

This SDS complies with the US OSHA HCS 2012.

## 1. Product and Company Identification

**Product Code:** 0003113  
**Product Name:** PVA(Zn) Fixative  
**Company Name:** CalibreScientific US, Inc.  
 1311 SE Cardinal Ct Suite 170  
 Vancouver, WA 98683  
**Web site address:** Alphatecsystems.com  
**Email address:** Regulatory@calibrescientific.com  
**Emergency Contact:** INFOTRAC  
 International 00-1- (352)323-3500  
 North America 1 (800)535-5053  
**Information:**  
**Intended Use:** For Laboratory Use Only  
**Product List** PVA(Zn) Fixative, Product Code Also Applies To: X003101, X003105, 0003101, 0003102, 0003105, 0003107, 0003119, 0003110, 0003716, 0003724.

## 2. Hazards Identification

**Flammable Liquids, Category 2**  
**Acute Toxicity: Inhalation, Category 4**  
**Acute Toxicity: Oral, Category 4**  
**Serious Eye Damage/Eye Irritation, Category 1**  
**Specific Target Organ Toxicity (single exposure), Category 1**  
**Aquatic Toxicity (Chronic), Category 2**  
**Aquatic Toxicity (Acute), Category 2**



**GHS Signal Word:** **Danger**

**GHS Hazard Phrases:** H225 - Highly flammable liquid and vapor.  
 H302 - Harmful if swallowed.  
 H318 - Causes serious eye damage.  
 H332 - Harmful if inhaled.  
 H370 - Causes damage to organs  
 H401 - Toxic to aquatic life.  
 H411 - Toxic to aquatic life with long lasting effects.

**GHS Precautionary Phrases:** P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
 P233 - Keep container tightly closed.  
 P260 - Do not breathe dust/fume/gas/mist/vapors/spray.  
 P264 - Wash hands thoroughly after handling.  
 P270 - Do not eat, drink or smoke when using this product.  
 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.

**GHS Response Phrases:** P301+312 - IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
 P303+361+353 - IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.  
 P304+340 - IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
 P305+351+338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove

**GHS Storage and Disposal Phrases:**

contact lenses, if present and easy to do. Continue rinsing.  
P308+311 - If exposed or concerned: Call a POISON CENTER/Doctor/...  
P310 - Immediately call a POISON CENTER or doctor/physician.  
P330 - Rinse mouth.  
P391 - Collect spillage.  
P405 - Store locked up.  
P501 - Dispose of contents/container to safe area according to state and local guidelines.

**Potential Health Effects (Acute and Chronic):**

Though a single exposure may cause no effect, daily exposures may result in the accumulation of a harmful amount.

Skin sensitization to acetic acid is rare, but has occurred.

Methanol has produced fetotoxicity in rats and teratogenicity in mice exposed by inhalation to high concentrations that did not produce significant maternal toxicity.

Chronic: May cause reproductive and fetal effects. Animal studies have reported the development of tumors. Prolonged exposure may cause liver, kidney, and heart damage. Chronic exposure may cause effects similar to those of acute exposure. Because of this slow elimination, methanol should be regarded as a cumulative poison. One case of a delayed asthmatic response to glacial acetic acid has been reported in a person with bronchial asthma.

**Inhalation:**

Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Causes respiratory tract irritation. May cause narcotic effects in high concentration. Vapors may cause dizziness or suffocation. Methanol is toxic and can very readily form extremely high vapor concentrations at room temperature. Inhalation is the most common route of occupational exposure. At first, methanol causes CNS depression with nausea, headache, vomiting, dizziness and incoordination. A time period with no obvious symptoms follows (typically 8-24 hrs). This latent period is followed by metabolic acidosis and severe visual effects which may include reduced reactivity and/or increased sensitivity to light, blurred, double and/or snowy vision, and blindness. Depending on the severity of exposure and the promptness of treatment, survivors may recover completely or may have permanent blindness, vision disturbances and/or nervous system effects. Effects may be delayed. Causes chemical burns to the respiratory tract. Exposure may lead to bronchitis, pharyngitis, and dental erosion. May be absorbed through the lungs. May be harmful if inhaled. Skin: May be harmful if absorbed through skin. May cause skin irritation.

