

**Section 1 Chemical Product and Company Information****HOME SCIENCE TOOLS**

665 Carbon Street  
Billings, MT 59102  
800-860-6272  
www.homesciencetools.com

**CHEMTREC 24 Hour Emergency**  
**Phone Number (800) 424-9300**  
For laboratory use only.  
Not for drug, food or household use.

<b>Product</b>	<b>NUTRIENT AGAR</b>
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<b>Synonyms</b>	Not applicable
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**Section 2 Hazards Identification**

**This substance or mixture has not been classified as hazardous according to the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals.**

**Signal word:** Not classified  
**Pictograms:** Not classified  
**Target organs:** None known

**GHS Classification:** Not classified

**GHS Label information:**  
**Hazard statement:** Not classified  
**Precautionary statement:** Not classified

**Supplemental information:**

Agar is a dried hydrophilic colloidal substance obtained from various species of algae and, as such, presents a low hazard for normal laboratory handling. Dust may cause skin and eye irritation. Do not breathe dust. Do not get in eyes, on skin, or on clothing. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Get medical attention if you feel unwell.

Ca Prop 65 - This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

**Section 3 Composition / Information on Ingredients**

Chemical Name	CAS #	%	EINECS
Agar	9002-18-0	62.50%	232-658-1
Peptone, bacteriological	None assigned	21.75%	None assigned
Beef extract, bacteriological	None assigned	13.05%	None assigned

**Section 4 First Aid Measures**

**INGESTION:** Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** MAY CAUSE TRANSIENT IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

**Section 5 Fire Fighting Measures**

**Suitable Extinguishing Media:** Use any media suitable for extinguishing supporting fire

**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

**Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Dust dispersed in air is capable of creating a dust explosion when exposed to an ignition source. Avoid dispersion of dust in air.

**Section 6 Accidental Release Measures**

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.

**Containment and Cleanup:** Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

**Section 7 Handling & Storage**

**Precautions for Safe Handling:** Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Conditions for Safe Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from ignition sources.

**Section 8 Exposure Controls / Personal Protection**

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Agar	None established	None established	None established

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

**Respiratory protection:** None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

**Section 9 Physical & Chemical Properties**

**Appearance:** Solid, tan powder.

**Odor:** Characteristic odor of cooked meat.

**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 ( = 1):** Data not available

**Flammability (solid/gas):** Data not available.

**Explosion limits: Lower / Upper:** Data not available

**Vapor pressure (mm Hg):** Negligible

**Vapor density (Air = 1):** Data not available

**Relative density (Specific gravity):** Data not available

**Solubility(ies):** Soluble 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

**Section 10 Stability & Reactivity**

**Chemical stability:** Stable

**Hazardous polymerization:** Will not occur.

**Conditions to avoid:** Excessive temperatures, heat, sparks, open flame and other sources of ignition.

**Incompatible materials:** Strong oxidizers, alkalis.

**Hazardous decomposition products:** Oxides of carbon.

**Section 11 Toxicological Information**

**Acute toxicity:** Oral-rat LD50: 1100 mg/kg [Agar CAS # 9002-18-0]

**Skin corrosion/irritation:** Data not available

**Serious eye damage/irritation:** Data not available

**Respiratory or skin sensitization:** Data not available

**Germ cell mutagenicity:** Data not available

**Carcinogenicity:** Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity:** Data not available

**STOT-single exposure:** Data not available

**STOT-repeated exposure:** Data not available

**Aspiration hazard:** Data not available

**Potential health effects:**

Inhalation: No specific hazard known.

Ingestion: No specific hazard known.

Skin: No specific hazard known.

Eyes: Contact with eyes may cause irritation.

**Signs and symptoms of exposure:** To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards.

**Additional information:** RTECS #: AW7950000 [Agar]

**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**

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

**Section 14 Transport Information**

**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**

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	WHMIS Classification
Agar	Listed	Not listed	Not listed	Listed	Not listed	Not listed

**Section 16 Additional Information**

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

## Section 1 Chemical Product and Company Information

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<b>Product</b>	<b>CALCIUM HYDROXIDE</b>
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<b>Synonyms</b>	Hydrated Lime / Slaked Lime / Caustic Lime / Calcium Hydrate
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## Section 2 Hazards Identification

**Signal word:** DANGER**Pictograms:** GHS05**Target organs:** Eyes, Skin, Respiratory system**GHS Classification:**

Skin corrosion (Category 1B)

Eye damage (Category 1)

**GHS Label information: Hazard statement:**

H314: Causes severe skin burns and eye damage.

**Precautionary statement:**

P260: Do not breathe dust.

P264: Wash hands thoroughly after handling.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P301+P330+P331: IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P363: Wash contaminated clothing before reuse.

P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P310: Immediately call a POISON CENTER or doctor.

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P405: Store locked up.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Ca Prop 65 - This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

## Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Calcium hydroxide	1305-62-0	>98%	215-137-3

## Section 4 First Aid Measures

**INGESTION:** HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** CAUSES SEVERE BURNS AND EYE DAMAGE. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** MAY BE HARMFUL IF ABSORBED THROUGH SKIN. CAUSES SKIN BURNS. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

## Section 5 Fire Fighting Measures

**Suitable Extinguishing Media:** Use any media suitable for extinguishing supporting fire.

**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

**Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

## Section 6 Accidental Release Measures

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.

**Containment and Cleanup:** Recover for reuse if not contaminated. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

**Precautions for Safe Handling:** Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Conditions for Safe Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances.

## Section 8 Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Calcium hydroxide	TWA: 5 mg/m <sup>3</sup>	TWA: 5 mg/m <sup>3</sup> Respirable fraction	TWA: 5 mg/m <sup>3</sup>

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

**Respiratory protection:** None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

## Section 9 Physical &amp; Chemical Properties

<b>Appearance:</b> Solid. White to yellow powder. <b>Odor:</b> No odor. <b>Odor threshold:</b> Data not available. <b>pH:</b> Data not available. <b>Melting / Freezing point:</b> as CaO 2850°C (5162°F) <b>Boiling point:</b> as CaO 579°C (1076°F) <b>Flash point:</b> Not flammable	<b>Evaporation rate ( = 1):</b> Data not available <b>Flammability (solid/gas):</b> Data not available. <b>Explosion limits: Lower / Upper:</b> Data not available <b>Vapor pressure (mm Hg):</b> Data not available <b>Vapor density (Air = 1):</b> Data not available <b>Relative density (Specific gravity):</b> 2.24 <b>Solubility(ies):</b> 0.185% @ 0°C in water.	<b>Partition coefficient:</b> Data not available <b>Auto-ignition temperature:</b> Data not available <b>Decomposition temperature:</b> Data not available. <b>Viscosity:</b> Data not available. <b>Molecular formula:</b> Ca(OH) <sub>2</sub> <b>Molecular weight:</b> 74.10
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## Section 10 Stability &amp; Reactivity

**Chemical stability:** Stable  
**Hazardous polymerization:** Will not occur.  
**Conditions to avoid:** Absorbs CO<sub>2</sub> from air to form calcium carbonate.  
**Incompatible materials:** Acids, fluorine.  
**Hazardous decomposition products:** None known.

## Section 11 Toxicological Information

**Acute toxicity:** Oral-rat LD50: 7340 mg/kg  
**Skin corrosion/irritation:** Skin-rabbit - Irritant.  
**Serious eye damage/irritation:** Eyes-rabbit - Severe irritant  
**Respiratory or skin sensitization:** Data not available  
**Germ cell mutagenicity:** Data not available  
**Carcinogenicity:** Data not available  
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.  
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.  
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.  
**Reproductive toxicity:** Data not available  
**STOT-single exposure:** Data not available  
**STOT-repeated exposure:** Data not available  
**Aspiration hazard:** Data not available  
**Potential health effects:**  
Inhalation: Inhalation may cause sore throat, burning sensation.  
Ingestion: Ingestion may cause burning sensation, abdominal pain, abdominal cramps, vomiting.  
Skin: Contact with skin causes redness, roughness, pain, dry skin, burns, blisters.  
Eyes: Contact with eyes causes redness, pain, severe deep burns.  
**Signs and symptoms of exposure:** Exercise appropriate procedures to minimize potential hazards.  
**Additional information:** RTECS #: EW2800000

## Section 12 Ecological Information

**Toxicity to fish:** *Gambusia affinis* (fish, fresh water), LC50 = 220 mg/L/48 hours  
**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


These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

## Section 14 Transport 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

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	WHMIS Classification
Calcium hydroxide	Listed	Not listed	D002	Listed	Not listed	 E

## Section 16 Additional Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

## Section 1 Chemical Product and Company Information

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<b>Product</b>	<b>MAGNESIUM SULFATE, HEPTAHYDRATE</b>
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<b>Synonyms</b>	Epsom Salts
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## Section 2 Hazards Identification

This substance or mixture has not been classified as hazardous according to the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals.

**Signal word:** None

**Pictograms:** No symbol required

**Target organs:** None known

**GHS Classification:** Not classified

**GHS Label information: Hazard statement:** Not classified

**Precautionary statement:** Not classified

**Supplementary information:**

Do not breathe dust. Do not get in eyes, on skin, or on clothing. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Get medical attention if you feel unwell.

Ca Prop 65 - This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

## Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Magnesium sulfate	10034-99-8	100%	231-298-2 (anhydrous)

## Section 4 First Aid Measures

**INGESTION:** MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** MAY CAUSE EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** MAY BE HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

## Section 5 Fire Fighting Measures

**Suitable Extinguishing Media:** Use any media suitable for extinguishing supporting fire.

**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

**Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

## Section 6 Accidental Release Measures

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.

**Containment and Cleanup:** Recover for reuse if not contaminated. Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

**Precautions for Safe Handling:** Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Conditions for Safe Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances.

## Section 8 Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Magnesium sulfate	None established	None established	None established

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

**Respiratory protection:** None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

## Section 9 Physical &amp; Chemical Properties

<b>Appearance:</b> Solid, White crystalline powder <b>Odor:</b> No odor. <b>Odor threshold:</b> Data not available. <b>pH:</b> Data not available. <b>Melting / Freezing point:</b> Data not available <b>Boiling point:</b> Data not available <b>Flash point:</b> Data not available	<b>Evaporation rate ( = 1):</b> Data not available <b>Flammability (solid/gas):</b> Data not available. <b>Explosion limits: Lower / Upper:</b> Data not available <b>Vapor pressure (mm Hg):</b> Data not available <b>Vapor density (Air = 1):</b> Data not available <b>Relative density (Specific gravity):</b> 2.7 <b>Solubility(ies):</b> Appreciable in water.	<b>Partition coefficient:</b> Data not available <b>Auto-ignition temperature:</b> Data not available <b>Decomposition temperature:</b> Data not available <b>Viscosity:</b> Data not available. <b>Molecular formula:</b> MgSO <sub>4</sub> ·7H <sub>2</sub> O <b>Molecular weight:</b> 246.48
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## Section 10 Stability &amp; Reactivity

**Chemical stability:** Stable **Hazardous polymerization:** Will not occur.

**Conditions to avoid:** Excessive temperatures and heat. Protect from moisture.

**Incompatible materials:** None known.

**Hazardous decomposition products:** Sulfur oxides.

## Section 11 Toxicological Information

**Acute toxicity:** Data not available

**Skin corrosion/irritation:** Data not available

**Serious eye damage/irritation:** Data not available

**Respiratory or skin sensitization:** Data not available

**Germ cell mutagenicity:** Data not available

**Carcinogenicity:** Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity:** Data not available

**STOT-single exposure:** Data not available

**STOT-repeated exposure:** Data not available

**Aspiration hazard:** Data not available

**Potential health effects:**

Inhalation: May cause respiratory irritation.

