

# BBC Biochemical MATERIAL SAFETY DATA SHEET

## Section 1. Chemical Product and Company Information

Common Name:	4% Paraformaldehyde, Packet A	Code:	8015, 8016, 8017
Supplier:	BBC Biochemical	MSDS#:	8015, 8016, 8017
Synonym:	Not Available	Validation Date:	3-4-09
Trade Name:	Not Available	Print Date:	3-4-09
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	<b>In Case of Emergency: 1-800-424-9300 Chemtrec USA 1-202-483-7616 Chemtrec Intrl 1-800-635-4477</b>	

## 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 Buffers	With held as trade secret	With held as a trade secret.	PEL: 2mg/m3 TWA

## 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 with may cause cancer. Combustible solid.
Routes of Entry	Eye contact, inhalation, ingestion, skin contact.
Potential Acute Health Effects	
<b>Eyes</b>	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.
<b>Skin</b>	Irritation. Contact with dust causes drying, cracking and scaling.
<b>Inhalation</b>	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.
<b>Ingestion</b>	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 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	Do not induce vomiting patient. Give conscious patient 2 glasses of water, get immediate medical attention.
Notes to Physician	Not available.

## Section 5. Fire Fighting Measures

Flammability of the Product	Combustible solid.
Auto-ignition Temperature	300C (572F)

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

### Section 6. Accidental Release Measures

<b>Small Spill and Leak</b>	Place leaking containers in well ventilated area. Eliminate ignition sources. Neutralize with ammonium hydroxide or complex with sodium sulfite. Use standard clean up procedures such as vacuuming or sweeping.
<b>Large Spill and Leak</b>	Same as above.

### Section 7, Handling and Storage

<b>Handling</b>	Wear protective gloves and chemical safety glasses when handling.
<b>Storage</b>	Store in cool dry place with adequate ventilation. Keep away from other combustibles, acids, or oxidizing agents.

### Section 8. Exposure Controls / Personal Protection

<b>Engineering Controls</b>	
<b>Personal Protection</b>	
<b>Eyes</b>	Safety glasses with side shields must be worn at all times.
<b>Body</b>	Impervious protective clothing must be worn to prevent skin contact.
<b>Respiratory</b>	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.
<b>Hands</b>	Neoprene, nitrile or equivalent gloves.
<b>Feet</b>	Not available.
<b>Personal Protection in Case of a Large Spill</b>	Safety glasses with side shields, impervious protective clothing, respirator if necessary and neoprene, nitrile or equivalent gloves.
<b>Product Name</b>	<b>Exposure Limits</b>
1) Paraformaldehyde	OSHA PEL: 0.5ppm Action Level, 0.75ppm TWA, 2ppm STEL, Cancer-Suspect Agent
2) Select Buffer	OSHA PEL: 2mg/m <sup>3</sup> TWA
<b>Consult Local authorities before acceptable exposure limits.</b>	

### Section 9. Physical and Chemical Properties

<b>Physical State and Appearance</b>	White powder.	<b>Odor:</b>	Pungent formaldehyde odor.
<b>Molecular Weight</b>	Not applicable.	<b>Taste:</b>	Not available.
<b>Molecular Formula</b>	Not applicable.	<b>Color:</b>	White
<b>pH (1%/Water)</b>	Not applicable.		
<b>Boiling/Condensation Point</b>	Not applicable.		
<b>Melting/Freezing Point</b>	Not applicable.		
<b>Critical Temperature</b>	Not applicable.		
<b>Specific Gravity</b>	Not applicable.		
<b>Vapor Pressure</b>	Not applicable.		
<b>Vapor Density</b>	Not applicable.		
<b>Volatility</b>	Not applicable.		
<b>Odor Threshold</b>	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.
Conditions of Instability	Avoid contact with ignition sources.
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 <sub>x</sub> , Formaldehyde
Hazardous Polymerization	Not available.

### Section 11. Toxicological Information

Toxicity to Animals	LD50: Paraformaldehyde: Oral rat 800mg/kg; LC50: Paraformaldehyde: Inhal. Rat >170 mg/m <sup>3</sup>
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	Not available.
BODS and COD	Not available.
Biodegradable/OEDC 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.

<b>TDG Classification</b>	TDG (Canada), Information not available.
<b>ADR/RID Classification</b>	ADR (Europe), Information not available.
<b>IMO/IMDG Classification</b>	Proper Shipping Name: Paraformaldehyde Hazard Class: 4.1 UN/NA: UN2213 Packing Group III Information reported for product/size: 3KG
<b>ICAO/IATA Classification</b>	See IATA Regulations 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**

<b>Hazardous Material Information System (U.S.A.)</b>	<b>Health</b>	3	<b>National Fire Protection Association (U.S.A.)</b>	
	<b>Fire Hazard</b>	1		
	<b>Reactivity</b>	0		
	<b>Personal Protection</b>			

**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.*

## BBC Biochemical

## MATERIAL SAFETY DATA SHEET

**Section 1. Chemical Product and Company Information**

Common Name: 4% Paraformaldehyde, Packet B	Code: 8015, 8016, 8017
Supplier: BBC Biochemical	MSDS#: 8015, 8016, 8017
Synonym: Not Available	Validation Date: 3-4-09
Trade Name: Not Available	Print Date: 3-4-09
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	<b>In Case of Emergency: 1-800-424-9300 Chemtrec USA 1-202-483-7616 Chemtrec Intrl 1-800-635-4477</b>

**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	
<b>Eyes</b>	Irritation, may cause permanent damage.
<b>Skin</b>	Irritation
<b>Inhalation</b>	Irritation to nose, throat and respiratory system.
<b>Ingestion</b>	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 area thoroughly with copious amounts of water. Remove contaminated clothing and clean before wearing again.
Inhalation	Remove to fresh air; give artificial respiration if breathing has stopped.
Ingestion	Do not induce vomiting patient. Give of conscious patient 2 glasses of water, 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 Of Various Substances** Not available.

**Explosion Hazards in Presence of Various Substances** Not available.

**Fire Fighting Media and Instructions** CO<sub>2</sub>, 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.
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	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**

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

**References**

**Other Special Considerations**

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