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**SAFETY DATA SHEET**



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**FORMALIN FIXED FETAL PIGS IN PRESERVED HOLDING SOLUTION**

**SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

**Product Name:** Formalin Fixed Fetal Pigs In Preserved Holding Solution  
**Recommended Use:** Science education applications  
**Synonyms:** None  
**Manufacturer/Supplier:** Ranaco Corporation, 4345 E Irvington Road, Tucson, AZ 85714  
**General Information:** 800-528-7023  
**Transportation Emergency Number:** 800-424-9300 Chemtrec – 24 hours assistance

**SECTION 2: HAZARD IDENTIFICATION**

**DANGER**



**Targeted organs:**

Eyes, Skin, Central Nervous System, Liver, Kidney  
 Respiratory Tract

**GHS Classification:**

Acute Toxicity, oral (Category 4)  
 Acute Toxicity, dermal (Category 4)  
 Skin Irritation (Category 2)  
 Eye irritation (Category 2A)  
 Skin sensitization (Category 1)  
 Acute toxicity, inhalation (Category 4)  
 Carcinogenicity (Category 2)

**Hazard Statements:**

Maybe harmful if swallowed.  
 Causes skin irritation.  
 Causes eye irritation.  
 May cause an allergic skin reaction.  
 May cause respiratory irritation.  
 May cause cancer.

**Precautionary Statements:**

Obtain special instructions before use.  
 Wear protective gloves and eye protection.  
 Do not eat, drink or smoke when using this product.  
 Wash hands thoroughly after handling.  
 IF ON SKIN: Wash with plenty of soap and water.  
 IF IN EYES: Rinse cautiously for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.  
 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 IF SWALLOWED: Immediately call a POISON CENTER or physician  
 IF exposed or concerned: Get medical advice/attention.  
 Store in a well-ventilated place. Keep container tightly closed.  
 Dispose of contents/container in accordance with local/regional/national regulations.

CA Prop 65: This product contains chemicals known to the State of California to cause cancer or reproductive toxicity.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS #	%
Formaldehyde	50-00-0	> 0.1% - ≤ 0.6%
Methanol	67-56-1	≤ 0.03%
Propylene Glycol	57-55-6	≤ 9%
Ethylene Glycol Monophenyl Ether	122-99-6	≤ 2%
Phenol	108-95-2	≤ 0.05%
Glutaraldehyde	111-30-8	≤ 1%
Water	7732-18-5	Balance

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## SECTION 4: FIRST AID MEASURES

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**SKIN CONTACT:** Wash affected area with soap and water. Seek medical attention if symptoms develop.

**EYE CONTACT:** Rinse cautiously for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing. Seek medical attention if irritation persists.

**INHALATION:** Remove to fresh air. Get medical treatment if symptoms persist.

**INGESTION:** Immediately call a POISON CENTER or physician. Only induce vomiting at the instruction of medical personnel. Never give anything by mouth to an unconscious person.

**SIGNS AND SYMPTOMS OF EXPOSURE:** Irritation of skin, eyes, respiratory tract. Repeated exposure may cause dermatitis or other allergic reactions.

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## SECTION 5: FIRE FIGHTING MEASURES

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**EXTINGUISHING MEDIA:** Use dry chemical, CO<sub>2</sub>, water spray (fog) or alcohol foam.

**FIRE FIGHTING METHODS AND PROTECTION:** Firefighters should wear self-contained breathing apparatus and wear full protective equipment.

**FIRE AND/OR EXPLOSION HAZARDS:** During a fire, smoke generated can be irritating or toxic.

**HAZARDOUS COMBUSTION PRODUCTS:** Products of combustion include but are not limited to carbon monoxide and carbon dioxide.

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## SECTION 6: ACCIDENTAL RELEASE MEASURES

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**PERSONAL PRECAUTIONS:** Avoid breathing vapors. Use gloves and eye protection to clean up spills.

**EMERGENCY PROCEDURES:** Ventilate area of spill. Eliminate all sources of ignition. Remove non-essential personnel.

**ENVIRONMENTAL PRECAUTIONS:** No special hazards. Follow applicable federal, state, provincial and local regulations regarding releases.

**METHODS FOR CONTAINMENT AND CLEAN-UP:** Absorb with liquid binding material and place in a sealed container. Dispose of waste in accordance with federal, state, provincial and local regulations.