Ingestion: Ingestion may cause nausea, vomiting and diarrhea.

Skin: Contact with skin may cause irritation.

Eyes: Contact with eyes may cause irritation.

**Signs and symptoms of exposure:** To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards.

**Additional information:** RTECS #: Data not available

## Section 12 Ecological Information

**Toxicity to fish:** Gambusia affinis (fish, fresh water), LC50: 15,500 mg/L/24 hours

**Toxicity to daphnia and other aquatic invertebrates:** Daphnia magna (Crustacea), EC50: 1,700 mg/L/24 hours

**Toxicity to algae:** Scenedesmus subspicatus (Algae), EC50: 2,700 mg/L/ 72 hours

**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

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

## Section 14 Transport 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

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	WHMIS Classification
Magnesium sulfate	Listed	Not listed	Not listed	Listed	Not listed	Uncontrolled product

## Section 16 Additional Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

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<b>Product</b>	<b>FERTILIZER</b>
<b>Synonyms</b>	Plant Nutrient ; Nutrient QuickSolution

**Section 2 Hazards Identification**

**Signal word:** WARNING  
**Pictograms:** GHS07  
**Target organs:** None known



**GHS Classification:**  
Skin irritation (Category 2)  
Eye irritation (Category 2A)  
STOT-SE (Category 3)

**GHS Label information: Hazard statement:**  
H315: Causes skin irritation.  
H319: Causes serious eye irritation.  
H335: May cause respiratory irritation.

**Precautionary statement:**  
P261: Avoid breathing dust.  
P264: Wash hands thoroughly after handling.  
P271: Use only outdoors or in a well-ventilated area.  
P280: Wear protective gloves/protective clothing/eye protection/face protection.  
P302+P352: IF ON SKIN: Wash with plenty of water and soap.  
P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P304+P340: IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P312: Call a POISON CENTER or doctor if you feel unwell.  
P332+P313: If skin irritation occurs: Get medical attention.  
P337+P313: If eye irritation persists: Get medical attention.  
P362+P364: Take off contaminated clothing and wash it before reuse.  
P403+P233: Store in a well-ventilated place. Keep container tightly closed.  
P405: Store locked up.  
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Ca Prop 65 - This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

**Section 3 Composition / Information on Ingredients**

Chemical Name	CAS #	%	EINECS
Ammonium phosphate	7722-76-1	undisclosed	231-764-5
Potassium nitrate	7757-79-1	undisclosed	231-818-8
Urea	57-13-6	undisclosed	200-315-5

**Section 4 First Aid Measures**

**INGESTION:** Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

**Section 5 Fire Fighting Measures**

**Suitable Extinguishing Media:** Use any media suitable for extinguishing supporting fire.

**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

**Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**Section 6 Accidental Release Measures**

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.

**Containment and Cleanup:** Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

**Section 7 Handling & Storage**

**Precautions for Safe Handling:** Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Conditions for Safe Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances.

**Section 8 Exposure Controls / Personal Protection**

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Particulate not otherwise classified	None established	TWA: 15 mg/m <sup>3</sup> total dust	None established

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

**Respiratory protection:** None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

**Section 9 Physical & Chemical Properties**

**Appearance:** Solid, green crystals.

**Odor:** No 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 ( = 1):** Data not available

**Flammability (solid/gas):** Data not available.

**Explosion limits: Lower / Upper:** Data not available

**Vapor pressure (mm Hg):** Data not available

**Vapor density (Air = 1):** Data not available

**Relative density (Specific gravity):** Data not available

**Solubility(ies):** Soluble 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

**Section 10 Stability & Reactivity**

**Chemical stability:** Stable

**Hazardous polymerization:** Will not occur.

**Conditions to avoid:** Excessive temperatures and heat.

**Incompatible materials:** None known.

**Hazardous decomposition products:** Carbon oxides, nitrogen oxides, phosphorous oxides, and ammonia.

**Section 11 Toxicological Information**

**Acute toxicity:** Oral-rat LD50: 3015 mg/kg [Potassium nitrate]; Dermal-rabbit LD50: >7940 mg/kg [Ammonium phosphate]

**Skin corrosion/irritation:** Data not available

**Serious eye damage/irritation:** Data not available

**Respiratory or skin sensitization:** Data not available

**Germ cell mutagenicity:** Data not available

**Carcinogenicity:** Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity:** Data not available

**STOT-single exposure:** Data not available

**STOT-repeated exposure:** Data not available

**Aspiration hazard:** Data not available

**Potential health effects:**

Inhalation: Inhalation may cause irritation and coughing.

Ingestion: Ingestion may cause nausea, vomiting, and diarrhea.

Skin: Contact may cause irritation.

Eyes: Contact may cause irritation.

**Signs and symptoms of exposure:** To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards.

**Additional information: RTECS #:** None

**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**

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

**Section 14 Transport Information**

**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**

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	WHMIS Classification
Ammonium phosphate	Listed	Not listed	Not listed	Listed	Not listed	Not listed
Potassium nitrate	Listed	Not listed	Not listed	Listed	Not listed	C
Urea	Listed	Not listed	Not listed	Listed	Not listed	Uncontrolled product

**Section 16 Additional Information**

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

Revision Date: September 11, 2013

Supersedes: June 24, 2011



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For laboratory use only.  
Not for drug, food or household use.

<b>Product</b>	<b>IODINE-POTASSIUM IODIDE SOLUTION</b>
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<b>Synonyms</b>	Iodine-Iodide / Iodine Solution / Iodine / Iodine Lugol's Dilute / Gram's Iodine Solution / Iodine 2% / Dilute Lugol's Solution
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**Section 2 Hazards Identification****Signal word:** WARNING**Pictograms:** GHS07 / GHS09**Target organs:** Thyroid, kidneys, endocrine system, skin, eyes, reproductive system, central nervous system.**GHS Classification:**

Acute toxicity, oral (Category 4)

Acute toxicity, inhalation (Category 4)

Aquatic Acute (Category 1)

**GHS Label information: Hazard statement(s):**

H312: Harmful in contact with skin.

H332: Harmful if inhaled.

H400: Very toxic to aquatic life.

**Precautionary statement(s):**

P261: Avoid breathing mist/vapours/spray.

P271: Use only outdoors or in a well-ventilated area.

P273: Avoid release to the environment.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P302/352: IF ON SKIN: Wash with plenty of soap and water.

P304/340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.

P312: Call a POISON CENTER or doctor/physician if you feel unwell.

P362: Take off contaminated clothing and wash before reuse.

P391: Collect spillage.

P501: Dispose of contents/container to an approved waste disposal plant.

**Ca Prop 65** - This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.**Section 3 Composition / Information on Ingredients**

Nommé Chimique	# CAS	%	EINECS
Water	7732-18-5	95.10%	231-791-2
Potassium iodide	7681-11-0	3.05%	231-659-4
Iodine	7553-56-2	1.85%	231-442-4

**Section 4 First Aid Measures****INGESTION:** MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.**INHALATION:** HARMFUL IF INHALED. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. Harmful if inhaled.**EYE CONTACT:** MAY CAUSE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.**SKIN ABSORPTION:** HARMFUL IN CONTACT WITH SKIN. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention. Harmful in contact with skin.**Section 5 Fire Fighting Measures****Extinguishing Media:** Use any media suitable for extinguishing supporting fire.**General information:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.**Specific Hazards:** In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.**Section 6 Accidental Release Measures****Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.**Containment and Cleanup:** Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

**Section 7 Handling & Storage**

Read label on container before using. Do not wear contact lenses when working with chemicals. Keep container tightly closed. Keep out of reach of children. Use with adequate ventilation. Wash thoroughly after handling.

**Handling:** Use with adequate ventilation. Avoid contact with eyes, skin and clothing. Avoid ingestion. Do not inhale vapors, mist or spray. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Storage:** Store in a cool, well-ventilated area away from incompatible substances.

**Section 8 Exposure Controls / Personal Protection**

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Iodine CAS # 7553-56-2	TWA: 0.01 ppm <sup>(FV)</sup> / STEL: 0.1 ppm <sup>(V)</sup>	STEL: C 0.1 ppm/C 1 mg/m <sup>3</sup>	STEL: C 0.1 ppm/C 1 mg/m <sup>3</sup>

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

**Respiratory protection:** None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

**Section 9 Physical & Chemical Properties**

<b>Appearance:</b> Deep amber liquid. <b>Odor:</b> Characteristic odor. <b>Odor threshold:</b> Not applicable. <b>pH:</b> Data not available. <b>Melting / Freezing point:</b> ~ 0°C (~ 32°F) [water] <b>Boiling point:</b> ~ 100°C (212°F) [water] <b>Flash point:</b> Not flammable.	<b>Evaporation rate ( Water = 1):</b> < 1 <b>Flammability (solid/gas):</b> Not applicable. <b>Explosion limits: Lower / Upper:</b> Not applicable <b>Vapor pressure (mm Hg):</b> 14 [water] <b>Vapor density (Air = 1):</b> 0.7 [water] <b>Relative density (Specific gravity):</b> 1.0 [water] <b>Solubility(ies):</b> Complete in water.	<b>Partition coefficient: (n-octanol / water):</b> Not applicable <b>Auto-ignition temperature:</b> Not applicable <b>Decomposition temperature:</b> Data not available. <b>Viscosity:</b> Data not available. <b>Molecular formula:</b> Mixture <b>Molecular weight:</b> Mixture
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**Section 10 Stability & Reactivity**

**Chemical stability:** Stable

**Hazardous polymerization:** Will not occur.

**Conditions to avoid:** Stable under recommended storage conditions. Excessive temperatures which cause evaporation.

**Incompatibilities with other materials:** Metals or unsaturated organic compounds, ammonia solutions or alkaline solutions of ammonia salts. Will form explosive nitrogen iodides when reacted with gaseous ammonia.

**Hazardous decomposition products:** Toxic iodide fumes.

**Section 11 Toxicological Information**

**Acute toxicity:** Oral-Rat LD50: 14,000 mg/kg [Iodine CAS # 7553-56-2]

**Skin corrosion/irritation:** Data not available

**Serious eye damage/irritation:** Data not available

**Respiratory or skin sensitization:** Inhalation-rat 3.1 mg/m<sup>3</sup> / 24 hour / 13 weeks - continuous [Iodine CAS # 7553-56-2]

**Germ cell mutagenicity:** Data not available

**Carcinogenicity:** Data not available

**IARC:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**NTP:** No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**OSHA:** No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity:** Data not available

**STOT-single exposure:** Data not available

**STOT-repeated exposure:** Data not available

**Aspiration hazard:** Data not available

**Potential health effects:**

Inhalation: Symptoms include cough, wheezing, and labored breathing. Symptoms may be delayed.

Ingestion: Causes abdominal pain, diarrhea, nausea, and vomiting. Ingestion of levels of 2-3 grams of iodine may cause death.

Skin: Contact may cause redness and pain.

Eyes: Contact causes watering of the eyes, redness and pain.

**Signs and symptoms of exposure:** Effects of short-term exposure: Lachrymator. The substance is severely irritating to the eyes and the respiratory tract, and is irritating to the skin. Inhalation of the vapor may cause asthma-like reactions. Inhalation of the vapor may cause lung edema. The effects may be delayed. Effects of long-term exposure: Repeated or prolonged contact may cause skin sensitization in rate cases. Repeated or prolonged inhalation exposure may cause asthma-like syndrome. The substance may have effects on the thyroid. Specific data not available for this mixture. Exercise appropriate procedures to minimize potential hazards..

