



Safety Data Sheet  
According to the (US) Hazard Communication Standard (29 CFR 1910.1200)

**SECTION 1: PRODUCT AND COMPANY IDENTIFICATION**

<b>Product Name</b>	Isopropanol, ACS
<b>NCL Catalog Number</b>	<b>I-80</b>
<b>Product Description</b>	Laboratory chemical
<b>Manufacturer</b>	EMD Chemicals Inc. PO Box 70, 480 Democrat Road Gibbstown, NJ 08027
<b>Supplier</b>	NCL of Wisconsin, Inc. PO Box 8, Birnamwood, WI 54414 Telephone: 1-800-648-7836 Fax: 715-449-2454 Email: <a href="mailto:nclabs@nclabs.com">nclabs@nclabs.com</a> Emergency Contact: 1-800-424-9300 (Chemtrec)

**SECTION 2: HAZARDS IDENTIFICATION**

**GHS Classification**

Flammable Liquids	Category 2
Eye Irritation	Category 2A
Specific Target Organ Toxicity	Single Exposure Category 3



**Signal Word** Danger

**Hazard Statements**

H225	Highly flammable liquid and vapor.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

**Precautionary Statements**

P210	Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P261	Avoid breathing fume/vapors/spray.
P264	Wash exposed skin thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
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.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313	If eye irritation persists: Get medical advice/attention.
P370+P378	In case of fire: Use dry sand, dry chemical, alcohol-resistant foam, or carbon dioxide to extinguish.
P403+P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container to comply with local, state and federal regulations.

**Other Hazards Not Contributing to the Classification**

Repeated exposure may cause skin dryness or cracking.

### SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

**Chemical Identity** Not applicable  
**Common Name** Not applicable

#### Substances

Name	CAS #	Approximate %
Isopropyl Alcohol (2-Propanol)	67-63-0	100

### SECTION 4: FIRST AID MEASURES

#### Description of First Aid Measures

**General First Aid Measures** Never give anything by mouth to an unconscious person. Seek medical advice if you feel unwell.

**If Inhaled** Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell.

**In Case of Skin Contact** Remove all contaminated clothing. Rinse skin with water/shower. Call a POISON CENTER or doctor/physician if you feel unwell.

**In Case of Eye Contact** Rinse carefully with water for several minutes. Do not apply neutralizing agents. Remove contact lenses, if present and easy to do. Continue rinsing. Take victim to an ophthalmologist if irritation persists.

**If Swallowed** Rinse mouth with water. Immediately after ingestion: Give lots of water to drink. Do not induce vomiting. Give activated charcoal. Call a POISON CENTER or doctor/physician if you feel unwell. Ingestion of large quantities: immediately take to hospital. Doctor: gastric lavage.

#### Most Important Symptoms/Effects Acute and Delayed

**After Inhalation** Exposure to high concentrations: Coughing. Dry/sore throat. Central nervous system depression. Dizziness. Headache. Narcosis.

**After Skin Contact** Dry skin.

**After Eye Contact** Irritation of the eye tissue.

**After Ingestion** Central nervous system depression. Headache. Dilation of the blood vessels. Low arterial pressure. Nausea. Vomiting. Abdominal pain. Disturbed motor response. Disturbances of consciousness. Body temperature fall. Slowing respiration.

**Chronic Symptoms** On continuous or repeated exposure/contact: Red skin. Dry skin. Itching. Cracking of the skin. Skin rash/inflammation. Impaired memory.

#### Indication of Immediate Medical Attention and Special Treatment Needed

Seek medical attention if exposed.

### SECTION 5: FIRE-FIGHTING MEASURES

#### Extinguishing Media

**Suitable Extinguishing Media** Water spray. Polyvalent foam. Alcohol-resistant foam. BC powder. Carbon dioxide.

**Unsuitable Extinguishing Media** Do not use a heavy water stream.

#### Special Hazards Arising from the Chemical

Highly flammable. Gas/vapor flammable with air within explosion limits. May be ignited by sparks. Gas/vapor spreads at floor level. Violent to explosive reaction with many compounds. On exposure to light, can release harmful gases/vapors. Violent explosive reaction with strong oxidizers. Prolonged storage/in large quantities: may form peroxides.

#### Special Protective Actions for Fire-Fighters

Wear self-contained breathing apparatus and protective clothing. Keep containers cool with water spray.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

**Personal Precautions, Protective Equipment and Emergency Procedures**

<b>Personal Precautions</b>	Use personal protective equipment (see section 8). Evacuate area of non-essential personnel. Eliminate ignition sources. Beware of vapors accumulating to form explosive concentrations. Vapors can accumulate in low areas.
<b>Environmental Precautions</b>	Prevent entry to sewers and public waters.
<b>Methods and Materials for Containment and Cleaning Up</b>	Collect spillage with inert absorbent material. Store away from other materials. Wash clothing/equipment after handling. Ensure compliance with local, state, and federal regulations.