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## SECTION 7: HANDLING AND STORAGE

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**PRECAUTIONS FOR SAFE HANDLING:** Do not eat, drink or smoke when using this product. Avoid breathing vapors. Avoid direct skin or eye contact with liquids. Do not ingest. Wash hands with soap and water after use or handling of product.

**CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES:** Store at room temperature in a dry well ventilated area. Keep specimen container tightly closed when not in use.

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## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

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### Exposure Limits:

Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Formaldehyde	C 0.3 ppm / C 0.37 mg/m <sup>3</sup>	TWA: 0.75 ppm / STEL: 2ppm	TWA: 0.016 ppm / STEL: 0.1 ppm
Methanol	TWA: 200 ppm / STEL: 250 ppm	TWA: 200 ppm / STEL: 260 ppm	TWA: 200 ppm / STEL: 250 ppm
Ethylene Glycol Monophenyl Ether	Not available	Not available	Not available
Phenol	TWA: 5 ppm (Skin)	TWA: 5 ppm (Skin)	TWA: 5 ppm (Skin)
Glutaraldehyde	C 0.05 ppm / C 0.2 mg/m <sup>3</sup>	Not available	C 0.2 ppm / C 0.8 mg/m <sup>3</sup>
Propylene Glycol	WEEL TWA 10 mg/m <sup>3</sup> Aerosol	Not available	Not available

**Engineering Controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility, a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles or face shield, apron and appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

**Respiratory Protection:** None should be needed in normal handling and room temperatures. If use conditions generate fumes above the OSHA regulations, use of a NIOSH/MSHA approved respirator is required.

ACGIH: American Conference of Industrial Hygienists, OSHA: U.S. Occupational Safety and Health Administration, NIOSH: U.S. National Institute for Occupational Safety and Health, PEL: Permissible Exposure Limit, TWA: Time Weighted Average, STEL: Short Term Exposure Limit, REL: Recommended Exposure Limit, WEEL: Workplace Environmental Exposure Limit

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## SECTION 9: PHYSICAL & CHEMICAL PROPERTIES

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**Appearance:** Specimen with/without clear colorless liquid  
**Odor:** Mild pungent or sweet odor  
**Odor Threshold:** Data not available  
**pH:** Data not available  
**Melting/Freezing Point:** Data not available  
**Boiling Point:** Data not available  
**Flash Point:** Data not available  
**Evaporation Rate (Water = 1) :** >1  
**Flammability (solid/gas):** Data not available  
**Explosion Limits: Lower/Upper:** Data not available

**Vapor Pressure (mmHg):** Data not available  
**Vapor Density:** Data not available  
**Relative Density (Specific Gravity):** >1  
**Solubility(ies):** Complete in water  
**Partition Coefficient:** Data not available  
**Auto-ignition Temperature:** Data not available  
**Decomposition Temperature:** Data not available  
**Viscosity:** Data not available  
**Molecular Formula:** Mixture  
**Molecular Weight:** Mixture

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## SECTION 10: STABILITY & REACTIVITY

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**Reactivity:** None under normal conditions.      **Chemical Stability:** Stable  
**Conditions to Avoid:** Excessive temperatures which cause evaporation.  
**Incompatible Materials:** Strong acids, phenol, strong oxidizers, strong bases, hydrochloric acid, ammonia, iodine, alkalies, tannin, iron products, gelatin, bisulfate  
**Hazardous Polymerization:** None under normal conditions.  
**Hazardous Decomposition Products:** May include, but are not limited to carbon dioxide, carbon monoxide, gaseous formaldehyde, aldehydes, ketones, alcohols, ethers and organic acids

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## SECTION 11: TOXICOLOGICAL INFORMATION

