MATERIAL SAFETY DATA SHEET

FELINE EMBALMING FLUID
CAROLINA BIOLOGICAL SUPPLY COMPANY

1. PRODUCT DESCRIPTION

Product Name: Feline Embalming Fluid
Product Code(s): None
Size: Not applicable
Chemical Name: Does not apply - Product is a mixture
CAS Number: None assigned to this product - See individual elements below.
Formula: Proprietary Information
Synonyms: None
Distributor: Carolina Biological Supply Company
Address: 2700 York Road, Burlington, NC 27215

2. COMPOSITION/INFORMATION ON INGREDIENTS

Principal Hazardous Components:
Formaldehyde (CAS# 50-0-0)
Propylene Glycol (CAS# 57-55-6)
Methanol (CAS# 67-56-1)
Phenol (CAS# 108-95-2)
Sodium Citrate (CAS# 144-33-2)

TLV (Units):
Formaldehyde: ACGIH-TLV Ceiling 0.3 ppm;
OSHA-PEL 0.75 ppm (TWA), STEL 2 ppm
Propylene Glycol: No TLV (ACGIH) or PEL (OSHA) information found.
Methanol: ACGIH-TLV 200 ppm (TWA), STEL 250 ppm (skin);
OSHA-PEL 200 ppm (TWA)
Phenol: ACGIH-TLV 5 ppm (skin) (TWA),
OSHA-PEL: 5 ppm (skin) (TWA)
Sodium Citrate: No TLV (ACGIH) or PEL (OSHA) information found.

3. HAZARD IDENTIFICATION

Emergency Overview:
The data below applies to the pure substances that are constituents of this mixture. Overexposure to this mixture may cause some or none of the symptoms listed. Due to the dilute nature of the ingredients of this mixture, it is unlikely that symptoms as severe as listed will occur. It is expected that this mixture is harmful if ingested, inhaled, or absorbed through the skin. This mixture cannot be made nonpoisonous and death may result from ingestion of large quantities. Prolonged skin contact may cause severe dermatitis, burns to skin, or other harmful effects.

Potential Health Effects (Pure Substances):
Formaldehyde: Strong sensitizer. May cause irritation to skin along with allergic rash. Eye contact may cause blurring, tearing, and discomfort. Prolonged contact with eye may cause
corneal or conjunctival ulceration. Inhalation may cause severe discomfort to nasal passages and upper respiratory tract. Ingestion may cause gastrointestinal disturbances, and in severe cases of ingestion, death.

Propylene Glycol: Irritating to eyes, skin, and mucous membranes. Low oral toxicity.

Methanol: May irritate mucous membranes. Extremely toxic to optic nerve. Symptoms of overexposure may include headache, drowsiness, nausea, vomiting, blurred vision, and coma. May cause drying and cracking of skin. May irritate eyes. If eye contact is prolonged, lesions may develop. Persons with preexisting disorders of skin, eyes, liver, or kidneys may be more susceptible to the toxic effects of methanol. Methanol cannot be made nonpoisonous.

Phenol: Human poison by ingestion. Moderately toxic by skin contact. A severe eye and skin irritant. Absorption of phenolic solutions through the skin may be very rapid, and cause death within 30 minutes to several hours by of exposure of as little as 64 square inches of skin. Lesser exposures can cause damage to the kidneys, liver, pancreas and spleen, and edema of the lungs. Ingestion can cause corrosion of the lips, mouth, throat, esophagus and stomach, and gangrene. Ingestion of 1.5 grams has killed. Chronic exposures can cause death from liver and kidney damage. Dermatitis resulting from contact with phenol or phenol-containing products is fairly common in industry.

Sodium Citrate: Poison by intravenous route. Moderately toxic by intraperitoneal and subcutaneous routes.

4. FIRST AID MEASURES

Emergency and First Aid Procedures:

Eyes: Flush with water for at least 15 minutes, raising and lowering upper and lower eyelids occasionally. Get medical attention.