**SECTION 7: HANDLING AND STORAGE**

**Handling and Storage**

<b>Precautions for Safe Handling</b>	Avoid contact with eyes and skin. Avoid breathing vapors. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Provide good ventilation in process area to prevent formation of vapor.
<b>Conditions for Safe Storage Including any Incompatibilities</b>	Keep in a tightly closed container, stored in a cool, dry, low ventilated area. Store away from sunlight, which can contribute to instability. Store away from; oxidizing agents, silver nitrate, sodium hypochlorite, direct sunlight, heat sources, and sources of ignition.
<b>Storage Area</b>	Ventilate at floor level. Fireproof storage room and provide an automatic sprinkler system. Provide tub for collecting spills. Provide tank with inert absorbent material. Comply with legal requirements.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

**Control Parameters**

<b>Isopropyl Alcohol (2-Propanol) (67-63-0)</b>		
USA ACGIH	ACGIH TWA (ppm)	200 ppm
USA ACGIH	ACGIH STEL (ppm)	200 ppm
USA OSHA	OSHA PEL (TWA) (mg/m <sup>3</sup> )	980 mg/m <sup>3</sup>
USA OSHA	OSHA PEL (TWA) (ppm)	400 ppm

**Appropriate Engineering Controls**

Material should be handled or transferred in a fume hood or with equivalent ventilation. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure.

**Individual Protection Measures**

Avoid all unnecessary exposure.

**Skin Protection**

Protective gloves and additional protection including impervious boots, apron, or coveralls, as needed in areas of unusual exposure to prevent skin contact.

**Eye Protection**

Use chemical safety goggles and /or a full face shield where splashing is possible. Contact lenses should not be worn when working with this material. Maintain eye-wash fountain and quick-drench facilities in work area.

**Respiratory Protection**

Wear appropriate mask.

**Other Information**

Do not eat, drink, or smoke during use.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical State</b>	Liquid
<b>Molecular Mass</b>	60.10 g/mol
<b>Color</b>	Colorless
<b>Odor</b>	Mild alcohol odor.
<b>Odor Threshold</b>	3-610 ppm, 8-1499 mg/m <sup>3</sup>
<b>pH</b>	Not determined
<b>Melting Point/Freezing Point</b>	-88°C/Not available
<b>Initial Boiling Point and Boiling Range</b>	82°C
<b>Flash Point</b>	12.0°C
<b>Evaporation Rate</b>	Not determined

<b>Flammability (Solid, Gas)</b>	Not determined
<b>Upper/Lower Flammability/Explosive Limits</b>	2-13 vol%, 50-335 g/m <sup>3</sup>
<b>Vapor Pressure</b>	44 hPa
<b>Vapor Density</b>	2.1
<b>Relative Density</b>	0.88
<b>Solubility</b>	Soluble in acetone. Complete soluble in; ethanol, ether, acetone, oils/fats, and chloroform.
<b>Partition Coefficient: n-octanol/water</b>	Log Pw: -0.24
<b>Auto-Ignition Temperature</b>	Not determined
<b>Decomposition Temperature</b>	Not determined
<b>Viscosity</b>	2.5316 mm <sup>2</sup> /s (25°C)

#### SECTION 10: STABILITY AND REACTIVITY

<b>Reactivity</b>	CO and CO <sub>2</sub> are formed. Volent and explosive reaction with strong oxidizers. Prolonged storage in large quantities may form peroxides.
<b>Chemical Stability</b>	Stable under ordinary conditions of use and storage.
<b>Possibility of Hazardous Reactions</b>	No additional information available.
<b>Conditions to Avoid</b>	Extremely high or low temperatures. Heat and sunlight can contribute to instability. Keep away from open flames and sparks.
<b>Incompatible Materials</b>	Strong oxidizers
<b>Hazardous Decomposition Products</b>	Fumes, carbon monoxide, carbon dioxide.

