Buffer	OSHA PEL: 2mg/m ³ TWA
3) Formaldehyde	OSHA PEL: 0.75ppm TWA, 2ppm STEL Present in Off-gas
Consult Local authorities before acceptable exposure limits.	

Section 9. Physical and Chemical Properties

Physical State and Appearance	White powder.	Odor:	Pungent formaldehyde odor.
Molecular Weight	Not applicable.	Taste:	Not available.
Molecular Formula	Not applicable.	Color:	White
pH (1%/Water)	Not applicable.		
Boiling/Condensation Point	Does not boil. Emits formaldehyde gas when heated		
Melting/Freezing Point	120-170 °C freezing point.		
Critical Temperature	Not applicable.		
Specific Gravity	0.82		
Vapor Pressure	Not applicable.		
Vapor Density	Not applicable.		
Volatility	Not applicable.		
Odor Threshold	Not applicable.		
Evaporation Rate	Not applicable.		
VOC	Not available.		
Viscosity	Not available.		
Ionicity (in water)	Not available.		
Dispersion Properties	Not available.		
Solubility	Miscible in water.		
Physical Chemical Comments	Not available.		

Section 10. Stability and Reactivity

Stability and Reactivity	Stable under ordinary conditions of use and storage. Releases formaldehyde gas slowly as it sublimates at room temperatures. Decomposition may occur by reaction with water.
Conditions of Instability	Avoid contact with ignition sources. Avoid generating dust. Avoid storage at product temperatures above 38°C (100°F)
Incompatibility with Various Substances	Acids, oxidizers, strong alkalis. Contact with HCl may cause formation of the potent carcinogen, bischloromethyl ether.
Hazardous Decomposition Products	Metal•O, HCl, CL, CO _x . Thermal decomposition products may include formaldehyde vapors.
Hazardous Polymerization	Not available.

Section 11. Toxicological Information

Toxicity to Animals	LD50: Paraformaldehyde: Oral rat 800mg/kg; LC50: Paraformaldehyde: Inhal. Rat >170 mg/m ³
Chronic Effects on Humans	Paraformaldehyde has the potential to cause cancer in humans. Repeated and prolonged exposure increases the risk. In humans, formaldehyde exposure has been associated with cancers of the lungs, nasopharynx and oropharynx, and nasal passages.
Other Toxic Effects on Humans	Tests on laboratory animals indicate paraformaldehyde may cause tumors and may produce adverse mutagenic and reproductive effects
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	Not available.
Special Remarks on Other Toxic Effects on Humans	Not available.

Section 12. Ecological Information

Ecotoxicity	Aquatic toxicity studies with paraformaldehyde in fish indicate slight acute toxicity. Rainbow Trout 96-hr. LC50= 60ppm Catfish 24-hr. TLm= 32ppm Founder 48-hr TLm= 100-300ppm Paraformaldehyde breaks down in water to formaldehyde.
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BODS and COD	Not available.
Biodegradable/OEDC	Not available.
Mobility	Not available.
Toxicity of the Products of Biodegradation	Not available.
Special Remarks on The Products of Biodegradation	Not available.

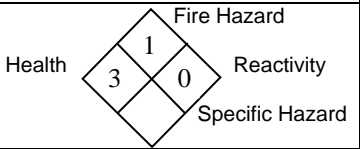
Section 13. Disposal Considerations

Waste Information	Not available.
Waste Stream	Not available.
Consult your local or regional authorities.	

Section 14. Transport Information

DOT Classification	Proper Shipping Name: Paraformaldehyde Hazard Class: 4.1 UN/NA: UN2213 Packing Group III Information reported for product/size: 3KG
Marine Pollutant	Not available.
Hazardous Substances Reportable Quantity	Not available.
Special Provisions for Transport	Not applicable.
TDG Classification	TDG (Canada) Information not available.
ADR/RID Classification	ADR (Europe) Information not available.
IMO/IMDG Classification	Proper Shipping Name: Paraformaldehyde Hazard Class: 4.1 UN/NA: UN2213 Packing Group III Information reported for product/size: 3KG
ICAO/IATA Classification	Proper Shipping Name: Paraformaldehyde Hazard Class: 4.1 UN/NA: UN2213 Packing Group III Information reported for product/size: 3KG

Section 15. Other Information

Label requirements			
Hazardous Material Information System (U.S.A.)	Health	3	National Fire Protection Association (U.S.A.)
	Fire Hazard	1	
	Reactivity	0	
	Personal Protection		
			
References			
Other Special Considerations			
Notice to Reader			
To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein.			

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MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Information

Common Name: Powdered•Formalin™	Code: 8000
Supplier: BBC Biochemical	MSDS#: 8000
Synonym: Not Available	Validation Date: 4-13-09
Trade Name: Not Available	Print Date: 4-13-09
Material Uses: Not Available	Responsible Name: Dr. B
Manufacturer: BBC Biochemical PO Box 1320 409 Eleanor Lane Mount Vernon, WA 98273 1-800-635-4477	In Case of Emergency: 1-800-424-9300 Chemtrec USA 1-202-483-7616 Chemtrec Intrl 1-800-635-4477

Section 2. Composition and Information on Ingredients

Name	CAS#	% by Weight	Exposure Limits
1) Sodium Phosphate Monobasic	7558-80-7	Percentage composition is with held as a trade secret.	Not available.
2) Sodium Phosphate Dibasic	10140-65-5		Not available.
3) Carboxy Methyl Cellulose	9004-32-4		Not available.