Eyes: Causes serious eye irritation.

**Skin Contact:**

Causes moderate skin irritation. May cause cyanosis of the extremities. May be absorbed through the skin in harmful amounts. Prolonged and/or repeated contact may cause defatting of the skin and dermatitis. Methanol can be absorbed through the skin, producing systemic effects that include visual disturbances. May cause irritation with pain and stinging, especially if the skin is abraded. Dermal absorption has been considered toxicologically insignificant. The cases of deep coma associated with skin contact are thought to be a consequence of gross isopropanol vapor inhalation in rooms with inadequate ventilation, rather than being attributable to percutaneous absorption of isopropanol per se. Causes skin burns. Contact with the skin may cause blackening and hyperkeratosis of the skin of the hands.

**Eye Contact:**

Causes severe eye irritation. May cause painful sensitization to light. May cause

**Ingestion:**

chemical conjunctivitis and corneal damage. Methanol is a mild to moderate eye irritant. Inhalation, ingestion or skin absorption of methanol can cause significant disturbances in vision, including blindness. Produces irritation, characterized by a burning sensation, redness, tearing, inflammation, and possible corneal injury. In the eyes of a rabbit, 0.1 ml of a rabbit, 0.1 ml of a rabbit, 0.1 ml of 70% isopropyl alcohol caused conjunctivitis, isopropyl alcohol caused conjunctivitis, iritis, and corneal opacity. Contact with liquid or vapor causes severe burns and possible irreversible eye damage.

May cause systemic toxicity with acidosis. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. May be fatal or cause blindness if swallowed. Aspiration hazard. May cause cardiopulmonary system effects. Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause kidney damage. Aspiration of material into the lungs may cause chemical pneumonitis, which may be fatal. The probable oral lethal dose in humans is 240 ml (2696 mg/kg), but ingestion of only 20 ml (224 mg/kg) has, but in gestion of only 20 ml (224 mg/kg) has caused poisoning. May cause severe and permanent damage to the digestive tract. Causes severe pain, nausea, vomiting, diarrhea, and shock. May cause polyuria, oliguria (excretion of a diminished amount of urine in relation to the fluid intake) and anuria (complete suppression of urination). Rapidly absorbed from the gastrointestinal tract. Harmful if swallowed. Additional Information.

RTECS: QJ6950000

**3. Composition/Information on Ingredients**

CAS #	Hazardous Components (Chemical Name)	Concentration
64-17-5	Ethyl alcohol {Ethanol}	20.0 -31.0 %
25213-24-5	Polyvinyl alcohol resin {Acetic acid ethenyl ester, polymer with ethenol}	10000. -60000. PPM
67-56-1	Methanol {Methyl alcohol; Carbinol; Wood alcohol}	1.0 -10.0 %
67-63-0	Isopropyl alcohol {sec-Propyl alcohol; IPA; 2-Propanol}	1.0 -10.0 %
56-81-5	Glycerin {Glycerol}	No Data.
7446-20-0	Zinc sulfate heptahydrate	10000. -30000. PPM

## 4. First Aid Measures

### Emergency and First Aid

#### Procedures:

##### In Case of Inhalation:

Remove from exposure and move to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation. If inhaled, remove to fresh air. Remove victim to fresh air. If breathing becomes difficult, call a physician. Consult a physician.

##### In Case of Skin Contact:

Wash clothing before reuse. Flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash off with soap and plenty of water. Consult a physician.

##### In Case of Eye Contact:

Get medical aid. Gently lift eyelids and flush continuously with water. In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if symptoms occur. Get medical aid immediately. In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician. Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

##### In Case of Ingestion:

If conscious and alert, rinse mouth and drink 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Potential for aspiration if swallowed. Get medical aid immediately. If vomiting occurs naturally, have victim lean forward. If victim is fully conscious, give a cupful of water. Wash out mouth with water provided person is conscious. Rinse mouth with water. Consult a physician.