#### SECTION 11: TOXICOLOGICAL INFORMATION

Acute Toxicity	Not classified
<b>Isopropyl Alcohol (2-Propanol) (67-63-0)</b>	
<b>LD50 oral rat</b>	5045 mg/kg
<b>LD50 dermal rabbit</b>	12870 mg/kg
<b>LC50 inhalation rat (mg/l)</b>	73 mg/l/4h

<b>Skin Corrosion/Irritation</b>	Not classified
<b>Serious Eye Damage/Irritation</b>	Causes serious eye irritation.
<b>Respiratory or Skin Sensitization</b>	Not classified
<b>Germ Cell Mutagenicity</b>	Not classified
<b>Carcinogenicity</b>	Not classified
<b>Reproductive Toxicity</b>	Not classified
<b>Specific Target Organ Toxicity (Single Exposure)</b>	May cause drowsiness or dizziness.
<b>Specific Target Organ Toxicity (Repeated Exposure)</b>	Not classified
<b>Aspiration Hazard</b>	Not classified
<b>Potential Adverse Human Health Effects and Symptoms</b>	No data available
<b>Symptoms/Injuries After Inhalation</b>	Coughing. Dry/sore throat. Central nervous system depression. Dizziness. Headache. Narcosis.
<b>Symptoms/Injuries After Skin Contact</b>	Dry skin.
<b>Symptoms/Injuries After Eye Contact</b>	Irritation of the eye tissue.
<b>Symptoms/Injuries After Ingestion</b>	Central nervous system depression. Headache. Dilation of the blood vessels. Low arterial pressure. Nausea. Vomiting. Abdominal pain. Disturbed motor response. Disturbances of consciousness. Lower body temperature. Slowing of respiration.
<b>Chronic Symptoms</b>	Red skin. Dry skin. Itching. Cracking of the skin. Skin rash/inflammation. Impaired memory.

#### SECTION 12: ECOLOGICAL INFORMATION

**Ecology – Water Toxicity**

Ground water pollutant. Not harmful to fishes. Not harmful to invertebrates.  
Not harmful to algae. Inhibition of activated sludge.

<b>Isopropyl Alcohol (2-Propanol) (67-63-0)</b>	
LC50 fishes 1	4200 mg/l (96h; Rasbora heteromorpha)
EC50 Daphnia 1	>10000 mg/l (48h; Daphnia magna)
LC50 fish 2	9640 mg/l (96h; Pimephales promelas)
EC50 Daphnia 2	13299 mg/l (48 h; Daphnia magna)
Threshold limit algae 1	>1000 mg/l (72h; Scenedesmus subspicatus)
Threshold limit algae 2	1800 mg/l (72h; Algae)

**Persistence and Degradability**

Readily biodegradable in water. Biodegradable in the soil. Biodegradable in the soil under anaerobic conditions. No data on mobility of the substance available.

Biochemical Oxygen Demand (BOD)	1.19 g O <sub>2</sub> /g Substance
Chemical Oxygen Demand (COD)	2.23 g O <sub>2</sub> /g Substance
ThOD	2.4 g O <sub>2</sub> /g Substance
BOD (% of ThOD)	0.49 % ThOD

**Bioaccumulative Potential**

Log Pow: 0.05, Low potential for bioaccumulation (Log Kow <4)

**Mobility in Soil**

Surface Tension: 0.0237 N/m

**Other Adverse Effects**

Avoid release to the environment.

**SECTION 13: DISPOSAL CONSIDERATIONS**

**Methods of Disposal**

**Disposal Recommendations**

Dispose of contents/containers in accordance with local, state, and federal regulations. Do not discharge into surface water.

**Ecology-Waste Materials**

Avoid release to the surrounding environment.

**SECTION 14: TRANSPORT INFORMATION**

<b>UN Number</b>	1219
<b>UN Shipping Name</b>	Isopropanol
<b>Transport Hazard Class(es)</b>	3 – Flammable and combustible liquid.
<b>Packing Group</b>	II
<b>Environmental Hazards</b>	Not applicable
<b>Transport in Bulk</b>	242
<b>Special Precautions</b>	Not applicable

**SECTION 15: REGULATORY INFORMATION**

<b>Isopropyl Alcohol (2-Propanol) (67-63-0)</b>
Listed on the United States TSCA (Toxic Substances Control Act) inventory
Listed on SARA Section 313 (Specific Toxic Chemical Listings)

**SECTION 16: OTHER INFORMATION**

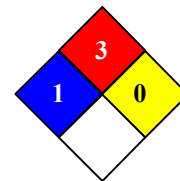
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**NFPA Hazards**

**Health Hazard** 1: Exposure would cause irritation with only minor residual injury.

**Fire Hazard** 3: Liquids and solids that can be ignited under almost all ambient temperature conditions.

**Reactivity/Instability** 0: Normally stable, even under fire exposure conditions, and is not reactive with water.



**HMIS III Rating**

**Health** 1: Irritation or minor reversible injury possible.

**Flammability** 3: Materials capable of ignition under almost all normal temperature conditions.

**Physical Hazard** 0: Materials that are normally stable.

**Personal Protection** H

<b>I-80</b>	
<b>Health</b>	<b>1</b>
<b>Flammability</b>	<b>3</b>
<b>Physical Hazard</b>	<b>0</b>
<b>Personal Protection</b>	<b>H</b>

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**END OF SAFETY DATA SHEET**