

# Material Safety Data Sheet

## Histology / Cytology Reagents

### Cytology Fixative (Non-Aerosol)

<b>Section 1. Product and Preparation Information</b>			
<b>Product Identifier</b> <b>Cytology Fixative</b>	<b>Product Use</b> Fixation of cytology cell spreads	<b>Date Prepared</b> May 2007	
<b>Synonym / Chemical Name</b> Denatured ethyl alcohol, primary aliphatic alcohol		<b>Document #</b> 107	
<b>Manufacturer/ Preparer</b> Surgipath Canada, Inc. 83 Terracon Place Winnipeg, Manitoba R2J 4B3	Surgipath Medical Industries, Inc. 5205 Route 12 Richmond, IL 60071	<b>Emergency Contact</b> Chemtrec USA and Canada Chemtrec International Canadian Non-Transport Calls USA Non-Transport Calls	800.424.9300 703.527.3887 800.665.7425 800.225.8867

<b>Section 2. Preventive Measures</b>			
<b>Personal Protection</b> 	<b>NFPA</b> 	<b>US DOT</b> 	<b>Canadian WHMIS</b> B2  D1B
<b>Personal Protection</b> <b>Eyes</b> Safety glasses <b>Body</b> Laboratory coat <b>Respiratory</b> NIOSH/MSHA approved respirator when ventilation is inadequate <b>Hands</b> Latex or nitrile gloves		<b>Emergency Overview</b> Highly flammable liquid and vapor, vapor may cause flash fire. Cannot be made non-poisonous. May be fatal or cause blindness if swallowed. Contains material that may cause blood, nervous system, reproductive system, liver, gastrointestinal tract, respiratory tract, skin and eye damage. Keep away from heat, sparks and flame. Keep container closed. Use only with adequate ventilation. For laboratory use only.	
<b>Engineering Controls</b> General mechanical ventilation or laboratory fume hood. Ensure that eyewash stations and quick drench showers are proximal to the workstation or tissue processor.			
<b>Handling and Storage</b> Dissipate static electricity during transfer by grounding and bonding containers and equipment. If air concentrations may exceed lower explosive limit, use explosion-proof equipment. Keep containers closed and out of reach of children. Do not use near open flames or sparks. Store at room temperature. Store in flammable liquid safety cabinet when possible.			
<b>Small Spill and Leak</b> Dilute with water and mop, or absorb with an inert dry material and place in an appropriate waste disposal container.			
<b>Large Spill and Leak</b> Keep away from heat and ignition sources. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Avoid skin and eye contact. Prevent entry into sewers, basements or confined areas: dike if needed. Eliminate all ignition sources. Be careful that airborne concentrations do not exceed published exposure and lower explosive limits.			
<b>Waste Disposal</b> <i>Unused Product</i> – Dispose as a regulated hazardous waste. <i>Spent product or spill clean up</i> - Follow all provincial and federal rules.			

<b>Section 3. Hazardous Ingredients</b>					
Hazardous Ingredient	% wt.	CAS Number	LD50	LC50	TDG PIN
Ethanol	<90	64-17-5	7,060 mg/kg oral rat 3,450 mg/kg oral mouse	20,000 ppm/10 hr. inhalation rat 39 gm/m <sup>3</sup> /4hr inhalation mouse	
Isopropanol	<6	67-63-0	5,045 mg/kg oral rat 3,600 mg/kg oral mouse	72,600 mg/m <sup>3</sup> inhalation rat 53,000 mg/m <sup>3</sup> inhalation mouse	
Methanol	<5	67-56-1	5,600 mg/kg oral rat 7,300 mg/kg oral mouse	64,000 ppm/4 hr. inhalation rat 81,000 mg/m <sup>3</sup> /14hr rabbit	
Polyethylene glycol	NA	25322-68-3	28 gm/kg oral rat	NA	

<b>Section 4. First Aid Measures</b>	
<b>Eye Contact</b>	Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation persists.
<b>Skin Contact</b>	Remove contaminated clothing immediately. Wash the affected areas with soap or mild detergent and large amounts of water for at least 15 minutes.
<b>Inhalation</b>	Move individual to fresh air immediately. If breathing is difficult, give oxygen. If breathing has stopped, administer artificial respiration. Get medical attention.
<b>Ingestion</b>	Never give anything by mouth to an unconscious person. Induce vomiting. Give no more than 2 glasses of water. Get medical attention immediately.

