

## BBC Biochemical

## MATERIAL SAFETY DATA SHEET

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

Common Name: Cyto•CellBlock Fix™	Code: 2300
Supplier: BBC Biochemical	MSDS#: 2300
Synonym: None	Validation Date: 10/1/00
Trade Name: None	Print Date: 10/1/00
Material Uses: Fixation of cells	Responsible Name: Dr. B
Manufacturer: BBC Biochemical 8510 Cedarhome Dr. NW Stanwood, WA 98292	In Case of Emergency: 1-800-424-9300 Chemtrec USA 1-202-483-7616 Chemtrec Intrl 1-800-225-8867

**Section 2. Composition and Information on Ingredients**

Name	CAS#	OSHA PEL/TWA	OSHA PEL/STEL
1) Water	7732-18-5		
2) Denatured Ethanol			
Ethyl Alcohol	64-17-5	1000 ppm	None established
Denaturing Alcohol	67-56-1	200 ppm	250 ppm
Denaturing Alcohol	63-63-0	400 ppm	500 ppm
3) Formaldehyde 37%	50-00-0	0.75 ppm	2 ppm
4) Acetone	67-64-1	1000 ppm	N/A
5) Selected Buffers	N/A	N/A	N/A

**Section 3. Hazards Identification**

Physical State and Appearance	Clear blue liquid, pungent odor.
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, sensitizer.
Inhalation	Irritation to nose, throat and respiratory system.
Ingestion	May cause allergic reaction, may cause blindness.
Potential Chronic Health Effects	Formaldehyde is a strong sensitizer. It has the potential to cause cancer in humans. Various animal experiment have shown it to cause cancer in rats.
Medical Conditions	Respiratory conditions.
Aggravated by	
Overexposure	
Overexposure/ Signs/Symptoms	GET IMMEDIATE ASSISTANCE FOR ALL CASES OF OVEREXPOSURE.

**Section 4. First Aid Measures**

Eye Contact	Immediately flush with water for at least 15 minutes.
Skin Contact	Wash thoroughly with soap and water. Remove contaminated clothing at once (launder before reuse); discard contaminated shoes.
Inhalation	Remove to fresh air; give artificial respiration if breathing has stopped.
Ingestion	If conscious, dilute, inactive or absorb the ingested formaldehyde by giving milk, activated charcoal, or water.
Notes to Physician	Not available.

**Section 5. Fire Fighting Measures**

Flammability of the Product	Not available.
Auto-ignition Temperature	Not available.
Flash Points	Not available.
Flammable Limits	LEL (%) 3.3

	UEL (%) 19.0
<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>	Not available.
<b>Fire Fighting Media and Instructions</b>	Dry chemical, carbon dioxide, "Alcohol" foam; water spray to cool fire-exposed containers and disperse vapors.
<b>Protective Clothing (Fire)</b>	Wear self-contained breathing apparatus and protective clothing.
<b>Special Remarks on Fire Hazards</b>	Vapor can travel distances to ignition source and flash back.
<b>Special Remarks on Explosion Hazards</b>	Thermal decomposition produces toxic fumes.

**Section 6. Accidental Release Measures**

<b>Small Spill and Leak</b>	Evacuate the area of all unnecessary personnel. Wear suitable protective equipment listed under Section VIII. Eliminate any ignition sources until the area is determined to be free from explosion or fire hazards. Contain the release and eliminate it's source, if this can be done without risk. Take up and containerize for proper disposal. Comply with Federal, State, and local regulations on reporting releases.
<b>Large Spill and Leak</b>	Same as above.

**Section 7, Handling and Storage**

<b>Handling</b>	Wash thoroughly after handling. Do not take internally. Have eye wash and safety equipment available. Do not breathe vapor or mist. Do not get in eyes, on skin, or on clothing.
<b>Storage</b>	Keep container tightly closed. Store away from heat, sparks, open flame.

**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. 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>	Impervious footwear should be worn to prevent skin contact.
<b>Personal Protection in Case of a Large Spill</b>	All of the above.
<b>Product Name</b>	<b>Exposure Limits</b>
1)	
2)	
3)	
<b>Consult Local authorities before acceptable exposure limits.</b>	

**Section 9. Physical and Chemical Properties**

<b>Physical State and Appearance</b>	Clear blue liquid.	<b>Odor:</b>	Pungent.
<b>Molecular Weight</b>	Not applicable.	<b>Taste:</b>	Not available.
<b>Molecular Formula</b>	Not applicable.	<b>Color:</b>	Blue.
<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.		
<b>Evaporation Rate</b>	Not applicable.		
<b>VOC</b>	Not available.		
<b>Viscosity</b>	Not available.		
<b>Ionicity (in water)</b>	Not available.		

<b>Dispersion Properties</b>	Not available.
<b>Solubility</b>	Soluble in water.
<b>Physical Chemical Comments</b>	Not available.

### Section 10. Stability and Reactivity

<b>Stability and Reactivity</b>	Stable.
<b>Conditions of Instability</b>	Heat, sparks, open flame.
<b>Incompatibility with Various Substances</b>	Data not available.
<b>Hazardous Decomposition Products</b>	Co <sub>x</sub> .
<b>Hazardous Polymerization</b>	Data not available.

### Section 11. Toxicological Information

<b>Toxicity to Animals</b>	LD50 Formaldehyde orl-mus: 42 mg/kg LC50: Not available.									
<b>Chronic Effects on Humans</b>	This product contains the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right-To-Know Act of 1986 and of 40 CFR 372: <table border="1"> <thead> <tr> <th>CAS #</th> <th>Chemical Name</th> <th>DeMinimis/SARA 313%</th> </tr> </thead> <tbody> <tr> <td>50-00-0</td> <td>Formaldehyde</td> <td>0.1</td> </tr> <tr> <td>67-56-1</td> <td>Methanol</td> <td>1.0</td> </tr> </tbody> </table> TSCA: This product is a "mixture".	CAS #	Chemical Name	DeMinimis/SARA 313%	50-00-0	Formaldehyde	0.1	67-56-1	Methanol	1.0
CAS #	Chemical Name	DeMinimis/SARA 313%								
50-00-0	Formaldehyde	0.1								
67-56-1	Methanol	1.0								
<b>Other Toxic Effects on Humans</b>										
<b>Special Remarks on Toxicity to Animals</b>	Tests on laboratory animals indicate formaldehyde may cause tumors and may produce adverse mutagenic and reproductive effects.									
<b>Special Remarks on Chronic Effects on Humans</b>	Not available.									
<b>Special Remarks on Other Toxic Effects on Humans</b>	Not available.									

### Section 12. Ecological Information

<b>Ecotoxicity</b>	Not available.
<b>BODS and COD</b>	Not available.
<b>Biodegradable/OEDC Mobility</b>	Not available.
<b>Toxicity of the Products of Biodegradation</b>	Not available.
<b>Special Remarks on The Products of Biodegradation</b>	Not available.

### Section 13. Disposal Considerations

<b>Waste Information</b>	Not available.
<b>Waste Stream</b>	Not available.
<b>Consult your local or regional authorities.</b>	

### Section 14. Transport Information

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

**Section 15. Other Information**

**Label requirements**

<b>Hazardous Material Information System (U.S.A.)</b>	<b>Health</b>	2	<b>National Fire Protection Association (U.S.A.)</b>	
	<b>Fire Hazard</b>	1		
	<b>Reactivity</b>	1		
	<b>Personal Protection</b>			

**References**

**Other Special Considerations**

**Validated by Dr. B on 10/1/00.**

**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.*