##### Signs and Symptoms Of Exposure:

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated. Zinc oxide dust or fume can irritate the respiratory tract. Prolonged skin contact can produce a severe dermatitis called oxide pox. Exposure to high levels of dust or fume can cause metallic taste, marked thirst, coughing, fatigue, weakness, muscular pain, and nausea followed by fever and chills. Severe overexposure may result in bronchitis or pneumonia with a bluish tint to the skin. , burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, airway resistance, Cardiovascular effects. , pulmonary edema, congestive heart failure.

##### Note to Physician:

Treat symptomatically and supportively. Persons with skin or eye disorders or liver, kidney, chronic respiratory diseases, or central and peripheral nervous system diseases may be at increased risk from exposure to this substance.  
Antidote: Replace fluid and electrolytes. Effects may be delayed.  
Ethanol may inhibit methanol metabolism. Urine acetone test may be helpful in diagnosis. Hemodialysis should be considered in severe intoxication. Persons with pre-existing skin disorders or impaired respiratory or pulmonary function may be at increased risk to the effects of this substance. Consult a physician. Show this safety data sheet to the doctor in attendance.

**5. Fire Fighting Measures**

<b>Flash Point:</b>	No data.
<b>Explosive Limits:</b>	LEL: No data. UEL: No data.
<b>Autoignition Pt:</b>	No data.
<b>Suitable Extinguishing Media:</b>	For large fires, use water spray, fog, or alcohol-resistant foam. Water may be ineffective. Do NOT use straight streams of water. For small fires, use carbon dioxide, dry chemical, dry sand, or alcohol-resistant foam. Cool containers with flooding quantities of water until well after fire is out. Use water spray, dry chemical, carbon dioxide, or alcohol-resistant foam. Carbon dioxide, dry chemical powder, or appropriate foam. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.
<b>Fire Fighting Instructions:</b>	<p>Replace fluid and electrolytes. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form explosive mixtures with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Can release vapors that form explosive mixtures at temperatures above the flashpoint. Use water spray to keep fire-exposed containers cool. Ethanol may inhibit methanol metabolism. During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Water may be ineffective. Material is lighter than water and a fire may be spread by the use of water. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas. Flammable liquid and vapor. May form explosive peroxides. Reacts with most metals to form highly flammable hydrogen gas which can form explosive mixtures with air. Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.</p> <p>Specific Hazard(s): Emits toxic fumes under fire conditions. Wear self contained breathing apparatus for fire fighting if necessary.</p> <p>Further information. The product itself does not burn.</p>
<b>Flammable Properties and Hazards:</b>	No data available.
<b>Hazardous Combustion Products:</b>	No data available.

**6. Accidental Release Measures**

<b>Steps To Be Taken In Case Material Is Released Or Spilled:</b>	<p>Use proper personal protective equipment as indicated in Section 8.</p> <p>Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Remove all sources of ignition. Use a spark-proof tool. A vapor suppressing foam may be used to reduce vapors. Use water spray to disperse the gas/vapor. Do not use combustible materials such as sawdust. Water spray may reduce vapor but may not prevent ignition in closed spaces. Clean up spills immediately, observing precautions in the Protective Equipment section. Wash area with soap and water. Use water spray to cool and disperse vapors, protect personnel, and dilute spills to form nonflammable mixtures. Control runoff and isolate discharged material for proper disposal. Spill may be carefully neutralized with soda ash (sodium carbonate).</p> <p><b>PROCEDURE(S) OF PERSONAL PRECAUTION(S)</b></p> <p>Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.</p> <p>Methods for cleaning up.</p> <p>Ventilate area and wash spill site after material pickup is complete. Personal precautions.</p> <p>Use personal protective equipment. Avoid dust formation. Avoid breathing dust. Ensure</p>
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adequate ventilation.

Environmental precautions.

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

Discharge into the environment must be avoided.

Pick up and arrange disposal without creating dust. Keep in suitable, closed containers for disposal.

