

BBC Biochemical

MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Information

Common Name: Alcoholic Zinc Formalin (4:1 Concentrate)	Code: 0825
Supplier: BBC Biochemical	MSDS#: 0821
Synonym: None	Validation Date: 2-19-09
Trade Name: None	Print Date: 2-19-09
Material Uses: Fixation of tissues	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#	OSHA/PEL	OSHA/STEL
1) Water	7732-18-5	None established	None established
2) Formaldehyde 37%	50-00-0	3.0 ppm	6 ppm
3) Zinc Salts	Not available.	None established	None established
4) Denatured Ethanol	64-17-5	400 ppm	None established

Section 3. Hazards Identification

Physical State and Appearance	Clear liquid.
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	Formaldehyde is a strong sensitizer and may cause an allergic reaction.
Medical Conditions	Respiratory conditions.
Aggravated by Overexposure	
Overexposure/Signs/Symptoms	

Section 4. First Aid Measures

Eye Contact	Immediately flush thoroughly with water for at least 15 minutes.
Skin Contact	Wash thoroughly with 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, inactivate, or absorb the ingested formaldehyde by giving milk, activated charcoal, or water. Get immediate medical attention.
Notes to Physician	Not available.

Section 5. Fire Fighting Measures

Flammability of the Product	Not available.
Auto-ignition Temperature	Not available.
Flash Points	None.
Flammable Limits	Not available.
Products of Combustion	Not available.
Fire Hazards in Presence Of Various Substances	Not available.
Explosion Hazards in	Not available.

Presence of Various Substances**Fire Fighting Media and Instructions** CO₂, foam, water. Wear self-contained breathing apparatus and protective clothing.**Protective Clothing (Fire)****Special Remarks on Fire Hazards** Thermal decomposition produces toxic fumes.**Special Remarks on Explosion Hazards****Section 6. Accidental Release Measures****Small Spill and Leak** 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 its 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.**Large Spill and Leak** Same as above.**Section 7, Handling and Storage****Handling** Do not breathe vapor or mist. Do not get in eyes, on skin, or on clothing.**Storage** Keep container tightly closed. Store away from heat, sparks, open flame.**Section 8. Exposure Controls / Personal Protection****Engineering Controls** Engineering and/or administrative controls should be implemented to reduce exposure.**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). Material must be handled or transferred in an approved fume hood or with adequate ventilation.**Hands** Neoprene, Nitrile or equivalent.**Feet** Impervious protective footwear must be worn to prevent skin contact.**Personal Protection in Case of a Large Spill**

Safety glasses with side shields, impervious clothing and footwear, gloves and respirator (if necessary).

Product Name**Exposure Limits**

- 1)
- 2)
- 3)

Consult Local authorities before acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Clear liquid.	Odor:	Not available.
Molecular Weight	Not applicable.	Taste:	Not available.
Molecular Formula	Not applicable.	Color:	Clear.
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	Avoid contact with ignition sources.
Incompatibility with Various Substances	Acids, oxidizers, strong alkalies. Contact with HCl may cause formation of the potent carcinogen, bischloromethyl ether.
Hazardous Decomposition Products	CO _x , ZnO, SO _x .
Hazardous Polymerization	Not available.

Section 11. Toxicological Information

Toxicity to Animals	LD50: Formaldehyde orl-mus 42 mg/kg LC50: Not available.	Formaldehyde DeMinimis/SARA 313%=0.1
Chronic Effects on Humans	Formaldehyde 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		
Special Remarks on Toxicity to Animals	Tests on laboratory animals indicate formaldehyde may cause tumors and may produce adverse mutagenic and reproductive effects. Cited in Registry of Toxic Effects of Substances (RTECS).	
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

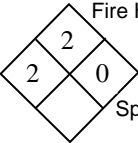
Waste Information	Not available.
Waste Stream	Not available.
Consult your local or regional authorities.	

Section 14. Transport Information

DOT Classification	Flammable and Corrosive Liquid. UN 2924 n.o.s., (Ethanol and Formaldehyde) hazard class 8, packing group II.
Marine Pollutant	Not available.
Hazardous Substances Reportable Quantity	Not available.
Special Provisions for Transport	Not applicable.
TDG Classification	Flammable and Corrosive Liquid. UN 2924 n.o.s., (Ethanol and Formaldehyde) hazard class 8, packing group II.
ADR/RID Classification	(Europe) Information not available.
IMO/IMDG Classification	IMDG Information not available.
ICAO/IATA Classification	See IATA Regulations. Flammable and Corrosive Liquid. UN 2924 n.o.s., (Ethanol and Formaldehyde) hazard class 8, packing group II.

Section 15. Other Information

Label requirements

Hazardous Material Information System (U.S.A.)	Health	2	National Fire Protection Association (U.S.A.)	
	Fire Hazard	2		
	Reactivity	0		
	Personal Protection			
References				
Other Special Considerations				
Notice to Reader				
<p><i>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.</i></p>				