**Additional information:** RTECS #: NN1575000 [Iodine CAS # 7553-56-2]

**Section 12 Ecological Information**

**Toxicity to fish:** Very toxic to aquatic life.

**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**

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

**Section 14 Transport Information**

**UN/NA number:** None assigned

**Shipping name:** Not Regulated.

**Hazard class:** None assigned **Packing group:** None assigned **Reportable Quantity:** No **Marine pollutant:** No **Exceptions:** No

**Section 15 Regulatory Information**

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	WHMIS Classification
Iodine	Listed	Not listed	Not listed	Listed	Not listed	E; D2A
Potassium iodide	Listed	Not listed	Not listed	Listed	Not listed	D2A

**Section 16 Additional Information**

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure.

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Not for drug, food or household use.

<b>Product</b>	<b>METHYLENE BLUE CHLORIDE, 1% AQUEOUS SOLUTION</b>
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<b>Synonyms</b>	Methylene Blue Chloride, Water Solution
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**Section 2 Hazards Identification**

This substance or mixture has not been classified as hazardous according to the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals.

**Signal word:** WARNING  
**Pictograms:** None assigned  
**Target organs:** None known

**GHS Classification:**  
Acute toxicity, oral (Category 5)

**GHS Label information:**  
**Hazard statement(s):**  
H303: May be harmful if swallowed.

**Precautionary statement(s):**

P312: Call a POISON CENTER or doctor if you feel unwell.

Ca Prop 65 - This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

**Section 3 Composition / Information on Ingredients**

Chemical Name	CAS #	%	EINECS
Water	7732-18-5	98.9%	231-791-2
Methylene blue chloride	61-73-4	1.0%	200-515-2
Sodium benzoate, as preservative	532-32-1	0.2%	208-534-8

**Section 4 First Aid Measures**

**INGESTION:** MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** MAY CAUSE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** MAY CAUSE SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

**Section 5 Fire Fighting Measures**

**Suitable Extinguishing Media:** Use any media suitable for extinguishing supporting fire.

**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

**Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion.

**Section 6 Accidental Release Measures**

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.

**Containment and Cleanup:** Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

**Section 7 Handling & Storage**

**Precautions for Safe Handling:** Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Conditions for Safe Storage:** Store in a cool, well-ventilated area away from incompatible substances.

**Section 8 Exposure Controls / Personal Protection**

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Methylene blue chloride	None established.	None established.	None established.

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

**Respiratory protection:** None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

**Section 9 Physical & Chemical Properties**

**Appearance:** Dark blue liquid.

**Odor:** No odor.

**Odor threshold:** Data not available.

**pH:** Data not available.

**Melting / Freezing point:** ~0°C (32°F) (water)

**Boiling point:** ~100°C (212°F) (water)

**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 (mm Hg):** 14 (water)

**Vapor density (Air = 1):** 0.7 (water)

**Relative density (Specific gravity):** Approximately 1.1

**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

**Section 10 Stability & Reactivity**

**Chemical stability:** Stable

**Hazardous polymerization:** Will not occur.

**Conditions to avoid:** Excessive temperatures which cause evaporation. Stable under recommended storage conditions.

**Incompatibilities with other materials:** Strong oxidizing materials and reducers.

**Hazardous decomposition products:** Sulfur oxides, nitrogen oxides, hydrogen chloride gas.

**Section 11 Toxicological Information**

**Acute toxicity:** Oral-rat LD50: 1180 mg/kg [Methylene blue chloride] / Oral-rat LD50: 2100 mg/kg [Sodium benzoate]

**Skin corrosion/irritation:** Data not available

**Serious eye damage/irritation:** Data not available

**Respiratory or skin sensitization:** Data not available

**Germ cell mutagenicity:** Data not available

**Carcinogenicity:**

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity:** Data not available

**STOT-single exposure:** Data not available

**STOT-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: Contact with skin may cause irritation.

Eyes: Contact with eyes may cause irritation.

**Signs and symptoms of exposure:** To the best of our knowledge the chemical, physical and toxicological properties have not been thoroughly investigated. Specific data is not available. Exercise appropriate procedures to minimize potential hazards.

**Additional information:** RTECS #: SP5740000 [Methylene blue chloride] / DH6650000 [Sodium benzoate]

**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**

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

**Section 14 Transport Information**

**UN/NA number:** None

**Shipping name:** Not Regulated

**Hazard class:** None

**Packing group:** None

**Reportable Quantity:** None

**Marine pollutant:** None

**Exceptions:** None

**Section 15 Regulatory Information**

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERCLA (RQ)	RCRA code	DSL	NDSL	WHMIS Classification
Methylene blue chloride	Listed	Not listed	Not listed	Listed	Not listed	Uncontrolled product
Sodium benzoate	Listed	Not listed	Not listed	Listed	Not listed	Uncontrolled product

**Section 16 Additional Information**

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure.

**Section 1 Chemical Product and Company Information**

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**CHEMTREC 24 Hour Emergency**  
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For laboratory use only.  
Not for drug, food or household use.

<b>Product</b>	<b>METHYLCELLULOSE, 1.5% SOLUTION</b>
<b>Synonyms</b>	Methylcellulose, 1.5% Aqueous Solution / Protozoan Quieting Solution

**Section 2 Hazards Identification**

**This substance or mixture has not been classified as hazardous according to the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals.**

**Signal word:** None required  
**Pictograms:** No symbol required  
**Target organs:** None known

**GHS Classification:** None required  
**GHS Label information: Hazard statement:** None required  
**Precautionary statement:** None required

**Supplemental information:**

Do not breathe mist/vapours/spray. Do not get in eyes, on skin, or on clothing. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Get medical attention if you feel unwell.

Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.

**Section 3 Composition / Information on Ingredients**

Chemical Name	CAS #	%	EINECS
Water	7732-18-5	98.4%	231-791-2
Methylcellulose	9004-67-5	1.5%	200-578-6
Salicylic acid (as preservative)	69-72-7	0.1%	200-712-3

**Section 4 First Aid Measures**

**INGESTION:** Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

**Section 5 Fire Fighting Measures**

**Suitable Extinguishing Media:** Carbon dioxide, dry chemical, dry sand, alcohol foam.

**Protective Actions for Fire-fighters:** In fire conditions, water may evaporate from this solution which may cause hazardous decomposition products to be formed as dust or fume.

**Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Dust dispersed in air is capable of creating a dust explosion when exposed to an ignition source. Avoid static discharge. Spill area may be slippery.

**Section 6 Accidental Release Measures**

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.

**Containment and Cleanup:** Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

**Precautions for Safe Handling:** Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Conditions for Safe Storage:** Store in a cool, well-ventilated area away from incompatible substances.

## Section 8 Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Methylcellulose	Not established	Not established	Not established

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

**Respiratory protection:** None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

## Section 9 Physical &amp; Chemical Properties

<b>Appearance:</b> Liquid. Thick, viscous despersion. <b>Odor:</b> No odor.	<b>Evaporation rate ( Water = 1):</b> <1 <b>Flammability (solid/gas):</b> Data not available.	<b>Partition coefficient:</b> Data not available <b>Auto-ignition temperature:</b> Data not available
<b>Odor threshold:</b> Data not available. <b>pH:</b> Data not available.	<b>Explosion limits: Lower / Upper:</b> Data not available <b>Vapor pressure (mm Hg):</b> 14 (water)	<b>Decomposition temperature:</b> Data not available. <b>Viscosity:</b> Data not available.
<b>Melting / Freezing point:</b> Approximately 0°C (32°F) (water) <b>Boiling point:</b> Approximately 100°C (212°F) (water)	<b>Vapor density (Air = 1):</b> 0.7 (water) <b>Relative density (Specific gravity):</b> Approximately 1.0 (water)	<b>Molecular formula:</b> Mixture <b>Molecular weight:</b> Mixture
<b>Flash point:</b> Data not available	<b>Solubility(ies):</b> Complete in water.	

## Section 10 Stability &amp; Reactivity

**Chemical stability:** Stable **Hazardous polymerization:** Will not occur.

**Conditions to avoid:** Excessive temperatures which cause evaporation.

**Incompatible materials:** Strong oxidizers. Avoid contact with strong acids and bases.

**Hazardous decomposition products:** Oxides of carbon.

## Section 11 Toxicological Information

**Acute toxicity:** Oral-rat LD50: >10,000 mg/kg [Methylcellulose]

**Skin corrosion/irritation:** Data not available

**Serious eye damage/irritation:** Data not available

**Respiratory or skin sensitization:** Data not available

**Germ cell mutagenicity:** Data not available

**Carcinogenicity:** Data not available

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

**Reproductive toxicity:** Data not available

**STOT-single exposure:** Data not available

**STOT-repeated exposure:** Data not available

**Aspiration hazard:** Data not available

**Potential health effects:**

Inhalation: No adverse effects are anticipated from single exposure to vapors, spray or mist.

Ingestion: Very low toxicity. Harmful effects not anticipated from swallowing small amounts.

Skin: Essentially non-irritating.

Eyes: Essentially non-irritating.

**Signs and symptoms of exposure:** Exercise appropriate procedures to minimize potential hazards.

**Additional information:** RTECS #: FJ5959000 [Methylcellulose]

## Section 12 Ecological Information

**Toxicity to fish:** LC50: >100 mg/L (No known toxicity) [Methylcellulose]

**Toxicity to daphnia and other aquatic invertebrates:** EC50: >100 mg/L (No known toxicity) [Methylcellulose]

**Toxicity to algae:** EC50: >100 mg/L (No known toxicity) [Methylcellulose]

**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:** No bioconcentration is expected because of the relatively high molecular weight (>1000)

## Section 13 Disposal Considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

## Section 14 Transport 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

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	WHMIS Classification
Methylcellulose	Listed	Not listed	Not listed	Listed	Not listed	Not listed

## Section 16 Additional Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.

**Section 1 Chemical Product and Company Information**

Page E1 of E2

**HOME SCIENCE TOOLS**

665 Carbon Street  
Billings, MT 59102  
800-860-6272  
www.homesciencetools.com

**CHEMTREC 24 Hour Emergency**  
**Phone Number (800) 424-9300**  
For laboratory use only.  
Not for drug, food or household use.

<b>Product</b>	<b>SODIUM BICARBONATE, ANHYDROUS</b>
<b>Synonyms</b>	Baking Soda / Sodium Hydrogen Carbonate / Carbonic Acid Sodium (1:1)

**Section 2 Hazards Identification**

**This substance or mixture has not been classified as hazardous according to the Globally Harmonized System (GHS) of Classification and Labeling of Chemicals.**

**Signal word:** Not classified  
**Pictograms:** Not classified  
**Target organs:** None known

**GHS Classification:** Not classified

**GHS Label information: Hazard statement(s):** Not classified

**Precautionary statement(s):**

Do not breathe dust. Do not get in eyes, on skin, or on clothing. Wear protective gloves/protective clothing/eye protection/face protection. Wash hands thoroughly after handling. Get medical attention if you feel unwell.

Ca Prop 65 - This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

**Section 3 Composition / Information on Ingredients**

Chemical Name	CAS #	%	EINECS
Sodium bicarbonate	144-55-8	100%	205-633-8

**Section 4 First Aid Measures**

**INGESTION:** Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

**Section 5 Fire Fighting Measures**

**Suitable Extinguishing Media:** Use any media suitable for extinguishing supporting fire.

**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

**Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. This material is commonly used to extinguish fires.

**Section 6 Accidental Release Measures**

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.

**Containment and Cleanup:** Sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

**Precautions for Safe Handling:** Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale dusts. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Conditions for Safe Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances. Store away from acids.