Skin: Thoroughly wash exposed area with soap and water for at least 15 minutes. Remove contaminated clothing. Launder contaminated clothing before reuse. If irritation develops get medical attention.

Ingestion: If swallowed, if conscious, give plenty of water or milk. Immediately call a poison control center or physician.

Inhalation: Remove to fresh air. Give oxygen if breathing is difficult; give artificial respiration if breathing has stopped. Keep person warm, quiet and give medical attention.
5. FIREFIGHTING PROCEDURES

Flash Point (Method Used):
No information available

NFPA 704M Rating:
Health: 3
Flammability: 3
Reactivity: 0

Extinguisher Media:
Use media suitable to extinguish surrounding fire.

Flammable Limits in Air % by volume:
No information available

Autoignition Temperature:
No information available

Special Firefighting Procedures:
Firefighters should wear full protective equipment and NIOSH approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

Unusual Fire and Explosion Hazards:
This product may evolve extremely noxious fumes under fire conditions.

6. SPILL OR LEAK PROCEDURES

Steps to be Taken in Case Material is Released or Spilled (Pure Substances):
Ventilate area of spill. Remove all non-essential personnel from the area. Cleanup personnel should wear full protective clothing and NIOSH approved self-contained breathing apparatus operated in pressure demand or other positive pressure mode. Absorb material on vermiculite or other suitable absorbent material. When saturated, shovel or scoop up material with non-sparking tools and place in containers for disposal. Be sure to comply with all applicable local, state, and federal waste disposal regulations.

7. SPECIAL PRECAUTIONS

Precautions to be Taken in Handling or Storing:
Store tightly closed in a cool, dry, well ventilated area suitable for general chemical storage.

Other Precautions:
No information available

8. SPECIAL PROTECTION INFORMATION

Respiratory Protection (Specify Type):
Use general or local exhaust ventilation to insure that airborne concentrations are kept below TLV and PEL requirements. A NIOSH approved chemical cartridge respirator can be worn, in general, up to 10 times the TLV. Consult respirator manufacturer for specific details. Above this point, a NIOSH approved self-contained breathing apparatus must be worn.
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Revised: 09/05/00
Replaces: None
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Ventilation:
Local Exhaust: Preferred
Mechanical (General): Acceptable
Special: No
Other: No

Protective Gloves: Neoprene, Nitrile or equivalent.
Eye Protection: Splash-proof chemical safety goggles should be worn.

Other Protective Clothing or Equipment: Lab coat, eye wash, safety shower.

9. PHYSICAL DATA

Melting Point (degrees C): No information available
Boiling Point (degrees C): No information available
Vapor Pressure (mm Hg): No information available
Vapor Density (Air =1): No information available
Specific Gravity (H2O = 1): No information available
Percent Volatile by Volume: Approximately 99.5%
Evaporation Rate (Water = 1): No information available
Solubility in Water: Complete, product is an aqueous solution
Appearance and Odor: Clear liquid with very pungent odor

10. REACTIVITY DATA

Stability: Stable
Conditions to Avoid: No information available
Incompatibility (Materials to Avoid): Water reactive materials
Hazardous Decomposition Products: If heated to thermal decomposition the components of this mixture may evolve formaldehyde gas. If heated to thermal decomposition the components of this mixture may evolve oxides of carbon.

Hazardous Polymerization: Will not occur

11. TOXICITY DATA

Threshold Limit Value: See Section 2
Toxicity Data: To the best of our knowledge the toxicological properties of this mixture have not been thoroughly evaluated. Data is listed below for individual components. All data RTECS, 1986.
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Formaldehyde: oral-rat LD50 800 mg/kg,
              ihl-rat LC50 590 mg/m³
Propylene Glycol: oral-rat LD50 20 g/kg
Methanol: oral-rat LD50 5628 mg/kg,
           ihl-rat LC50 64000 ppm/4H
Phenol: oral-rat LD50 317 mg/kg,
        ihl-rat LC50 316 mg/kg
Sodium Citrate: ipr-rat LD50 1724 mg/kg,
                ivn-mus LD50 71 mg/kg

Effects of Overexposure:
Acute: See Section 3
Chronic:

Propylene Glycol: Mutation data cited. Reproductive data cited. Not listed as causing cancer by IARC, NTP, or OSHA.