Section 3. Hazards Identification

Physical State and Appearance	White crystalline powder.
Emergency Overview	Not available.
Routes of Entry	Eye contact, inhalation, ingestion, skin contact.
Potential Acute Health Effects	
Eyes	Irritation, may cause permanent damage.
Skin	Irritation
Inhalation	Irritation to nose, throat and respiratory system.
Ingestion	May cause allergic reaction. Irritation to throat and respiratory system.
Potential Chronic Health Effects	Not available
Medical Conditions Aggravated by Overexposure	Not available
Overexposure/Signs/Symptoms	Not available.

Section 4. First Aid Measures

Eye Contact	Immediately flush thoroughly with water for at least 15 minutes.
Skin Contact	Wash thoroughly with soap and water.
Inhalation	Remove to fresh air; give artificial respiration if breathing has stopped.
Ingestion	Induce vomiting of conscious patient immediately by giving 2 glasses of water and pressing finger down throat. Get immediate medical attention.
Notes to Physician	Not available.

Section 5. Fire Fighting Measures

Flammability of the Product	Not considered flammable.
Auto-ignition Temperature	Not available.
Flash Points	Not available.
Flammable Limits	Not available.
Products of Combustion	Not available.
Fire Hazards in Presence	Not available.

Of Various Substances

Explosion Hazards in Presence of Various Substances Not available.

Fire Fighting Media and Instructions CO₂, foam, water.

Protective Clothing (Fire)

Special Remarks on Fire Hazards

Special Remarks on Explosion Hazards

Section 6. Accidental Release Measures

Small Spill and Leak Place leaking containers in well ventilated area. Use standard clean up procedures such as vacuuming or sweeping.

Large Spill and Leak Same as above.

Section 7, Handling and Storage

Handling Wear protective gloves and chemical safety glasses when handling.

Storage Store in cool dry place with adequate ventilation

Section 8. Exposure Controls / Personal Protection**Engineering Controls****Personal Protection**

Eyes Safety glasses with side shields.

Body Impervious protective clothing must be worn to prevent skin contact.

Respiratory If workplace exposure limit(s) of product or any component is exceeded (see TLV/PEL), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your safety supplier). Engineering and/or administrative controls should be implemented to reduce exposure.

Hands Neoprene, nitrile or equivalent gloves.

Feet Not available

Personal Protection in Case of a Large Spill Safety glasses with side shields, impervious protective clothing, respirator if necessary and neoprene, nitrile or equivalent gloves.

Product Name	Exposure Limits
1) Sodium Phosphate Monobasic	Not available
2) Sodium Phosphate Dibasic	Not available
3) Carboxy Methyl Cellulose	Not available

Consult Local authorities before acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical State and Appearance White crystalline powder.

Odor: Not available.

Molecular Weight Not applicable.

Taste: Not available.

Molecular Formula Not applicable.

Color: White.

pH (1%/Water) Not applicable.

Boiling/Condensation Point Not applicable.

Melting/Freezing Point Not applicable.

Critical Temperature Not applicable.

Specific Gravity Not applicable.

Vapor Pressure Not applicable.

Vapor Density Not applicable.

Volatility Not applicable.

Odor Threshold Not applicable.

Evaporation Rate Not applicable.

VOC Not available.

Viscosity Not available.

Ionicity (in water) Not available.

Dispersion Properties Not available.

Solubility Miscible in water.

Physical Chemical Comments Not available.

Section 10. Stability and Reactivity

Stability and Reactivity	Stable.
Conditions of Instability	Not available.
Incompatibility with Various Substances	Not available.
Hazardous Decomposition Products	Not available.
Hazardous Polymerization	Not available.

Section 11. Toxicological Information

Toxicity to Animals	LD50: Not available. LC50: Not available.
Chronic Effects on Humans	
Other Toxic Effects on Humans	
Special Remarks on Toxicity to Animals	Not available.
Special Remarks on Chronic Effects on Humans	Not available.
Special Remarks on Other Toxic Effects on Humans	Not available.

Section 12. Ecological Information

Ecotoxicity	Not available.
BOD5 and COD	Not available.
Biodegradable/OEDC Mobility	Not available. Not available.
Toxicity of the Products of Biodegradation	Not available.
Special Remarks on The Products of Biodegradation	Not available.

Section 13. Disposal Considerations

Waste Information	Not available.
Waste Stream	Not available.
Consult your local or regional authorities.	

Section 14. Transport Information

DOT Classification	Not hazardous.
Marine Pollutant	Not available.
Hazardous Substances Reportable Quantity	Not available.
Special Provisions for Transport	Not applicable.
TDG Classification	Not controlled under TDG (Canada).
ADR/RID Classification	Not controlled under ADR (Europe).
IMO/IMDG Classification	Not controlled under IMDG.
ICAO/IATA Classification	Not controlled under IATA.

Section 15. Other Information

Label requirements

Hazardous Material Information System (U.S.A.)	Health	1	National Fire Protection Association (U.S.A.)	
	Fire Hazard	0		
	Reactivity	0		
	Personal Protection			

References

Other Special Considerations

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