## Section 8 Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	Sodium bicarbonate	None established	None established	None established

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

**Respiratory protection:** None should be needed in normal laboratory handling at room temperatures. If dusty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

## Section 9 Physical &amp; Chemical Properties

<b>Appearance:</b> Solid, white crystalline powder. <b>Odor:</b> No odor. <b>Odor threshold:</b> Data not available. <b>pH:</b> 8.2 (1% solution) <b>Melting / Freezing point:</b> Data not available <b>Boiling point:</b> Decomposes <b>Flash point:</b> Non combustible	<b>Evaporation rate ( = 1):</b> Data not available <b>Flammability (solid/gas):</b> Data not available. <b>Explosion limits: Lower / Upper:</b> Data not available <b>Vapor pressure (mm Hg):</b> Negligible <b>Vapor density (Air = 1):</b> Data not available <b>Relative density (Specific gravity):</b> 2.16 @ 20°C <b>Solubility(ies):</b> 8.6 g/100 ml water at 20°C	<b>Partition coefficient:</b> Data not available <b>Auto-ignition temperature:</b> Data not available <b>Decomposition temperature:</b> Data not available <b>Viscosity:</b> Data not available. <b>Molecular formula:</b> NaHCO <sub>3</sub> <b>Molecular weight:</b> 84.01
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## Section 10 Stability &amp; Reactivity

**Chemical stability:** Stable  
**Hazardous polymerization:** Will not occur.  
**Conditions to avoid:** High temperature causes decomposition to sodium carbonate, water and carbon dioxide.  
**Incompatible materials:** Reacts with acids to yield acid salts, water and carbon dioxide.  
**Hazardous decomposition products:** Gaseous carbon dioxide.

## Section 11 Toxicological Information

**Acute toxicity:** Oral-rat LD50: 4220-4400 mg/kg  
**Skin corrosion/irritation:** Skin-rabbit - not irritating  
**Serious eye damage/irritation:** Eye-rabbit - not irritating  
**Respiratory or skin sensitization:** Non sensitizing  
**Germ cell mutagenicity:** Data not available  
**Carcinogenicity:** Data not available  
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.  
IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.  
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.  
**Reproductive toxicity:** Data not available  
**STOT-single exposure:** Data not available  
**STOT-repeated exposure:** Data not available  
**Aspiration hazard:** Data not available  
**Potential health effects:**  
Inhalation: Excessive dust may irritate respiratory tract.  
Ingestion: Ingestion may cause gastrointestinal disturbance if ingested.  
Skin: No hazard known.  
Eyes: Contact with eyes may cause very slight irritation.  
**Signs and symptoms of exposure:** See Potential health effects above.  
**Additional information:** RTECS #: VZ0950000

## Section 12 Ecological Information

**Toxicity to fish:** *Gambusia affinis* (fish, freshwater) LC50: 7550 mg/l/24 hours  
**Toxicity to daphnia and other aquatic invertebrates:** *Daphnia magna* (Crustacea) EC50: 2350 mg/l/48 hours  
**Toxicity to algae:** *Nitzschia linearis* (Algae) LC50: 650 mg/l/5 day  
**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

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

## Section 14 Transport Information

**UN/NA number:** Not applicable  
**Hazard class:** Not applicable  
**Exceptions:** Not applicable  
**Shipping name:** Not Regulated  
**Packing group:** Not applicable  
**2012 ERG Guide #** Not applicable  
**Reportable Quantity:** No  
**Marine pollutant:** No

## Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERCLA (RQ)	RCRA code	DSL	NDSL	WHMIS Classification
Sodium bicarbonate	Listed	Not listed	Not listed	Listed	Not listed	Uncontrolled product

## Section 16 Additional Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.



**Safety Data Sheet**  
acc. to OSHA HCS

Date Prepared: 03/25/2014

Reviewed On: 03/25/2014

**1 Identification**

- **Product Identifier**
- **Product Name:** Ampicillin AM-10
- **Catalog Number:** 231264
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** *In-vitro Diagnostics*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
BD Diagnostic Systems  
7 Loveton Circle  
Sparks, MD 21152  
Telephone: (410) 771 - 0100 or (800) 638 – 8663  
Email Address: [Technical\\_Services@bd.com](mailto:Technical_Services@bd.com)
- **Information Department:** Technical Service
- **Emergency telephone number:**  
In case of a chemical emergency, spill, fire, exposure, or accident, contact BD Diagnostic Systems (410) 771-0100 or (800)-638-8663, or ChemTrec at (800) 424-9300.

**2 Hazard(s) identification**

- **Classification of the substance or mixture**



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS07

Skin Sens. 1 H317 May cause an allergic skin reaction.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

This product contains no hazardous constituents, or the concentration of all chemical constituents are below the regulatory threshold limits described by Occupational Safety Health Administration Hazard Communication Standard 29 CFR 1910.1200, the Canada's Workplace Hazardous Materials Information System (WHMIS) and the European Directive 67/548/EEC and 1999/45/EC.

- **Classification system:**

The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.

- **Label elements**

- **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

(Contd. on page 2)

**Safety Data Sheet**  
acc. to OSHA HCS

Date Prepared: 03/25/2014

Reviewed On: 03/25/2014

**Product Name: Ampicillin AM-10**

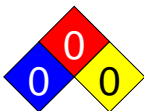
(Contd. of page 1)

**· Hazard pictograms**

GHS08

**· Signal word** Danger**· Hazard-determining components of labeling:**

Ampicillin

**· Hazard statements***H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.**H317 May cause an allergic skin reaction.***· Precautionary statements***P101 If medical advice is needed, have product container or label at hand.**P102 Keep out of reach of children.**P103 Read label before use.**P284 In case of inadequate ventilation wear respiratory protection.**P261 Avoid breathing dust/fume/gas/mist/vapours/spray.**P280 Wear protective gloves/protective clothing/eye protection/face protection.**P272 Contaminated work clothing should not be allowed out of the workplace.**P321 Specific treatment (see on this label).**P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.**P363 Wash contaminated clothing before reuse.**P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.**P333+P313 If skin irritation or rash occurs: Get medical advice/attention.**P302+P352 IF ON SKIN: Wash with plenty of soap and water.**P501 Dispose of contents/container in accordance with local/regional/national/international regulations.***· NFPA ratings (scale 0-4)**

Health = 0

Flammability = 0

Reactivity = 0

**· HMIS ratings (scale 0-4)**

HEALTH 0 Health = 0

FIRE 0 Flammability = 0

REACTIVITY 0 Reactivity = 0

**· Other hazards****· Results of PBT and vPvB assessment****· PBT:** Not applicable.**· vPvB:** Not applicable.

US

(Contd. on page 3)

Date Prepared: 03/25/2014

Reviewed On: 03/25/2014

**Product Name: Ampicillin AM-10**

(Contd. of page 2)

### 3 Composition/information on ingredients

- **Chemical characterization: Mixture**
- **Description:** Mixture consisting of the following components.
- **Dangerous Components:** Void
- **Additional information** Risk phrases refer to section 15.

### 4 First-aid measures

- **Description of first aid measures**
- **General information** No special measures required.
- **After inhalation** Seek medical treatment in case of complaints.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing** If symptoms persist consult doctor.
- **Information for doctor** Show this product label or this MSDS.
- **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents**  
CO<sub>2</sub>, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**  
No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Wipe up with damp sponge or mop.
- **Methods and material for containment and cleaning up:** No special measures required.
- **Reference to other sections** No dangerous substances are released.

US

(Contd. on page 4)

Date Prepared: 03/25/2014

Reviewed On: 03/25/2014

**Product Name: Ampicillin AM-10**

(Contd. of page 3)

## 7 Handling and storage

- **Handling**
- **Precautions for safe handling** *Keep receptacles tightly sealed.*
- **Information about protection against explosions and fires:**  
*No special measures required.*
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** *No special requirements.*
- **Information about storage in one common storage facility:**  
*Store away from oxidizing agents.*
- **Further information about storage conditions:**  
*Store in cool, dry conditions in well sealed containers.*
- **Specific end use(s)** *No further relevant information available.*

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:**  
*No further data; see Section 7.*
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
*The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.*
- **Additional information:** *The lists that were valid during the creation were used as basis.*
- **Exposure controls**
- **Personal Protective Equipment**
- **General protective and hygienic measures**  
*The usual precautionary measures for handling chemicals should be followed.*
- **Breathing equipment:** *Not required.*
- **Protection of hands:**



Chemical resistant gloves (i.e. nitrile, or equivalent).

- **Eye protection:** *Safety glasses*
- **Body protection:** *Protective work clothing (lab coat).*

US

(Contd. on page 5)

**Safety Data Sheet**  
acc. to OSHA HCS

Date Prepared: 03/25/2014

Reviewed On: 03/25/2014

**Product Name: Ampicillin AM-10**

(Contd. of page 4)

**9 Physical and chemical properties****· Information on basic physical and chemical properties****· General Information****· Appearance:**

<b>Form:</b>	Solid.
<b>Color:</b>	According to product specification
<b>Odor:</b>	Characteristic

**· Change in condition** Undetermined**· Melting point/Melting range:** Not determined**· Boiling point/Boiling range:** Not determined**· Flash point:** Not applicable**· Flammability (solid, gaseous)** Product is not flammable.**· Danger of explosion:** Product does not present an explosion hazard.**· Density:** Not determined**· Solubility in / Miscibility with****Water:** Soluble**· Solvent content:****Solids content:** 100.0 %**· Other information** No further relevant information available.**10 Stability and reactivity****· Reactivity****· Chemical stability****· Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

**· Possibility of hazardous reactions** No dangerous reactions known**· Conditions to avoid** No further relevant information available.**· Incompatible materials:** No further relevant information available.**· Hazardous decomposition products:** No dangerous decomposition products known.**11 Toxicological information****· Information on toxicological effects****· Acute toxicity:****· Primary irritant effect:****· on the skin:** No irritating effect.**· on the eye:** No irritating effect.**· Sensitization:** Sensitizing effect by skin contact is possible with prolonged exposure.

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**Safety Data Sheet**  
acc. to OSHA HCS

Date Prepared: 03/25/2014

Reviewed On: 03/25/2014

**Product Name: Ampicillin AM-10**

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**· Additional toxicological information:**

The product is not subject to OSHA classification according to internally approved calculation methods for preparations.

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

**· Carcinogenic categories****· IARC (International Agency for Research on Cancer)**

69-53-4 Ampicillin

3

**· NTP (National Toxicology Program)**

None of the ingredients is listed.

**12 Ecological information****· Toxicity****· Aquatic toxicity:** No further relevant information available.**· Persistence and degradability** No further relevant information available.**· Behavior in environmental systems:****· Bioaccumulative potential** No further relevant information available.**· Mobility in soil** No further relevant information available.**· Ecotoxicological effects:****· Other information:**

The ecological effects have not been thoroughly investigated, but currently none have been identified.

**· Additional ecological information:****· General notes:** Generally not hazardous for water.**· Results of PBT and vPvB assessment****· PBT:** Not applicable.**· vPvB:** Not applicable.**· Other adverse effects** No further relevant information available.**13 Disposal considerations****· Waste treatment methods****· Recommendation**

Smaller quantities can be disposed of with solid waste.

Dispose of material in accordance with federal (40 CFR 261.3), state and local requirements.

This product is not considered a RCRA hazardous waste.

**· Uncleaned packagings:****· Recommendation:** Disposal must be made according to state and federal regulations.**· Recommended cleansing agent:** Water, if necessary with cleansing agents.