Methanol: Mutation data cited. Reproductive data cited. Not listed as causing cancer by IARC, NTP, or OSHA.

Phenol: Mutation data cited. Reproductive effects data cited. Tumorigenic data cited. Not listed as causing cancer by IARC, NTP, or OSHA.

Sodium Citrate: No chronic effects data found. Not listed as causing cancer by IARC, NTP or OSHA.

* Data cited in this section refers to listings in the Registry of Toxic Effects of Chemical Substances (RTECS). It does not necessarily mean that these effects were observed. Individual articles referenced in RTECS should be consulted when making any determination of toxicity of this substance.

Conditions Aggravated by Overexposure:
Preexisting conditions of skin, eyes, liver, or kidneys.

Target Organs: Skin, eyes, liver, kidneys

12. ECOLOGICAL DATA

Resource Conservation and Recovery Act (RCRA) requirements:
Formaldehyde (U122), Phenol (U188) and Methanol (U154) are considered hazardous chemical wastes if and when they are discarded.
Clean Water Act Requirements: 
Formaldehyde is listed under Section 311 as a hazardous 
substance requiring the submission of a National Pollutant 
Discharge Elimination System (NPDES) permit application to the 
EPA.

Formaldehyde is listed in Table V of testing requirements as a 
hazardous substance required to be identified by existing 
dischargers, if expected to be present.

13. DISPOSAL INFORMATION

Waste Disposal Method: 
Dispose in accordance with all applicable federal, state and 
local regulations.

14. TRANSPORT INFORMATION

N/A

15. REGULATORY INFORMATION

EPA TSCA STATUS: 
The ingredients of this product are all on the TSCA Inventory list.

Hazard Category for SARA Section 311/312 Reporting: 
Acute  Chronic

SARA EHS Sect. 302  TPQ (lbs.)
Formaldehyde  500
Propylene Glycol  No
Methanol  No
Phenol  500
Sodium Citrate  No

SARA Sect. 313 Chemicals  Chemical Category
Name list
Formaldehyde  Yes  No
Propylene Glycol  Yes  No
Methanol  Yes  No
Phenol  No  No
Sodium Citrate  No  No

CERCLA Sect. 103  RQ (lbs.)
Formaldehyde  100
Propylene Glycol  No
Methanol  5000
Phenol  1000
Sodium Citrate  No

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RCRA Sect. 261.33
Formaldehyde Yes
Propylene Glycol No
Methanol Yes (Ignitability)
Phenol Yes
Sodium Citrate No

California Proposition 65: Formaldehyde (gas) is a chemical known to the State of California to cause cancer.

16. ADDITIONAL INFORMATION AND PRECAUTIONS

The information provided in this Material Safety Data Sheet represents a compilation of data drawn directly from various sources available to us. Carolina Biological Supply makes no representation or guarantee as to the suitability of this information to a particular application of the substance covered in the Material Safety Data Sheet. Any employer must carefully assess the applicability of any information contained herein in regards to the particular use to which the employer puts the material.

Glossary
ACGIH........American Conference of Governmental Industrial Hygienists
CAS Number...Chemical Abstracts Service Number
CWA...........Clean Water Act
DOT............U.S. Department of Transportation
IARC...........International Agency for Research on Cancer
IATA..........International Air Transport Association
IMO............International Maritime Organization
NTP..........National Toxicology Program
OSHA.........Occupational Safety and Health Administration
PEL...........Permissible Exposure Limit
ppm...........parts per million
RTECS........Registry of Toxic Effects of Chemical Substances
(published by the National Institute of Occupational Safety and Health (NIOSH))
TLV.........Threshold Limit Value