## 7. Handling and Storage

### Precautions To Be Taken in Handling:

Wash thoroughly after handling. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Keep away from heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Remove contaminated clothing and wash before reuse. Do not ingest or inhale. Use only with adequate ventilation. Avoid use in confined spaces. Take precautionary measures against static discharges. Do not allow to evaporate to near dryness. Remove contaminated clothing and wash before reuse. Ground and bond containers when transferring material. Do not get in eyes, on skin, or on clothing. Discard contaminated shoes. Keep away from heat, sparks and flame. Do not breathe dust, mist, or vapor. Use corrosion-resistant transfer equipment when dispensing. User Exposure: Avoid inhalation. Avoid prolonged or repeated exposure. Provide appropriate exhaust ventilation at places where dust is formed.

### Precautions To Be Taken in Storing:

Keep away from heat, sparks and flame. Keep away from sources of ignition. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Do not store near perchlorates, peroxides, chromic acid or nitric acid. Keep containers tightly closed. Do not store in direct sunlight. After opening, purge container with nitrogen before reclosing. Periodically test for peroxide formation on long-term storage. Addition of water or appropriate reducing materials will lessen peroxide formation. Store protected from moisture. Containers should be dated when opened and tested periodically for the presence of peroxides. Should crystals form in a peroxidizable liquid, peroxidation may have occurred and the product should be considered extremely dangerous. All peroxidizable substances should be stored away from heat and light and be protected from ignition sources. Keep away from heat, sparks and flame. Do not store near alkaline substances. Acetic acid should be kept above its freezing point of 62°F(17°C) to allow it to be handled as a liquid. It will contract slightly on freezing. Freezing and thawing does not affect product quality. Store at 2-8°C. Store in a cool, dry place. Keep container tightly closed in a dry and well-ventilated place.

## 8. Exposure Controls/Personal Protection

CAS #	Partial Chemical Name	OSHA TWA	ACGIH TWA	Other Limits
64-17-5	Ethyl alcohol {Ethanol}	PEL: 1000 ppm	TLV: 1000 ppm	No data.
25213-24-5	Polyvinyl alcohol resin {Acetic acid ethenyl ester, polymer with ethenol}	No data.	No data.	No data.
67-56-1	Methanol {Methyl alcohol; Carbinol; Wood alcohol}	PEL: 200 ppm	TLV: 200 ppm STEL: 250 ppm	No data.
67-63-0	Isopropyl alcohol {sec-Propyl alcohol; IPA; 2-Propanol}	PEL: 400 ppm	TLV: 200 ppm STEL: 400 ppm	No data.
56-81-5	Glycerin {Glycerol}	PEL: 15 (dust); 5 (resp.) mg/m3	TLV: 10 mg/m3	No data.

7446-20-0	Zinc sulfate heptahydrate	No data.	No data.	No data.
<b>Respiratory Equipment (Specify Type):</b>	A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use. Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi- purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.			
<b>Eye Protection:</b>	Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166. Wear chemical splash goggles and face shield. Chemical safety goggles. Skin-Specific: Chemical resistant apron. Safety glasses.			
<b>Protective Gloves:</b>	Wear appropriate protective gloves to prevent skin exposure. The selected protective gloves have to satisfy the specifications of EU Directive 89/689/EEC and the standard EN 374 derived from it.			
<b>Other Protective Clothing:</b>	Wear appropriate protective clothing to prevent skin exposure. Choose body protection according to the amount and concentration of the dangerous substance at the work place.			
<b>Engineering Controls (Ventilation etc.):</b>	Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits. Use a corrosion-resistant ventilation system. Safety shower and eye bath. Mechanical exhaust required.			
<b>Work/Hygienic/Maintenance Practices:</b>	Wash thoroughly after handling. Wash contaminated clothing before reuse. Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.			

