





## G<I FGHU]b! '9cg]b!MD\ `cl ]bY

Isopropyl Alcohol	67-63-0	400ppm (983 mg/m3)	500ppm (1230 mg/m3)
Methyl Alcohol	67-56-1	200ppm (262 mg/m3)	250ppm (328 mg/m3)
Glacial Acetic Acid	64-19-7	10ppm	15ppm

**Engineering Controls:** Use in a well ventilated area to prevent exposure. Maintain eyewash fountain and quick-drench facilities in work areas.

**Personal Protective Measures:** Wear gloves, lab coat, eye protection and impervious footwear. Contact lenses should not be worn when working with this material.

**Special PPE Requirements:** If ventilation hood not available wear respirator.

### 9. Physical and Chemical Properties Section

**Appearance:** Bright orange/red, Bright orange/red liquid

**Molecular Weight:** N/A

**Molecular Formula:** N/A

**pH:** N/A

**Boiling Point and Boiling Range:** N/A

**Melting Point/Freezing Point:** N/A

**Flash Point:** N/A

**Specific Gravity/Relative Density:** N/A

**Odor:** Characteristic alcohol odor

**Odor Threshold:** N/A

**Color:** Bright orange/red

**Flammability (solid/gas):** Emits flammable vapors, flammable liquid

**Vapor Density:** N/A

**Upper/Lower flammability or explosive limits:** N/A

**Vapor Pressure:** N/A

**Evaporation Rate:** N/A

**Partition Coefficient: n-octanol/water:** N/A

**Viscosity:** N/A

**Auto-ignition temperature:** N/A

**Solubility:** Miscible in water

**Decomposition Temperature:** N/A

### 10. Stability and Reactivity

**Reactivity:**

**Chemical Stability:** Stable

**Conditions of Stability/Instability:** Instable under heat

**Stabilizers needed:** None

**Safety issue indicated by appearance change:** N/A

**Other:** N/A

**Hazardous Reactions:** N/A

**Hazardous Polymerization:** Does not occur

**Conditions to avoid:** Heat, open flame.

**Classes of Incompatible Materials:** Strong oxidizers, potassium dioxide, bromine pentafluoride, acetyl bromide, acetyl chloride, platinum, sodium

**Hazardous Decomposition Products:** Thermal-oxidation degradation can produce oxides of carbon. Toxic gases and vapors (i.e. Carbon monoxide) may be released in a fire.

### 11. Toxicological Information

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#### Likely Routes of Exposure

**Eyes:** Irritation.

**Skin:** Irritation.

**Inhalation:** Dizziness, headache, nausea, narcosis

**Ingestion:** May cause blindness, nausea, damage to gastrointestinal tract, liver, kidneys and cardiovascular system. Carcinogenic if ingested repeatedly over time (IARC List 1-Ethanol in alcoholic beverages)

**Signs or Symptoms of Exposure:** Irritation eyes, skin, nose; headache, drowsiness, lassitude (weakness, exhaustion), narcosis; cough; liver damage; anemia; reproductive, teratogenic effects

**Effects from short term exposure (delayed, immediate, chronic):** May cause blindness, nausea, damage to gastrointestinal tract, liver, kidneys and cardiovascular system

**Acute Toxicity (Numerical Measures):** Ethanol 100%: LD50 (oral, mouse) = 3450 mg/kg, LC50 (inhalation, mouse) = 39000 mg/m<sup>3</sup>/4H

**Carcinogenicity (NTP, IARC, OSHA):** Not listed as a carcinogen.\* \*Note: Ethanol in alcoholic beverages is listed as IARC List 1 Carcinogenic to humans.

#### 12. Ecological Information

**Ecotoxicity:** N/A

**Persistence and degradability:** N/A

**Bioaccumulation Potential (octanol-water partition coefficient, BCF):** N/A

**Mobility in the soil:** N/A

**Adverse Environmental Effects:** N/A

#### 13. Disposal Considerations

**Recommended Disposal Containers:** Check with your local waste authorities\*

**Recommended Disposal Methods:** Do not dispose of in drains, check with your local waste authorities.\*

**Physical/Chemical Properties affecting Disposal:** See section 2 and section 9 applicable information.\*

**Special Precautions for Landfill and Incineration Activities:** Check with your local waste authorities.\*

**Waste Stream:** Consult your local or regional authorities.\*

#### 14. Transport Information

**UN Number:** UN1170

**UN Proper Shipping Name:** Ethanol

**Transport Hazard Class(es):** 3

**Packing Group Number:** II

**Environmental Hazards (IMDG code):**

**Marine Pollutant:** No

**Transport in Bulk (IBC Code):** N/A

**Special Transport Precautions:** N/A

#### 15. Regulatory Information

**OSHA:**

**DOT:**

**EPA:**

**CPSC:**

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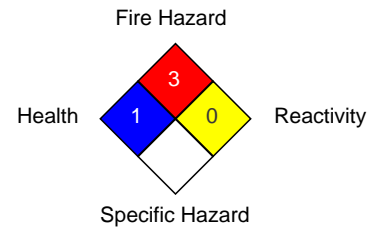
#### 16. Other Information

Revision Date: 07/22/2015

##### NFPA

Health	1
Fire Hazard	3
Reactivity	0
Specific Hazard	

National Fire Protection Association (USA) NFPA



##### HMIS

Health	1
Flammability	3
Physical Hazard	0
Personal Protection	

Hazardous Material Information System HMIS

Health	1
Flammability	3
Physical Hazard	0
Personal Protection	

#### Notice to Reader:

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