US

(Contd. on page 7)



# Safety Data Sheet acc. to OSHA HCS

Date Prepared: 03/25/2014

Reviewed On: 03/25/2014

**Product Name: Ampicillin AM-10**

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## 14 Transport information

· <b>UN-Number</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	Void
· <b>UN proper shipping name</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	Void
· <b>Transport hazard class(es)</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	
· <b>Class</b>	Void
· <b>Packing group</b>	
· <b>DOT, ADR, IMDG, IATA</b>	Void
· <b>Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	If a "void" appears in the Hazard Class section for the type of transportation, this indicates the product is not regulated for transportation.
· <b>UN "Model Regulation":</b>	-

## 15 Regulatory information

· <b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b>
· <b>SARA Section 355 (extremely hazardous substances)</b> None of the ingredients is listed.
· <b>SARA Section 313 (specific toxic chemical listings)</b> None of the ingredients is listed.
· <b>TSCA (Toxic Substances Control Act)</b> None of the ingredients is listed.
· <b>California Proposition 65 - Chemicals known to cause cancer</b> None of the ingredients is listed.
· <b>California Proposition 65 - Chemicals known to cause reproductive toxicity for females:</b> None of the ingredients is listed.

(Contd. on page 8)

**Safety Data Sheet**  
 acc. to OSHA HCS

Date Prepared: 03/25/2014

Reviewed On: 03/25/2014

**Product Name: Ampicillin AM-10**

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**· California Proposition 65 - Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

**· California Proposition 65 - Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

**· Carcinogenic categories**
**· TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

**· GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

**· Hazard pictograms**


GHS08

**· Signal word Danger**
**· Hazard-determining components of labeling:**

Ampicillin

**· Hazard statements**

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

**· Precautionary statements**

P101 If medical advice is needed, have product container or label at hand.

P102 Keep out of reach of children.

P103 Read label before use.

P284 In case of inadequate ventilation wear respiratory protection.

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P272 Contaminated work clothing should not be allowed out of the workplace.

P321 Specific treatment (see on this label).

P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

P363 Wash contaminated clothing before reuse.

P304+P341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**· National regulations**
**· Water hazard class: Generally not hazardous for water.**

(Contd. on page 9)



**Safety Data Sheet**  
acc. to OSHA HCS

Date Prepared: 03/25/2014

Reviewed On: 03/25/2014

**Product Name: Ampicillin AM-10**

(Contd. of page 8)

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**16 Other information**

To the best of our knowledge, the information contained herein is accurate. However, neither Becton, Dickinson and Company or any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we can not guarantee that these are the only hazards that exist.

· **Department issuing MSDS:**

Environmental, Health & Safety  
Created by Michael J. Spinazzola

· **Contact:** Technical Service Representative· **Date of preparation / last revision** 03/25/2014 / -· **Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer  
(Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

Resp. Sens. 1: Sensitisation - Respirat., Hazard Category 1

Skin Sens. 1: Sensitisation - Skin, Hazard Category 1

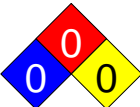
Date Prepared: 10/16/2014

Reviewed On: 07/31/2014

## 1 Identification

- **Product Identifier**
- **Product Name:** Erythromycin E-15
- **Catalog Number:** 231290
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** *In-vitro Diagnostics*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
BD Diagnostic Systems  
7 Loveton Circle  
Sparks, MD 21152  
Telephone: (410) 771 - 0100 or (800) 638 - 8663  
Email Address: [Technical\\_Services@bd.com](mailto:Technical_Services@bd.com)
- **Information Department:** Technical Service
- **Emergency telephone number:**  
In case of a chemical emergency, spill, fire, exposure, or accident, contact BD Diagnostic Systems (410) 771-0100 or (800)-638-8663, or ChemTrec at (800) 424-9300.

## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
The substance is not classified according to the Globally Harmonized System (GHS).
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**  
This product contains no hazardous constituents, or the concentration of all chemical constituents are below the regulatory threshold limits described by Occupational Safety Health Administration Hazard Communication Standard 29 CFR 1910.1200, the Canada's Workplace Hazardous Materials Information System (WHMIS) and the European Directive 67/548/EEC and 1999/45/EC.
- **Label elements**
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **NFPA ratings (scale 0-4)**  
  
Health = 0  
Flammability = 0  
Reactivity = 0
- **HMIS ratings (scale 0-4)**  

HEALTH	0
FIRE	0
REACTIVITY	0

  
Health = 0  
Flammability = 0  
Reactivity = 0
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

(Contd. on page 2)

**Safety Data Sheet**  
acc. to OSHA HCS

Date Prepared: 10/16/2014

Reviewed On: 07/31/2014

**Product Name: Erythromycin E-15**· **vPvB:** Not applicable.

(Contd. of page 1)

**3 Composition/information on ingredients**

- **Chemical characterization: Substances**
- **CAS No. Description:**  
Not applicable
- 

**4 First-aid measures**

- **Description of first aid measures**
- **General information** No special measures required.
- **After inhalation** Seek medical treatment in case of complaints.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing** If symptoms persist consult doctor.
- **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **Information for doctor** Show this product label or this SDS.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**5 Fire-fighting measures**

- **Extinguishing media**
- **Suitable extinguishing agents**  
CO<sub>2</sub>, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**  
No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Wipe up with damp sponge or mop.
- **Methods and material for containment and cleaning up:** No special measures required.

(Contd. on page 3)

US

**Safety Data Sheet**  
acc. to OSHA HCS

Date Prepared: 10/16/2014

Reviewed On: 07/31/2014

**Product Name: Erythromycin E-15**

(Contd. of page 2)

· **Reference to other sections** No dangerous substances are released.**7 Handling and storage**

- **Precautions for safe handling** Keep receptacles tightly sealed.
- **Information about protection against explosions and fires:**  
No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:**  
Store away from oxidizing agents.
- **Further information about storage conditions:**  
Store in cool, dry conditions in well sealed containers.
- **Specific end use(s)** No further relevant information available.

**8 Exposure controls/personal protection**

- **Additional information about design of technical systems:**  
No further data; see Section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal Protective Equipment**
- **General protective and hygienic measures**  
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:**  
In case of brief exposure, use a chemical fume hood or a NIOSH/MSHA-approved respirator.
- **Protection of hands:**



Chemical resistant gloves (i.e. nitrile, or equivalent).

- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing (lab coat).

US

(Contd. on page 4)

**Safety Data Sheet**  
acc. to OSHA HCS

Date Prepared: 10/16/2014

Reviewed On: 07/31/2014

**Product Name: Erythromycin E-15**

(Contd. of page 3)

**9 Physical and chemical properties****· Information on basic physical and chemical properties****· General Information****· Appearance:**

<b>Form:</b>	Solid.
<b>Color:</b>	According to product specification
<b>Odor:</b>	Characteristic

**· Change in condition** Undetermined**· Melting point/Melting range:** Not determined**· Boiling point/Boiling range:** Not determined**· Flash point:** Not applicable**· Flammability (solid, gaseous)** Product is not flammable.**· Danger of explosion:** Product does not present an explosion hazard.**· Density:** Not determined**· Solubility in / Miscibility with****Water:** Insoluble**Solids content:** 100.0 %**· Other information** No further relevant information available.**10 Stability and reactivity****· Reactivity****· Chemical stability****· Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

**· Possibility of hazardous reactions** No dangerous reactions known**· Conditions to avoid** No further relevant information available.**· Incompatible materials:** No further relevant information available.**· Hazardous decomposition products:** No dangerous decomposition products known.**11 Toxicological information****· Information on toxicological effects****· Acute toxicity:****· Primary irritant effect:****· on the skin:** No irritating effect.**· on the eye:** No irritating effect.**· Sensitization:** Sensitizing effect through inhalation is possible with prolonged exposure.

(Contd. on page 5)

**Safety Data Sheet**  
acc. to OSHA HCS

Date Prepared: 10/16/2014

Reviewed On: 07/31/2014

**Product Name: Erythromycin E-15**

(Contd. of page 4)

**· Additional toxicological information:**

The product is not subject to OSHA classification according to internally approved calculation methods for preparations.

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

The substance is not subject to classification.

**· Carcinogenic categories****· IARC (International Agency for Research on Cancer)**

Substance is not listed.

**· NTP (National Toxicology Program)**

Substance is not listed.

**· OSHA-Ca (Occupational Safety & Health Administration)**

Substance is not listed.

**12 Ecological information****· Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

**· Ecotoxicological effects:****· Other information:**

The ecological effects have not been thoroughly investigated, but currently none have been identified.

**· Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

**13 Disposal considerations****· Waste treatment methods****· Recommendation**

Smaller quantities can be disposed of with solid waste.

Dispose of material in accordance with federal (40 CFR 261.3), state and local requirements.

This product is not considered a RCRA hazardous waste.

**· Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to state and federal regulations.

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

US

(Contd. on page 6)



# Safety Data Sheet acc. to OSHA HCS

Date Prepared: 10/16/2014

Reviewed On: 07/31/2014

**Product Name: Erythromycin E-15**

(Contd. of page 5)

## 14 Transport information

· <b>UN-Number</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	Void
· <b>UN proper shipping name</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	Void
· <b>Transport hazard class(es)</b>	
· <b>DOT, ADR, ADN, IMDG, IATA</b>	
· <b>Class</b>	Void
· <b>Packing group</b>	
· <b>DOT, ADR, IMDG, IATA</b>	Void
· <b>Environmental hazards:</b>	
· <b>Marine pollutant:</b>	No
· <b>Special precautions for user</b>	Not applicable.
· <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
· <b>Transport/Additional information:</b>	If a "void" appears in the Hazard Class section for the type of transportation, this indicates the product is not regulated for transportation.
· <b>UN "Model Regulation":</b>	-

## 15 Regulatory information

· <b>Safety, health and environmental regulations/legislation specific for the substance or mixture</b>
· <b>SARA Section 355 (extremely hazardous substances)</b> Substance is not listed.
· <b>SARA Section 313 (specific toxic chemical listings)</b> Substance is not listed.
· <b>TSCA (Toxic Substances Control Act)</b> Substance is not listed.
· <b>California Proposition 65 - Chemicals known to cause cancer</b> Substance is not listed.
· <b>California Proposition 65 - Chemicals known to cause reproductive toxicity for females:</b> Substance is not listed.

(Contd. on page 7)

**Safety Data Sheet**  
acc. to OSHA HCS

Date Prepared: 10/16/2014

Reviewed On: 07/31/2014

**Product Name: Erythromycin E-15**

(Contd. of page 6)

**· California Proposition 65 - Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

**· California Proposition 65 - Chemicals known to cause developmental toxicity:**

Substance is not listed.

**· Carcinogenic categories****· TLV (Threshold Limit Value established by ACGIH)**

Substance is not listed.

**· GHS label elements** Void**· Hazard pictograms** Void**· Signal word** Void**· Hazard statements** Void**· Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**16 Other information**

To the best of our knowledge, the information contained herein is accurate. However, neither Becton, Dickinson and Company or any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we can not guarantee that these are the only hazards that exist.

**· Department issuing SDS:**

Environmental, Health &amp; Safety

Created by Michael J. Spinazzola

**· Date of preparation / last revision** 10/16/2014 / -**· Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

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ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)



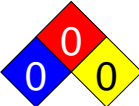
Date Prepared: 10/15/2014

Reviewed On: 08/05/2014

**1 Identification**

- **Product Identifier**
- **Product Name:** Neomycin
- **Catalog Number:** 231313
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the mixture** *In-vitro Diagnostics*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
BD Diagnostic Systems  
7 Loveton Circle  
Sparks, MD 21152  
Telephone: (410) 771 - 0100 or (800) 638 – 8663  
Email Address: [Technical\\_Services@bd.com](mailto:Technical_Services@bd.com)
- **Information Department:** Technical Service
- **Emergency telephone number:**  
In case of a chemical emergency, spill, fire, exposure, or accident, contact BD Diagnostic Systems (410) 771-0100 or (800)-638-8663, or ChemTrec at (800) 424-9300.