**9. Physical and Chemical Properties**

<b>Physical States:</b>	<input type="checkbox"/> Gas <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Solid		
<b>Appearance and Odor:</b>	Colorless/Clear. acetic odor.		
<b>pH:</b>	No data.		
<b>Melting Point:</b>	No data.		
<b>Boiling Point:</b>	No data. / 0.0 mm Hg		
<b>Flash Point:</b>	No data.		
<b>Evaporation Rate:</b>	No data.		
<b>Flammability (solid, gas):</b>	No data available.		
<b>Explosive Limits:</b>	LEL: No data.		UEL: No data.
<b>Vapor Pressure:</b>	No data.		
<b>Vapor Density (vs. Air=1):</b>	No data.		
<b>Specific Gravity (Water=1):</b>	No data.		
<b>Density:</b>	~ 0.8005 G/CM3		
<b>Solubility in Water:</b>	No data.		

<b>Saturated Vapor Concentration:</b>	No data.
<b>Octanol/Water Partition Coefficient:</b>	No data.
<b>Autoignition Pt:</b>	No data.
<b>Decomposition Temperature:</b>	No data.
<b>Viscosity:</b>	No data.

**10. Stability and Reactivity**

<b>Stability:</b>	Unstable [ <input type="checkbox"/> ]    Stable [ <input checked="" type="checkbox"/> ]
<b>Conditions To Avoid - Instability:</b>	Incompatible materials, ignition sources, Excess heat, confined spaces, Light, freezing temperatures, Note: Use great caution in mixing with water due to heat evolution that causes explosive spattering. Always add the acid to water.
<b>Incompatibility - Materials To Avoid:</b>	Strong oxidizing agents, acids, Alkali metals, Ammonia, hydrazine, Peroxides, Sodium, Acid anhydrides, calcium hypochlorite, chromyl chloride, nitrosyl perchlorate, bromine pentafluoride, Perchloric acid, silver nitrate, mercuric nitrate, potassium tert-butoxide, magnesium perchlorate, Acid chlorides, platinum, uranium hexafluoride, silver oxide, iodine heptafluoride, acetyl bromide, disulfuryl difluoride, tetrachlorosilane + water, acetyl chloride, permanganic acid, ruthenium (VIII) oxide, uranyl perchlorate, Reducing agents, Potassium, metals as powders (e.g. hafnium, raney nickel), powdered aluminum, powdered magnesium. Strong acids, Strong bases, Amines, ethylene oxide, isocyanates, acetaldehyde, chlorine, phosgene, Attacks some forms of plastics, rubbers, and coatings. aluminum at high temperatures. Metals. Bases, chlorine trifluoride, Nitric acid, chlorosulfonic acid, oleum, ethyleneimine, 2-aminoethanol, ethylene diamine, phosphorus trichloride, phosphorus isocyanate.
<b>Hazardous Decomposition or Byproducts:</b>	Carbon monoxide, irritating and toxic fumes and gases, Carbon dioxide, Zinc/zinc oxides, Sulphur oxides.
<b>Possibility of Hazardous Reactions:</b>	Will occur [ <input type="checkbox"/> ]    Will not occur [ <input checked="" type="checkbox"/> ]
<b>Conditions To Avoid - Hazardous Reactions:</b>	No data available.



## 11. Toxicological Information

<b>Toxicological Information:</b>	<p>Epidemiology: Teratogenicity: There is no human information available. Methanol is considered to be a potential developmental hazard based on animal data. In animal experiments, methanol has caused fetotoxic or teratogenic effects without maternal toxicity.</p> <p>Reproductive Effects: See actual entry in RTECS for complete information.</p> <p>Mutagenicity: Neurotoxicity: ACGIH cites neuropathy, vision and CNS under TLV basis.</p> <p>Other Studies: ROUTE OF EXPOSURE:</p> <p>Skin Contact: May cause skin irritation.</p> <p>Skin Absorption: May be harmful if absorbed through the skin.</p> <p>Eye Contact: May cause eye irritation.</p> <p>Inhalation: Material may be irritating to mucous membranes and upper respiratory tract. May be harmful if inhaled.</p> <p>Ingestion: May be harmful if swallowed.</p>
<b>Sensitization:</b>	<p>Prolonged or repeated exposure may cause allergic reactions in certain sensitive individuals.</p> <p style="text-align: center;">TARGET ORGAN(S) OR SYSTEM(S)</p> <p>Kidneys.</p>
<b>Carcinogenicity/Other Information:</b>	<p>CAS# 64-17-5: Not listed by ACGIH, IARC, NTP, or CA Prop 65. CAS# 67-56-1: Not listed by ACGIH, IARC, NTP, or CA Prop 65. CAS# 67-63-0: Not listed by ACGIH, IARC, NTP, or CA Prop 65. CAS# 64-19-7: Not listed by ACGIH, IARC, NTP, or CA Prop 65.</p>
<b>Carcinogenicity:</b>	<p>NTP? No      IARC Monographs? No      OSHA Regulated? No</p>