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**Acute Toxicity:** Formalin Fixed Pigs in Preserved Holding Solution have not been tested as a mixture. Information about individual components is supplied.  
Formaldehyde – Oral-rat LD50: 100 mg/kg; Inhalation-rat LC50: 250 ppm/4 hours; Dermal-rat: 270 mg/kg  
Methanol - Oral-rat LD50: 5,600 mg/kg; Inhalation-rat LC50: 6,400 ppm/4 hours, 145,000 ppm/ 1 hour; Dermal-rat: 15,800 mg/kg  
Propylene Glycol – Ingestion-rat LD50: > 20,000 mg/kg; Skin absorption-rabbit LD50: > 20,000 mg/kg  
Ethylene Glycol Monophenyl Ether- Oral-rat LD50: 1,840 mg/kg; Dermal-rabbit: >2,214 mg/kg  
Phenol - Oral-rat LD50: 340 mg/kg; Inhalation-rat LC50: 310-316 mg/m<sup>3</sup>; Dermal-rabbit: 850 mg/kg  
Glutaraldehyde - Oral-rat LD50:200mg/kg; Dermal-rabbit LD50: 1,749 mg/kg.  
**Chronic Effects:** Data not available.  
**Skin Corrosion/Irritation:**  
Causes skin irritation. May cause an allergic skin reaction.  
**Serious Eye Damage/Irritation:**  
Causes eye irritation or damage.  
**Respiratory or Skin Sensitization:**  
May cause sensitization by skin contact  
**Germ Cell Mutagenicity:** Data not available.  
**Carcinogenicity:** Data not available. Information about individual components is supplied.  
Formaldehyde – Classified as a carcinogen by the International Agency for Research on Cancer (IARC) and the National Toxicology Program (NTP) and OSHA. CA Prop 65: Formaldehyde is known to the State of California to cause cancer.  
**Reproductive Toxicity:** Data not available. Information about individual components is supplied.  
Ethylene Glycol Monophenyl Ether - CA Prop 65: This chemical is known to the State of California to cause reproductive toxicity at high oral doses.  
**Specific Target Organ Toxicity – Single exposure:** Data not available.  
**Specific Target Organ Toxicity– Repeated exposure:** Data not available.  
**Aspiration Hazard:** Data not available.

**Potential Health Effects:****Inhalation:** May cause respiratory irritation.**Ingestion:** May be harmful if swallowed.**Skin:** May cause skin irritation. May cause an allergic skin reaction.**Eyes:** May cause eye irritation or damage.**Signs and Symptoms of Exposure:**

The chemical, physical and toxicological properties have not been thoroughly investigated for this product/mixture. Specific data is not available. Exercise appropriate procedures to minimize hazards.

**SECTION 12: ECOLOGICAL INFORMATION****Toxicity to fish:** No data available.**Toxicity to daphnia and other aquatic invertebrates:** No data available.**Toxicity to algae:** No data available.**Persistence and degradability:** No data available.**Bioaccumulative potential:** No data available.**Mobility in soil:** No data available.**PBT and vPvB assessment:** No data available.**Other adverse effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.**SECTION 13: DISPOSAL CONSIDERATIONS**

Dispose of contents/container in accordance with local/regional/national regulations.

**SECTION 14: TRANSPORTATION INFORMATION (US DOT / CANADA TDG)****UN/NA Number:** Not applicable**Shipping Name:** Not regulated**Hazard Class:** Not applicable**Packing Group:** Not applicable**Reportable Quantity:** No**Marine Pollutant:** No**Exceptions:** Not applicable**2012 ERG Guide#:** Not applicable**SECTION 15: REGULATORY INFORMATION**

Toxic Substances Control Act (TSCA): All components of this product are included on the TSCA inventory.

Component	TSCA	CERCLA (RQ)	RCRA CODE	DSL	NDSL	WHMIS CLASSIFICATION
Formaldehyde	Listed	100 lbs (45.4 kg)	U122	Listed	Not Listed	D1A; D2A; D2B
Methanol	Listed	5,000 lbs (2,270 kg)	U154	Listed	Not Listed	B2; D1B; D2A; D2B
Propylene Glycol	Listed	None	None	Listed	Not Listed	None
Ethylene Glycol Monophenyl Ether	Listed	None	None	Listed	Not Listed	B3
Phenol	Listed	1000 lbs	U188	Listed	Not Listed	D1A, D1B, E
Glutaraldehyde	Listed	None	None	Listed	Not Listed	D1A, D2B, E

California Proposition 65: This product contains a chemical known to the State of California to cause cancer or reproductive toxicity.

**SECTION 16: OTHER INFORMATION****Date Prepared:** March 9, 2016**Supersedes:** April 16, 2015

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