**2 Hazard(s) identification**

- **Classification of the substance or mixture**  
The product is not classified according to the Globally Harmonized System (GHS).
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**  
This product contains no hazardous constituents, or the concentration of all chemical constituents are below the regulatory threshold limits described by Occupational Safety Health Administration Hazard Communication Standard 29 CFR 1910.1200, the Canada's Workplace Hazardous Materials Information System (WHMIS) and the European Directive 67/548/EEC and 1999/45/EC.
- **Classification system:**  
The classification was made according to the latest editions of international substances lists, and expanded upon from company and literature data.
- **Label elements**
- **GHS label elements** Void
- **Hazard pictograms** Void
- **Signal word** Void
- **Hazard statements** Void
- **NFPA ratings (scale 0-4)**  
 Health = 0  
Flammability = 0  
Reactivity = 0
- **HMIS ratings (scale 0-4)**  

HEALTH	0
FIRE	0
REACTIVITY	0

 Health = 0  
Flammability = 0  
Reactivity = 0

(Contd. on page 2)

US

**Safety Data Sheet**  
acc. to OSHA HCS

Date Prepared: 10/15/2014

Reviewed On: 08/05/2014

**Product Name: Neomycin**

(Contd. of page 1)

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

**3 Composition/information on ingredients**

- **Chemical characterization: Mixture**
- **Description:** Mixture consisting of the following components.
- **Dangerous Components:** Void
- **Additional information** Risk phrases refer to section 15.

**4 First-aid measures**

- **Description of first aid measures**
- **General information** No special measures required.
- **After inhalation** Seek medical treatment in case of complaints.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing** If symptoms persist consult doctor.
- **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **Information for doctor** Show this product label or this SDS.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**5 Fire-fighting measures**

- **Extinguishing media**
- **Suitable extinguishing agents**  
CO2, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**  
No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Wipe up with damp sponge or mop.

(Contd. on page 3)

**Safety Data Sheet**  
acc. to OSHA HCS

Date Prepared: 10/15/2014

Reviewed On: 08/05/2014

**Product Name: Neomycin**

(Contd. of page 2)

- **Methods and material for containment and cleaning up:** No special measures required.
- **Reference to other sections** No dangerous substances are released.

**7 Handling and storage**

- **Precautions for safe handling** Keep receptacles tightly sealed.
- **Information about protection against explosions and fires:**  
No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:**  
Store away from oxidizing agents.
- **Further information about storage conditions:**  
Store in cool, dry conditions in well sealed containers.
- **Specific end use(s)** No further relevant information available.

**8 Exposure controls/personal protection**

- **Additional information about design of technical systems:**  
No further data; see Section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal Protective Equipment**
- **General protective and hygienic measures**  
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:**



Chemical resistant gloves (i.e. nitrile, or equivalent).

- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing (lab coat).

US

(Contd. on page 4)

Date Prepared: 10/15/2014

Reviewed On: 08/05/2014

**Product Name: Neomycin**

(Contd. of page 3)

**9 Physical and chemical properties****· Information on basic physical and chemical properties****· General Information****· Appearance:**

<b>Form:</b>	Solid.
<b>Color:</b>	According to product specification
<b>Odor:</b>	Characteristic

**· Change in condition** Undetermined**· Melting point/Melting range:** Not determined**· Boiling point/Boiling range:** Not determined**· Flash point:** Not applicable**· Flammability (solid, gaseous)** Product is not flammable.**· Danger of explosion:** Product does not present an explosion hazard.**· Density:** Not determined**· Solubility in / Miscibility with****Water:** Soluble**· Solvent content:****Solids content:** 100.0 %**· Other information** No further relevant information available.**10 Stability and reactivity****· Reactivity****· Chemical stability****· Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

**· Possibility of hazardous reactions** No dangerous reactions known**· Conditions to avoid** No further relevant information available.**· Incompatible materials:** No further relevant information available.**· Hazardous decomposition products:** No dangerous decomposition products known.**11 Toxicological information****· Information on toxicological effects****· Acute toxicity:****· Primary irritant effect:****· on the skin:** No irritating effect.**· on the eye:** No irritating effect.**· Sensitization:** Sensitizing effect through inhalation is possible with prolonged exposure.

(Contd. on page 5)

**Safety Data Sheet**  
acc. to OSHA HCS

Date Prepared: 10/15/2014

Reviewed On: 08/05/2014

**Product Name: Neomycin**

(Contd. of page 4)

**· Additional toxicological information:**

The product is not subject to OSHA classification according to internally approved calculation methods for preparations.

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

**· Carcinogenic categories****· IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

**· NTP (National Toxicology Program)**

None of the ingredients is listed.

**· OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

**12 Ecological information****· Toxicity**

**· Aquatic toxicity:** No further relevant information available.

**· Persistence and degradability** No further relevant information available.

**· Bioaccumulative potential** No further relevant information available.

**· Mobility in soil** No further relevant information available.

**· Ecotoxicological effects:****· Other information:**

The ecological effects have not been thoroughly investigated, but currently none have been identified.

**· Additional ecological information:**

**· General notes:** Generally not hazardous for water.

**· Results of PBT and vPvB assessment**

**· PBT:** Not applicable.

**· vPvB:** Not applicable.

**· Other adverse effects** No further relevant information available.

**13 Disposal considerations****· Waste treatment methods****· Recommendation**

Smaller quantities can be disposed of with solid waste.

Dispose of material in accordance with federal (40 CFR 261.3), state and local requirements.

This product is not considered a RCRA hazardous waste.

**· Uncleaned packagings:**

**· Recommendation:** Disposal must be made according to state and federal regulations.

(Contd. on page 6)



**Safety Data Sheet**  
acc. to OSHA HCS

Date Prepared: 10/15/2014

Reviewed On: 08/05/2014

**Product Name: Neomycin**

(Contd. of page 6)

**· California Proposition 65 - Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

**· California Proposition 65 - Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

**· California Proposition 65 - Chemicals known to cause developmental toxicity:**

1405-10-3 Neomycin, sulfate (salt)

**· Carcinogenic categories****· TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

**· GHS label elements** Void**· Hazard pictograms** Void**· Signal word** Void**· Hazard statements** Void**· National regulations****· Water hazard class:** Generally not hazardous for water.**· Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**16 Other information**

To the best of our knowledge, the information contained herein is accurate. However, neither Becton, Dickinson and Company or any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we can not guarantee that these are the only hazards that exist.

**· Department issuing SDS:**

Environmental, Health &amp; Safety

Created by Michael J. Spinazzola

**· Date of preparation / last revision** 10/15/2014 / -**· Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organisation

ICAO-TI: Technical Instructions by the "International Civil Aviation Organisation" (ICAO)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

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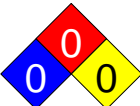
Date Prepared: 07/10/2013

Reviewed On: 07/10/2013

## 1 Identification

- **Product Identifier**
- **Product Name:** Penicillin P-10
- **Catalog Number:** 231321
- **Relevant identified uses of the substance or mixture and uses advised against**  
No further relevant information available.
- **Application of the substance / the preparation** *In-vitro Diagnostics*
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
BD Diagnostic Systems  
7 Loveton Circle  
Sparks, MD 21152  
Telephone: (410) 771 - 0100 or (800) 638 - 8663  
Email Address: [Technical\\_Services@bd.com](mailto:Technical_Services@bd.com)
- **Information Department:** Technical Service
- **Emergency telephone number:**  
In case of a chemical emergency, spill, fire, exposure, or accident, contact BD Diagnostic Systems (410) 771-0100 or (800)-638-8663, or ChemTrec at (800) 424-9300.

## 2 Hazard(s) identification

- **Classification of the substance or mixture**  
*The substance is not classified according to the Globally Harmonized System (GHS).*
- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**  
*This product contains no hazardous constituents, or the concentration of all chemical constituents are below the regulatory threshold limits described by Occupational Safety Health Administration Hazard Communication Standard 29 CFR 1910.1200, the Canada's Workplace Hazardous Materials Information System (WHMIS) and the European Directive 67/548/EEC and 1999/45/EC.*
- **Label elements**
- **GHS label elements** *Void*
- **Hazard pictograms** *Void*
- **Signal word** *Void*
- **Hazard statements** *Void*
- **NFPA ratings (scale 0-4)**  
  
Health = 0  
Flammability = 0  
Reactivity = 0
- **HMIS ratings (scale 0-4)**  

HEALTH	0
FIRE	0
REACTIVITY	0

  
Health = 0  
Flammability = 0  
Reactivity = 0
- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.

(Contd. on page 2)

US



**Safety Data Sheet**  
acc. to OSHA HCS

Date Prepared: 07/10/2013

Reviewed On: 07/10/2013

**Product Name: Penicillin P-10**· **vPvB:** Not applicable.

(Contd. of page 1)

**3 Composition/information on ingredients**

- **Chemical characterization: Substances**
- **CAS No. Description:**  
Not applicable  
penicillin

**4 First-aid measures**

- **Description of first aid measures**
- **General information** No special measures required.
- **After inhalation** Seek medical treatment in case of complaints.
- **After skin contact** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact**  
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing** If symptoms persist consult doctor.
- **Information for doctor** Show this product label or this MSDS.
- **Most important symptoms and effects, both acute and delayed**  
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

**5 Fire-fighting measures**

- **Extinguishing media**
- **Suitable extinguishing agents**  
CO<sub>2</sub>, ABC multipurpose dry chemical or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**  
No further relevant information available.
- **Advice for firefighters**
- **Protective equipment:** No special measures required.

**6 Accidental release measures**

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Wipe up with damp sponge or mop.
- **Methods and material for containment and cleaning up:** No special measures required.

(Contd. on page 3)

US

**Safety Data Sheet**  
acc. to OSHA HCS

Date Prepared: 07/10/2013

Reviewed On: 07/10/2013

**Product Name: Penicillin P-10**

(Contd. of page 2)

· **Reference to other sections** No dangerous substances are released.**7 Handling and storage**

- **Handling**
- **Precautions for safe handling** Keep receptacles tightly sealed.
- **Information about protection against explosions and fires:**  
No special measures required.
- **Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:**  
Store away from oxidizing agents.
- **Further information about storage conditions:**  
Store in cool, dry conditions in well sealed containers.
- **Specific end use(s)** No further relevant information available.

**8 Exposure controls/personal protection**

- **Additional information about design of technical systems:**  
No further data; see Section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:** Not required.
- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal Protective Equipment**
- **General protective and hygienic measures**  
The usual precautionary measures for handling chemicals should be followed.
- **Breathing equipment:** Not required.
- **Protection of hands:**



Chemical resistant gloves (i.e. nitrile, or equivalent).

- **Eye protection:** Safety glasses
- **Body protection:** Protective work clothing (lab coat).

US

(Contd. on page 4)

**Safety Data Sheet**  
acc. to OSHA HCS

Date Prepared: 07/10/2013

Reviewed On: 07/10/2013

**Product Name: Penicillin P-10**

(Contd. of page 3)

**9 Physical and chemical properties****· Information on basic physical and chemical properties****· General Information****· Appearance:**

**Form:** Solid.  
**Color:** According to product specification  
**Odor:** Characteristic

**· Change in condition** Undetermined

**· Melting point/Melting range:** Not determined

**· Boiling point/Boiling range:** Not determined

**· Flash point:** Not applicable

**· Flammability (solid, gaseous)** Product is not flammable.

**· Danger of explosion:** Product does not present an explosion hazard.

**· Density:** Not determined

**· Solubility in / Miscibility with**

**Water:** Soluble

**Solids content:** 100.0 %

**· Other information** No further relevant information available.

**10 Stability and reactivity****· Reactivity****· Chemical stability****· Thermal decomposition / conditions to be avoided:**

No decomposition if used according to specifications.