## 12. Ecological Information

<b>General Ecological Information:</b>	<p>Environmental: When released to the atmosphere it will photodegrade in hours (polluted urban atmosphere) to an estimated range of 4 to the atmosphere it will photodegrade in hours (polluted urban atmosphere) to an estimated range of 4 to 6 days in less polluted areas. Rainout should be significant.</p> <p>No information available.</p> <p>Dangerous to aquatic life in high concentrations. Aquatic toxicity rating: TLm 961000 ppm. It may be dangerous if it enters water intakes. Methyl alcohol is expected to biodegrade in soil and water very rapidly. This product will show high soil mobility and will be degraded from the ambient atmosphere by the reaction with photochemically produced hydroxyl radicals with an estimated half-life of 17.8 days. Bioconcentration factor for fish (golden ide) &lt; 10. Based on a log Kow of -0.77, the BCF value for methanol can be estimated to be 0.</p> <p>Ecotoxicity: Fish: Fathead Minnow: 1000 ppm; 96h; LC50Daphnia: 1000 ppm; 96h; LC50Fish: Gold orfe: 8970-9280 ppm; 48h; LC50 IPA has a high biochemical oxygen demand and a potential to cause oxygen depletion in aqueous systems, a low potential to affect aquatic organisms, a low potential to affect secondary waste treatment microbial metabolism, a low potential to affect the germination of some plants, a high potential to biodegrade (low persistence) with unacclimated microorganisms from activated sludge.</p> <p>Physical: THOD: 2.40 g oxygen/gCOD: 2.23 g oxygen/gBOD-5: 1.19-1.72 g oxygen/g.</p> <p>Other: No information available. Evaporation from dry surfaces is likely to occur. When spilled on soil, the liquid will spread on the surface and penetrate into the soil at a rate dependent on the soil type and its water content. Acetic acid shows no potential for biological accumulation or food chain contamination.</p> <p>If released to the atmosphere, it is degraded in the vapor-phase by reaction with photochemically produced hydroxyl radicals (estimated typical half-life of 26.7 days). It occurs in atmospheric particulate matter in acetate form and physical removal from air</p>
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can occur via wet and dry deposition.  
Physical: Natural waters will neutralize dilute solutions to acetate salts.

### 13. Disposal Considerations

**Waste Disposal Method:** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.  
RCRA P-Series: None listed.  
RCRA U-Series: None listed. RCRA U-Series:  
CAS# 67-56-1: waste number U154 (Ignitable waste). APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION.  
Contact a licensed professional waste disposal service to dispose of this material.  
Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations. Product.  
Contaminated packaging.  
Dispose of as unused product.

