BBC Biochemical MATERIAL SAFETY DATA SHEET

Section 1. Chemical Product and Company Information

Common Name:	**S-2 Histo™**	**Code:**	**4311**
Supplier:	**BBC Biochemical**	**MSDS#:**	**4311**
Synonym:	**None**	**Validation Date:**	**3-6-09**
Trade Name:	**None**	**Print Date:**	**3-6-09**
Material Uses:		**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) Isopropyl Alcohol	67-63-0	400 ppm	500 ppm
2) Ethyl Alcohol	64-17-5	1000 ppm	None established
3) Methyl Alcohol	67-56-1	200 ppm	250 ppm
4) Methyl Iso-Butyl Ketone	108-10-1	50 ppm	75 ppm

Section 3. Hazards Identification

Physical State and Appearance	Transparent, colorless liquid with an alcoholic odor.
Emergency Overview	Not available.
Routes of Entry	Inhalation, ingestion, skin contact.
Potential Acute Health Effects	
Eyes	400-800 ppm may cause irritation.
Skin	May cause slight irritation.
Inhalation	400-800 ppm may cause mild to uncomfortable irritation.
Ingestion	May cause abdominal pain and vomiting; Central nervous system depression.
Potential Chronic Health Effects	
Medical Conditions Aggravated by Overexposure	N/A
Overexposure/ Signs/Symptoms	

Section 4. First Aid Measures

Eye Contact	Flush for 15-20 minutes with large amounts of water or normal saline until no evidence of chemical remains..
Skin Contact	Remove contaminated clothing and shoes immediately. Wash with copious amounts of water for at least 15-20 minutes.
Inhalation	Remove to fresh air immediately. Get medical attention immediately..
Ingestion	Give activated charcoal. Do not attempt emesis if respiration is depressed. Get medical attention immediately.
Notes to Physician	Not available.

Section 5. Fire Fighting Measures

Flammability of the Product	Flammable Liquid.
Auto-ignition Temperature	Not available.
Flash Points	52 F.
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	"Alcohol" foam, CO_2 Dry chemical. Wear self-contained breathing apparatus and protective clothing.
Protective Clothing (Fire)	
Special Remarks on Fire Hazards	Fire hazard when exposed to heat.
Special Remarks on Explosion Hazards	Explosion hazard when exposed to heat.

Section 6. Accidental Release Measures

Small Spill and Leak	Remove sources of heat or ignition, or when feasible, remove leaking container. Provide ventilation. Contain spill (dilution of spill with water to raise flashpoint may be desireable.) Pick up liquid for recovery or disposal when feasible. Absorb small spills and residue with suitable material and containerize for proper disposal as described under Waste Disposal Method below. Material must be disposed of in accordance with all federal, state, and local regulations.
Large Spill and Leak	Same as above.

Section 7, Handling and Storage

Handling	Do not breathe vapor. Electrically ground all equipment when handling this product.
Storage	Keep container tightly closed. Store away from incompatible substances. Store away from heat, sparks, open flame, oxidizers.

Section 8. Exposure Controls / Personal Protection

Engineering Controls	
Personal Protection	
Eyes	Safety goggles with side shields must be worn at all times.
Body	Impervious clothing must be worn at all times.
Respiratory	If workplace exposure limit(s) of product or any component is exceeded (see TLV/PEL), a NIOSH/MSHA approved air 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	Appropriate protective gloves must be worn to prevent contact with this substance.
Feet	Impervious footwear must be worn at all times.
Personal Protection in Case of a Large Spill	

Product Name	**Exposure Limits**
1)Ethyl Alcohol	OSHA PEL 1000ppm TWA
2)Isopropyl Alcohol	OSHA PEL 400ppm TWA
3)Methyl Alcohol	OSHA PEL 200ppm TWA

Consult Local authorities before acceptable exposure limits.

Section 9. Physical and Chemical Properties

Physical State and Appearance	Transparent, colorless liquid with an alcoholic odor.	**Odor:**	Not available.
Molecular Weight	Not applicable.	**Taste:**	Not available.
Molecular Formula	Not applicable.	**Color:**	Not available.
pH (1%/Water)	Not applicable.		
Boiling/Condensation Point	170-180 F.		
Melting/Freezing Point	Not applicable.		
Critical Temperature	Not applicable.		
Specific Gravity	~0.8.		
Vapor Pressure	40-50 mmHg @ 66 F.		
Vapor Density	~2.0.		
Volatility	100% volatile.		
Odor Threshold	Not applicable.		
Evaporation Rate	~2.5.		
VOC	Not available.		
Viscosity	Not available.		
Ionicity (in water)	Not available.		

Dispersion Properties	Not available.
Solubility	Soluble in water.
Physical Chemical Comments	Not available.

Section 10. Stability and Reactivity

Stability and Reactivity	Stable under normal Temperatures and Pressures. May oxidize under normal storage conditions.
Conditions of Instability	Heat.
Incompatibility with Various Substances	Strong oxidizing agents.
Hazardous Decomposition Products	Thermal decomposition products may include toxic oxides of carbon.
Hazardous Polymerization	Has not been reported to occur under normal temperatures and pressures.

Section 11. Toxicological Information

Toxicity to Animals	Inhalation: Ethyl Alcohol LC50: (rat) 20000ppm/10h Methyl Alcohol LC_o: (human) 86000mg/m^3 Isopropyl Alcohol LCL_o: (rat) 16000 ppm/8h Methyl Iso-Butyl Ketone LCL_o: (rat) 4000 ppm/15 min. Oral: Ethyl Alcohol TDL_o: (human) 50 mg/kg LD_{50}: (rat) 7.060 mg/kg Methyl Alcohol LDL_o: (human) 340 mg/kg Methyl Iso-Butyl Ketone LD_{50}: (rat) 2080 mg/kg Isopropyl Alcohol LDL_o: (human) 8600 mg/kg Dermal: Ethyl Alcohol LDL_o: (rabbit) 20 g/kg Methyl Alcohol LDL_o: (monkey) 500 mg/kg
Chronic Effects on Humans	Ethyl Alcohol may cause severe skin irritation on prolonged contact.
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	UN1993, Flammable Liquids, n.o.s., (Ethanol), 3, II
Marine Pollutant	Not available.
Hazardous Substances	Not available.

Reportable Quantity	
Special Provisions for Transport	Not applicable.
TDG Classification	UN1993, Flammable Liquids, n.o.s., (Ethanol), 3, II
ADR/RID Classification	ADR (Europe) Information not available.
IMO/IMDG Classification	IMDG Information not available.
ICAO/IATA Classification	See IATA Regulations, UN1993, Flammable Liquids, n.o.s., (Ethanol), 3, II

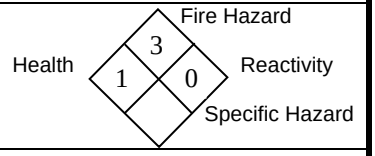
Section 15. Other Information

Label requirements

Hazardous Material Information System (U.S.A.)

Health	1
Fire Hazard	3
Reactivity	0
Personal Protection	

National Fire Protection Association (U.S.A.)



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.