**· Possibility of hazardous reactions** No dangerous reactions known

**· Conditions to avoid** No further relevant information available.

**· Incompatible materials:** No further relevant information available.

**· Hazardous decomposition products:** No dangerous decomposition products known.

**11 Toxicological information****· Information on toxicological effects****· Acute toxicity:****· Primary irritant effect:**

**· on the skin:** No irritating effect.

**· on the eye:** No irritating effect.

**· Sensitization:** Sensitizing effect through inhalation is possible with prolonged exposure.

(Contd. on page 5)



# Safety Data Sheet acc. to OSHA HCS

Date Prepared: 07/10/2013

Reviewed On: 07/10/2013

**Product Name: Penicillin P-10**

(Contd. of page 4)

· **Additional toxicological information:**

The product is not subject to OSHA classification according to internally approved calculation methods for preparations.

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

The substance is not subject to classification.

· **Carcinogenic categories**

· **IARC (International Agency for Research on Cancer)**

Substance is not listed.

· **NTP (National Toxicology Program)**

Substance is not listed.

## 12 Ecological information

· **Toxicity**

· **Aquatic toxicity:** No further relevant information available.

· **Persistence and degradability** No further relevant information available.

· **Behavior in environmental systems:**

· **Bioaccumulative potential** No further relevant information available.

· **Mobility in soil** No further relevant information available.

· **Ecotoxicological effects:**

· **Other information:**

The ecological effects have not been thoroughly investigated, but currently none have been identified.

· **Additional ecological information:**

· **General notes:** Generally not hazardous for water.

· **Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **Other adverse effects** No further relevant information available.

## 13 Disposal considerations

· **Waste treatment methods**

· **Recommendation**

Smaller quantities can be disposed of with solid waste.

Dispose of material in accordance with federal (40 CFR 261.3), state and local requirements.

This product is not considered a RCRA hazardous waste.

· **Uncleaned packagings:**

· **Recommendation:** Disposal must be made according to state and federal regulations.

(Contd. on page 6)



# Safety Data Sheet acc. to OSHA HCS

Date Prepared: 07/10/2013

Reviewed On: 07/10/2013

**Product Name: Penicillin P-10**

(Contd. of page 5)

· **Recommended cleansing agent:** Water, if necessary with cleansing agents.

## 14 Transport information

· **UN-Number**

· **DOT, ADR, ADN, IMDG, IATA** Void

· **UN proper shipping name**

· **DOT, ADR, ADN, IMDG, IATA** Void

· **Transport hazard class(es)**

· **DOT, ADR, ADN, IMDG, IATA**

· **Class** Void

· **Packing group**

· **DOT, ADR, IMDG, IATA** Void

· **Environmental hazards:**

· **Marine pollutant:** No

· **Special precautions for user** Not applicable.

· **Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code** Not applicable.

· **Transport/Additional information:** If a "void" appears in the Hazard Class section for the type of transportation, this indicates the product is not regulated for transportation.

· **UN "Model Regulation":** -

## 15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **SARA Section 355 (extremely hazardous substances)**

Substance is not listed.

· **SARA Section 313 (specific toxic chemical listings)**

Substance is not listed.

· **TSCA (Toxic Substances Control Act)**

Substance is not listed.

· **California Proposition 65 - Chemicals known to cause cancer**

Substance is not listed.

(Contd. on page 7)

**Safety Data Sheet**  
acc. to OSHA HCS

Date Prepared: 07/10/2013

Reviewed On: 07/10/2013

**Product Name: Penicillin P-10**

(Contd. of page 6)

**· California Proposition 65 - Chemicals known to cause reproductive toxicity for females:**

Substance is not listed.

**· California Proposition 65 - Chemicals known to cause reproductive toxicity for males:**

Substance is not listed.

**· California Proposition 65 - Chemicals known to cause developmental toxicity:**

Substance is not listed.

**· Carcinogenic categories****· TLV (Threshold Limit Value established by ACGIH)**

Substance is not listed.

**· GHS label elements** Void**· Hazard pictograms** Void**· Signal word** Void**· Hazard statements** Void**· National regulations****· Water hazard class:** Generally not hazardous for water.**· Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**16 Other information**

To the best of our knowledge, the information contained herein is accurate. However, neither Becton, Dickinson and Company or any of its subsidiaries assumes any liabilities whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we can not guarantee that these are the only hazards that exist.

**· Department issuing MSDS:**

Environmental, Health &amp; Safety

Created by Michael J. Spinazzola

**· Contact:** Technical Service Representative**· Abbreviations and acronyms:**

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

CAS: Chemical Abstracts Service (division of the American Chemical Society)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

# SAFETY DATA SHEET



www.ranaco.com

## FORMALIN FIXED SPECIMENS IN PRESERVED HOLDING SOLUTION – EXCLUDING FETAL PIGS, CATS, GRASSFROGS, BULLFROGS, RABBITS, RATS, MINK

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Formalin Fixed Specimens In Preserved Holding Solution – Excluding Fetal Pigs, Cats, Grassfrogs, Bullfrogs, Rabbits, Rats, Mink  
**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, 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 a chemical 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	< 1%
Water	7732-18-5	Balance

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## SECTION 4: FIRST AID MEASURES

---

**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.

---

## SECTION 6: ACCIDENTAL RELEASE MEASURES

---

**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.

---

## SECTION 7: HANDLING AND STORAGE

---

**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.

---

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

---

### 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
	<b>WEEL</b>		
Propylene Glycol	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 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

---

**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 monoxide, carbon dioxide, gaseous formaldehyde, aldehydes, ketones, alcohols, ethers and organic acids

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## SECTION 11: TOXICOLOGICAL INFORMATION

---

**Acute Toxicity:** Formalin Fixed Specimens 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

**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.

Formaldehyde - Ca Prop 65: Formaldehyde is known to the State of California to cause reproductive toxicity.

**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	CERLCA (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

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:** April 16, 2015

**RANACO** disclaims all expressed or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, **RANACO** makes no representations as to its accuracy or sufficiency. Conditions of use are beyond **RANACO**'s control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling and disposal of the product or from the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.

# SAFETY DATA SHEET



www.ranaco.com

## SPECIMENS IN PRESERVED HOLDING SOLUTION – INSECTS AND OTHER INVERTEBRATES

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Specimens In Preserved Holding Solution – Insects and Other Invertebrates  
**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

#### WARNING



**Targeted organs:**  
Eyes, Skin, Respiratory Tract

**GHS Classification:**  
Acute Toxicity, oral (Category 4)  
Acute Toxicity, dermal (Category 4)  
Skin Irritation (Category 2)  
Eye irritation (Category 2B)  
Acute toxicity, inhalation (Category 4)

**Hazard Statements:**  
Maybe harmful if swallowed.  
May be harmful in contact with skin.  
Causes eye irritation.  
May cause respiratory irritation.

**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.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS #	%
Propylene Glycol	57-55-6	9%
Ethylene Glycol Monophenyl Ether	122-99-6	1%
Water	7732-18-5	Balance

Specimens may contain traces of isopropyl alcohol.

---

## SECTION 4: FIRST AID MEASURES

---

**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.

---

## SECTION 5: FIRE FIGHTING MEASURES

---

**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.

---

## SECTION 6: ACCIDENTAL RELEASE MEASURES

---

**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.

---

## SECTION 7: HANDLING AND STORAGE

---

**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 container tightly closed when not in use.

---

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

---

### Exposure Limits:

Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
Ethylene Glycol Monophenyl Ether	Not available	Not available	Not available
	<b>WEEL</b>		
Propylene Glycol	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

---

## SECTION 9: PHYSICAL & CHEMICAL PROPERTIES

---

**Appearance:** Clear colorless liquid  
**Odor:** Mild 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

---

## SECTION 10: STABILITY & REACTIVITY

---

**Reactivity:** None under normal conditions.  
**Chemical Stability:** Stable  
**Conditions to Avoid:** Excessive temperatures which cause evaporation.  
**Incompatible Materials:** Avoid contact with strong acids, strong oxidizers, and strong bases.  
**Hazardous Polymerization:** None under normal conditions.  
**Hazardous Decomposition Products:** Products of combustion include but are not limited to carbon monoxide and carbon dioxide.

---

## SECTION 11: TOXICOLOGICAL INFORMATION

---

**Acute Toxicity:** Specimens in Preserved Holding Solution have not been tested as a mixture. Information about individual components is supplied.

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

**Chronic Effects:** Data not available.

**Skin Corrosion/Irritation:**

May cause skin irritation.

**Serious Eye Damage/Irritation:**

May cause eye irritation.

**Respiratory or Skin Sensitization:**

Data not available.

**Germ Cell Mutagenicity:**

Data not available.

**Carcinogenicity:** Data not available. Information about individual components is supplied.

No components of this mixture are classified as a carcinogen by the International Agency for Research on Cancer (IARC), National Toxicology Program (NTP) or OSHA.

**Reproductive Toxicity:** Data not available.

**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.

**Eyes:** May cause eye irritation.

**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	CERLCA (RQ)	RCRA CODE	DSL	NDSL	WHMIS CLASSIFICATION
Propylene Glycol	Listed	None	None	Listed	Not Listed	None
Ethylene Glycol Monophenyl Ether	Listed	None	None	Listed	Not Listed	B3

**SECTION 16: OTHER INFORMATION**

**Date Prepared:** April 16, 2015

**RANACO** disclaims all expressed or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, **RANACO** makes no representations as to its accuracy or sufficiency. Conditions of use are beyond **RANACO**'s control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling and disposal of the product or from the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.

# SAFETY DATA SHEET



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## FORMALIN FIXED SPECIMENS IN PRESERVED HOLDING SOLUTION – EXCLUDING FETAL PIGS, CATS, GRASSFROGS, BULLFROGS, RABBITS, RATS, MINK

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Formalin Fixed Specimens In Preserved Holding Solution – Excluding Fetal Pigs, Cats, Grassfrogs, Bullfrogs, Rabbits, Rats, Mink  
**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, 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.

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

#### 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.

### 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	< 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.

---

## 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.

---

## SECTION 6: ACCIDENTAL RELEASE MEASURES

---

**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.

---

## SECTION 7: HANDLING AND STORAGE

---

**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.

---

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

---

### 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
	<b>WEEL</b>		
Propylene Glycol	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 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 monoxide, carbon dioxide, gaseous formaldehyde, aldehydes, ketones, alcohols, ethers and organic acids

---

## SECTION 11: TOXICOLOGICAL INFORMATION

---

**Acute Toxicity:** Formalin Fixed Specimens 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

**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.

Formaldehyde - Ca Prop 65: Formaldehyde is known to the State of California to cause reproductive toxicity.

**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	CERLCA (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

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:** April 16, 2015

**RANACO** disclaims all expressed or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, **RANACO** makes no representations as to its accuracy or sufficiency. Conditions of use are beyond **RANACO's** control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling and disposal of the product or from the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.