### 14. Transport Information

**GHS Classification:** Flammable Liquids, Category 2 - Danger! Highly flammable liquid and vapor  
Acute Toxicity: Inhalation, Category 4 - Warning! Harmful if inhaled  
Acute Toxicity: Oral, Category 4 - Warning! Harmful if swallowed  
Serious Eye Damage/Eye Irritation, Category 1 - Danger! Causes serious eye damage  
Specific Target Organ Toxicity (single exposure), Category 1 - Danger! Causes damage to organs {<target organs>}  
Aquatic Toxicity (Chronic), Category 2 - Toxic to aquatic life with long lasting effects  
Aquatic Toxicity (Acute), Category 2 - Toxic to aquatic life

**LAND TRANSPORT (US DOT):**

**DOT Proper Shipping Name:** Flammable liquids, corrosive, n.o.s. (ETHANOL, ACETIC ACID)  
**DOT Hazard Class:** 3 FLAMMABLE LIQUID, CORROSIVE  
**UN/NA Number:** UN2924 **Packing Group:** II



**LAND TRANSPORT (Canadian TDG):**

**TDG Shipping Name:** Flammable liquids, corrosive, n.o.s. (ETHANOL, ACETIC ACID)  
**UN Number:** UN2924 **Packing Group:** II  
**Hazard Class:** 3 (8) - FLAMMABLE LIQUID, CORROSIVE **TDG Classification:**

**LAND TRANSPORT (European ADR/RID):**

**ADR/RID Shipping Name:** Flammable liquids, corrosive, n.o.s. (ETHANOL, ACETIC ACID)  
**UN Number:** UN2924 **Packing Group:** II  
**Hazard Class:** 3 (8) - FLAMMABLE LIQUID, CORROSIVE

**AIR TRANSPORT (ICAO/IATA):**

**ICAO/IATA Shipping Name:** Flammable liquids, corrosive, n.o.s. (ETHANOL, ACETIC ACID)  
**UN Number:** UN2924 **Packing Group:** II  
**Hazard Class:** 3 (8) - FLAMMABLE LIQUID,  
CORROSIVE

**15. Regulatory Information**

**EPA SARA (Superfund Amendments and Reauthorization Act of 1986) Lists**

CAS #	Hazardous Components (Chemical Name)	S. 302 (EHS)	S. 304 RQ	S. 313 (TRI)
64-17-5	Ethyl alcohol {Ethanol}	No	No	No
25213-24-5	Polyvinyl alcohol resin {Acetic acid ethenyl ester, polymer with ethenol}	No	No	No
67-56-1	Methanol {Methyl alcohol; Carbinol; Wood alcohol}	No	Yes NA	Yes
67-63-0	Isopropyl alcohol {sec-Propyl alcohol; IPA; 2-Propanol}	No	No	Yes
56-81-5	Glycerin {Glycerol}	No	No	No
7446-20-0	Zinc sulfate heptahydrate	No	No	Yes-Cat. N982

CAS #	Hazardous Components (Chemical Name)	Other US EPA or State Lists
64-17-5	Ethyl alcohol {Ethanol}	CA PROP.65: No; MA Oil/HazMat: Yes; NJ EHS: No; PA HSL: Yes - 1
25213-24-5	Polyvinyl alcohol resin {Acetic acid ethenyl ester, polymer with ethenol}	CA PROP.65: No; MA Oil/HazMat: No; NJ EHS: No; PA HSL: No
67-56-1	Methanol {Methyl alcohol; Carbinol; Wood alcohol}	CA PROP.65: Yes: RDTox.; MA Oil/HazMat: Yes; NJ EHS: Yes - 1222; PA HSL: Yes - E
67-63-0	Isopropyl alcohol {sec-Propyl alcohol; IPA; 2-Propanol}	CA PROP.65: No; MA Oil/HazMat: No; NJ EHS: Yes - 1076; PA HSL: Yes - E
56-81-5	Glycerin {Glycerol}	CA PROP.65: No; MA Oil/HazMat: No; NJ EHS: No; PA HSL: Yes - 1
7446-20-0	Zinc sulfate heptahydrate	CA PROP.65: No; MA Oil/HazMat: Yes - Cat.; NJ EHS: Yes - Cat.; PA HSL: No

**16. Other Information**

**Revision Date:** 03/07/2025 **Previous revision:** 02/01/2023  
**Preparer Name:** A. Frontella

**Additional Information About This Product:** No data available.

**Document & Change Control Number** SDS0133.G.

**Company Policy or Disclaimer:** Disclaimer

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