<b>Section 5. Physical Data</b>				
Physical State Liquid	Odor and Appearance Fragrant odor, colorless	Odor Threshold (ppm) 180 ppm Ethanol	Solubility Easily soluble in water	Auto-ignition Temp 793° F (422° C)
Vapor Pressure 36mmHg @ 20C (MeOH)	Vapor Density 1.5 (air-1)	Evaporation Rate N/A	Boiling Point 169° F (76° C)	Flash Point CC 59° F (15° C)
pH N/A	Specific Gravity 0.79 Water=1	Coeff. Water/oil Dist. N/A	Freezing Point -151° F (-101° C)	Flammable Limits LEL – 3.3% UEL – 19%

<b>Section 6. Fire and Explosion</b>		
Flammability Flammable Liquid IB (Canada B2)	Conditions Excessive heat, sparks and open flames.	Fl. Pt - Auto Ignition - Flammable Limits See Physical Data above
Explosivity Not explosive under normal conditions of use. Vapors are heavier than air and may settle in low areas. Vapors may travel long distances to an ignition source and flash back explosively. Flame may be invisible. Not sensitive to impact. Probably will not accumulate static charge due to high electrical conductivity, however proper grounding during transfer is recommended (NFPA 77).		
Hazardous Combustion Products CO, CO2, NO, NO2, SO2, SO3	Means of Extinction Small Fire – Use DRY chemical powder. Large Fire – Use alcohol foam, water spray or fog	

<b>Section 7. Reactivity</b>		
Stability Product is stable under normal conditions of use.	Hazardous Decomposition Products CO from incomplete combustion	
Conditions of Reactivity NA	Hazardous Polymerization No hazardous polymerization.	Incompatibility Slightly reactive with oxidizing materials and acids.

<b>Section 8. Toxicological Properties</b>						
Routes of Entry NA	Target Organs Liver, kidney, gastrointestinal tract, reproductive and nervous systems					
Effects of Acute Exposure						
Eye	Slightly hazardous in case of eye contact (irritant)					
Skin	Slightly hazardous (irritant). Skin inflammation is characterized by itching, scaling, reddening or occasionally blistering.					
Absorption	NA					
Inhalation	Slightly hazardous in case of inhalation					
Ingestion	Hazardous in case of ingestion.					
Effects of Chronic Exposure						
Repeated exposure by inhalation may cause system poisoning, impaired vision or blindness. Inhalation may worsen conditions such as emphysema or bronchitis. Repeated skin exposure may cause defatting of the skin.						
Carcinogenic Effects Ethanol and methanol are not classified as a human carcinogen. Isopropanol is classified as Group 3 (not classifiable) by IARC.						
Reproductive Toxicity Ethyl alcohol when used as a beverage has proven to be toxic to blood, nervous system, reproductive system, liver, gastrointestinal tract, respiratory tract, skin and eyes.						
Teratogenic and Mutagenic Effects NA						
Exposure Limits	OSHA PEL TWA	ACGIH TLV TWA	STEL	TWAEV (Ont.)	STE V (Ont.)	CEV (Ont.)
Ethanol	1,900 ppm	1,000 ppm	NA	1,000 ppm	NA	NA
Isopropanol	980 mg/m <sup>3</sup>	400 ppm	500 ppm	200 ppm	400 ppm	NA
Methanol	260 ppm	200 ppm	250 ppm	200 ppm	250 ppm	NA
Polyethylene glycol	NA	NA	NA	NA	NA	NA
Toluidine blue	NA	NA	NA	NA	NA	NA

<b>Section 9. Regulatory Information</b>				
OSHA Hazardous Yes	Cal. Prop. 65 Not Listed	Canadian WHMIS B2, D1B	RCRA Regulated D001, F003	
SARA 302/304 Not Listed	SARA 313 MeOH Listed	CERCLA 102A MeOH Listed	RQ 5000 lbs. MeOH	
CWA 307 Not Listed	CWA 311 Not Listed	CAA 112 Release Prevention MeOH Listed	CAA 112 Reg. Flam. Substance Not Listed	
CAA 112 Reg. Toxic Substance Not Listed	TSCA Inventory Listed	EEC Flammability R11 – Highly Flammable	CEPA DSL All Ingredients Listed	
Proper US DOT Shipping Name Ethyl alcohol solutions, 3, UN1170 Pg. II	TDG Classification Class 3 Flammable Liquid	IATA Classification Class 3 Flammable Liquid	Limited Quantity Yes	

The information provided above is based upon unused product. Product characteristics may change after processing, requiring further classification.

This Material Safety Data Sheet has been prepared in accordance with the Canadian Controlled Products Regulations and 29CFR1910.1200. 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.