# SAFETY DATA SHEET



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## FORMALIN FIXED SPECIMENS IN PRESERVED HOLDING SOLUTION – EXCLUDING FETAL PIGS, CATS, GRASSFROGS, BULLFROGS, RABBITS, RATS, MINK

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** Formalin Fixed Specimens In Preserved Holding Solution – Excluding Fetal Pigs, Cats, Grassfrogs, Bullfrogs, Rabbits, Rats, Mink  
**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, 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 a chemical 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	< 1%
Water	7732-18-5	Balance

---

## SECTION 4: FIRST AID MEASURES

---

**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.

---

## SECTION 5: FIRE FIGHTING MEASURES

---

**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.

---

## SECTION 6: ACCIDENTAL RELEASE MEASURES

---

**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.

---

## SECTION 7: HANDLING AND STORAGE

---

**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.

---

## SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

---

### 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
	<b>WEEL</b>		
Propylene Glycol	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

---

## SECTION 9: PHYSICAL & CHEMICAL PROPERTIES

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**Appearance:** Specimen with/without clear colorless liquid  
**Odor:** Mild pungent 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

---

## SECTION 10: STABILITY & REACTIVITY

---

**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 monoxide, carbon dioxide, gaseous formaldehyde, aldehydes, ketones, alcohols, ethers and organic acids

---

## SECTION 11: TOXICOLOGICAL INFORMATION

---

**Acute Toxicity:** Formalin Fixed Specimens 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

**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.

Formaldehyde - Ca Prop 65: Formaldehyde is known to the State of California to cause reproductive toxicity.

**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.

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**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**

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

---

**SECTION 14: TRANSPORTATION INFORMATION (US DOT /CANADA TDG)**

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**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

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**SECTION 15: REGULATORY INFORMATION**

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

Component	TSCA	CERLCA (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

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

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**SECTION 16: OTHER INFORMATION**

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**Date Prepared:** April 16, 2015

**RANACO** disclaims all expressed or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, **RANACO** makes no representations as to its accuracy or sufficiency. Conditions of use are beyond **RANACO**'s control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling and disposal of the product or from the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.

# SAFETY DATA SHEET

## FAA FIXED EARTHWORMS, WORMS, BOTANICALS AND OTHER SPECIMENS IN PRESERVED HOLDING SOLUTION



www.ranaco.com

### SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** FAA Fixed Earthworms, Worms, Botanicals And Other Specimens 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,  
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.

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

**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.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS #	%
Formaldehyde	50-00-0	≤ 0.1%
Methanol	67-56-1	≤ 0.03%
Propylene Glycol	57-55-6	≤ 9%
Ethylene Glycol Monophenyl Ether	122-99-6	≤ 2%
Isopropyl Alcohol	67-63-0	≤ 0.5%
Glacial Acetic Acid	64-19-7	≤ 0.05%
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>, dry sand 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
Isopropyl Alcohol	TWA: 200 ppm / STEL: 400 ppm	TWA 400 ppm: 980 mg/m <sup>3</sup>	TWA 400 ppm: 980 mg/m <sup>3</sup>
Glacial Acetic Acid	2 mg/m <sup>3</sup> Vapor	5 mg/m <sup>3</sup> Nuisance Dust	TWA 10 mg/m <sup>3</sup>
	<b>WEEL</b>		
Propylene Glycol	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 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, heat and sources ignition

**Incompatible Materials:** Inorganic acids, strong oxidizers, and halogens

**Hazardous Polymerization:** None under normal conditions.

**Hazardous Decomposition Products:** May include, but are not limited to Carbon oxides

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## SECTION 11: TOXICOLOGICAL INFORMATION

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**Acute Toxicity:** FAA Fixed Specimens 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 hour; 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

Isopropyl Alcohol - Oral-rat LD50:5,000mg/kg; Dermal-rabbit LD50: 12,800 mg/kg; Inhalation-rat LC50: 16,000 ppm; Irritation eye-rabbit: standard draize, 10 mg

Glacial Acetic Acid - Oral-rat LD50: 3,310 mg/kg; Dermal-rabbit LD50: 1.06 g/kg; Inhalation-mouse LC50: 5,620 ppm/1-hr

**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.

Formaldehyde - Ca Prop 65: Formaldehyde is known to the State of California to cause reproductive toxicity.

**Specific Target Organ Toxicity – Single exposure:** Data not available.

**Specific Target Organ Toxicity– Repeated exposure:** Data not available.

**Aspiration Hazard:** Data not available.

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**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	CERLCA (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
Isopropyl Alcohol	Listed	None	None	Listed	Not Listed	B2, D2B
Glacial Acetic Acid	Listed	5,000 lbs (2,270 kg)	None	Listed	Not Listed	B3, 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:** April 16, 2015

**RANACO** disclaims all expressed or implied warranties of merchantability and fitness for a particular purpose, with respect to the product or information provided herein. All information appearing herein is based upon data obtained from the manufacturer and/or recognized technical sources. While the information is believed to be accurate, **RANACO** makes no representations as to its accuracy or sufficiency. Conditions of use are beyond **RANACO**'s control and therefore users are responsible to verify this data under their own operating conditions to determine whether the product is suitable for their particular purposes and they assume all risks of their use, handling and disposal of the product or from the publication or use of, or reliance upon, information contained herein. This information relates only to the product designated herein, and does not relate to its use in combination with any other material or in any other process.

## Section 1 Chemical Product and Company Information

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**HOME SCIENCE TOOLS**

665 Carbon Street  
Billings, MT 59102  
800-860-6272  
www.homesciencetools.com

**CHEMTREC 24 Hour Emergency**  
**Phone Number (800) 424-9300**  
For laboratory use only.  
Not for drug, food or household use.

<b>Product</b>	<b>PETROLEUM ETHER</b>
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<b>Synonyms</b>	Ligroin / VM&P Naphtha
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## Section 2 Hazards Identification

**Signal word:** DANGER**Pictograms:** GHS02 / GHS08**Target organs:** Central nervous system**GHS Classification:**

Flammable liquid (Category 2)

Aspiration hazard (Category 1)

Mutagenicity (Category 1B)

Carcinogenicity (Category 1B)

**GHS Label information: Hazard statement:**

H225: Highly flammable liquid and vapour.

H304: May be fatal if swallowed and enters airways.

H340: May cause genetic defects.

H350: May cause cancer.

**Precautionary statement:**

P201: Obtain special instructions before use.

P202: Do not handle until all safety precautions have been read and understood.

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P233: Keep container tightly closed.

P241: Use explosion-proof electrical/ventilating/lighting equipment.

P242: Use only non-sparking tools.

P243: Take precautionary measures against static discharge.

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P301+P310+P331: IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.

P303+P361+P353: IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P308+P313: IF exposed or concerned: Get medical attention.

P370+P378: In case of fire: Use dry chemical, alcohol foam, carbon dioxide to extinguish.

P403+P235: Store in a well-ventilated place. Keep cool.

P405: Store locked up.

P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

Ca Prop 65 - This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive harm.

## Section 3 Composition / Information on Ingredients

Chemical Name	CAS #	%	EINECS
Petroleum ether	8032-32-4	100%	232-453-7

## Section 4 First Aid Measures

**INGESTION:** MAY BE HARMFUL OR FATAL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** MAY BE HARMFUL IF INHALED. MAY CAUSE RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** MAY CAUSE EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** MAY BE HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

## Section 5 Fire Fighting Measures

**Suitable Extinguishing Media:** Carbon dioxide, dry chemical, dry sand, alcohol foam.

**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

**Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Vapor may cause flash fire. Dangerous fire hazard when exposed to heat or flame. Vapors can flow along surfaces to distant ignition source and flash back. Contact with strong oxidizers may cause fire.

## Section 6 Accidental Release Measures

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.

**Containment and Cleanup:** Remove all sources of ignition. Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

**Precautions for Safe Handling:** Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Conditions for Safe Storage:** Store in a cool, dry, well-ventilated area away from incompatible substances. Keep away from ignition sources.

## Section 8 Exposure Controls / Personal Protection

Exposure Limits:	Chemical Name	ACGIH (TLV)	OSHA (PEL)	NIOSH (REL)
	VM&P Naphtha	Not established	Not established	TWA: 350 mg/m <sup>3</sup> STEL: C1800 mg/m <sup>3</sup>

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

**Respiratory protection:** None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

## Section 9 Physical &amp; Chemical Properties

<b>Appearance:</b> Clear, colorless liquid.	<b>Evaporation rate ( Butyl acetate = 1):</b> Ca 10	<b>Partition coefficient:</b> Data not available
<b>Odor:</b> Gasoline or kerosene-like odor.	<b>Flammability (solid/gas):</b> Data not available.	<b>Auto-ignition temperature:</b> 288°C (550°F)
<b>Odor threshold:</b> Data not available.	<b>Explosion limits: Lower / Upper:</b> 1.1% / 5.9%	<b>Decomposition temperature:</b> Data not available.
<b>pH:</b> Data not available.	<b>Vapor pressure (mm Hg):</b> Ca 40 @ 20°C (68°F)	<b>Viscosity:</b> Data not available.
<b>Melting / Freezing point:</b> <-73°C (-99°F)	<b>Vapor density (Air = 1):</b> 2.5	<b>Molecular formula:</b> Mixture
<b>Boiling point:</b> 20-75°C (68-167°F)	<b>Relative density (Specific gravity):</b> 0.60-0.75	<b>Molecular weight:</b> Mixture
<b>Flash point:</b> -18°C (0.4°F) CC	<b>Solubility(ies):</b> Insoluble in water.	

## Section 10 Stability &amp; Reactivity

**Chemical stability:** Stable **Hazardous polymerization:** Will not occur.  
**Conditions to avoid:** Heat and sunlight can cause instability. Avoid heat, flame, ignition sources, sunlight and incompatibles.  
**Incompatible materials:** Strong oxidizers. Will attack some forms of plastics, rubber and coatings.  
**Hazardous decomposition products:** Oxides of carbon.

## Section 11 Toxicological Information

**Acute toxicity:** Inhalation-rat LC50: 3400 ppm/4 hours  
**Skin corrosion/irritation:** Data not available  
**Serious eye damage/irritation:** Data not available  
**Respiratory or skin sensitization:** Data not available  
**Germ cell mutagenicity:** Data not available  
**Carcinogenicity:** Data not available  
 NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.  
 IARC classified: Group 3: Not classifiable as to its carcinogenicity to humans. [Petroleum solvents]  
 OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.  
**Reproductive toxicity:** Data not available  
**STOT-single exposure:** Data not available  
**STOT-repeated exposure:** Data not available  
**Aspiration hazard:** Data not available  
**Potential health effects:**  
 Inhalation: Inhalation of this material may cause symptoms of intoxication and peripheral nerve disorders and central nervous system depression. Symptoms of overexposure include loss of appetite, muscle weakness, impairment of motor action, dizziness and drowsiness. May also cause throat irritation.  
 Ingestion: Ingestion will cause burning sensation in mouth, esophagus, and stomach. Vomiting, blurred vision, and diarrhea may also occur. Cases of chemical pneumonia have been reported from ingestion of this substance. Nervous system disorders paralleling those from inhalation exposure may also occur.  
 Skin: Contact with skin causes irritation defatting on prolonged contact.  
 Eyes: Contact with eyes may cause redness and pain. Vapors may cause irritation.  
**Signs and symptoms of exposure:** Exercise appropriate procedures to minimize potential hazards.  
**Additional information:** RTECS #: OI6180000

## Section 12 Ecological Information

**Toxicity to fish:** No data available  
**Toxicity to daphnia and other aquatic invertebrates:** No data available  
**Toxicity to algae:** Selenastrum capricornutum (Algae) EC50: 4700 mg/L/72 hours (growth rate)  
**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

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

## Section 14 Transport Information (US DOT / CANADA TDG)

**UN/NA number:** UN1268 **Shipping name:** Petroleum distillates, n.o.s., (Petroleum ether)  
**Hazard class:** 3 **Packing group:** II **Reportable Quantity:** No **Marine pollutant:** No  
**Exceptions:** Limited quantity equal to or less than 1 L **2012 ERG Guide #** 128

## Section 15 Regulatory Information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

Component	TSCA	CERLCA (RQ)	RCRA code	DSL	NDSL	WHMIS Classification
Petroleum ether	Listed	Not listed	D001	Listed	Not listed	Not listed

## Section 16 Additional Information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.