

Safety Data Sheet

1. IDENTIFICATION

Product identifier

Product Name 91% Isopropyl Alcohol

Other means of identification

SDS # 54115

Recommended use of the chemical and restrictions on use

Recommended Use General purpose solvent

Details of the supplier of the safety data sheet

Supplier Address

Pacific Innovations LLC
129 Seegers Avenue
Elk Grove Village, IL 60007
1-503-455-8581

Emergency telephone number

Emergency Telephone INFOTRAC: 1-800-535-5053 (North America)

2. HAZARDS IDENTIFICATION

Physical state Liquid

OSHA Hazards

This mixture is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200)

Classification

Flammable Liquids	Category 2
Serious Eye Damage	Category 2A
Specific Target Organ Toxicity – Single Exposure	Category 3

Signal Word

Danger

Hazard statements

Highly flammable liquid and vapor
Causes serious eye irritation
May cause drowsiness or dizziness



Precautionary Statements - Prevention

Keep away from heat/sparks/open flames/hot surfaces.
No smoking
Keep container tightly closed.
Ground/bond container and receiving equipment.
Use explosion-proof electrical/ventilating/lighting equipment.
Use only non-sparking tools.

Take precautionary measures against static discharge.
 Avoid breathing mist/vapors/spray.
 Wash thoroughly after handling.
 Use only outdoors or in a well-ventilated area.
 Wear protective gloves/eye protection/face protection.

Precautionary Statements - Response

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 IF INHALED: Call a POISON CENTER or doctor/physician if you feel unwell.
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
 Call a POISON CENTER/doctor/physician if you feel unwell.

In case of fire: Use CO2, dry chemical, or foam to extinguish

Precautionary Statements - Storage

Store in a well-ventilated place. Keep container tightly closed. Keep cool.
 Store locked up

Precautionary Statements - Disposal

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

Other Information

May be harmful if swallowed.
 PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE IRRITATION.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical name	CAS No	Weight-%
Isopropyl Alcohol	67-63-0	50 – 100
Water	7732-18-5	0 - 10

If Chemical Name/CAS No is "proprietary" and/or Weight-% is listed as a range, the specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. FIRST AID MEASURES

Description of first aid measures

General Advice	Immediately call a poison center or doctor/physician.
Eye Contact	Flush eyes with cool, clean, low-pressure water for at least 15 minutes. Hold eyelids apart to ensure complete irrigation of the eye and eyelid tissue. If easily accomplished, check for and remove contact lenses. If contact lenses cannot be removed, seek medical attention. Do not rub affected area. Seek medical attention
Skin Contact	Remove contaminated shoes and clothing. Flush affected area with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. Do not use ointments. If skin surface is not damaged, clean affected area thoroughly with mild soap and water. Seek medical attention if tissue appears damages or if pain or irritation persists.
Inhalation	Immediately move victim to fresh air. If victim is not breathing, immediately begin rescue breathing. If breathing is difficult, 100 percent humidified oxygen should be administered by a qualified individual. Seek medical attention immediately.
Ingestion	Do not induce vomiting. Rinse mouth immediately and drink plenty of water. Never give anything by mouth to a person who is not fully conscious. Do not leave victim unattended. Seek medical attention immediately.

Most important symptoms and effects, both acute and delayed

Symptoms May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.

Indication of any immediate medical attention and special treatment needed

Notes to Physician Treat symptomatically. Effects of exposure (inhalation, ingestion, or skin contact) to substance may be delayed.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media

Small Fire Use dry chemicals, carbon dioxide, alcohol resistant foam, or water fog. Carbon dioxide can displace oxygen. Use caution when applying carbon dioxide in confined spaces.

Large Fire Use foam or water fog. Water may be ineffective. Water may not extinguish the fire. Water fog and spray are effective in cooling containers and adjacent structures. Water can be used to cool the external walls of vessels to prevent excessive pressure, autoignition, or explosion. DO NOT use a solid stream of water directly on the fire as the water may spread the fire to a larger area.

Unsuitable Extinguishing Media Straight streams of water, directly on fire

Specific Hazards Arising from the Chemical

Hazardous Combustion Products Carbon dioxide, carbon monoxide.

Flammable Liquid! This material releases vapors at or below ambient temperatures. When mixed with air in certain proportions and exposed to an ignition source, its vapor can cause a flash fire. Use only with adequate ventilation. Vapors are heavier than air and may travel long distances along the ground to an ignition source and flash back. A vapor and air mixture can create an explosion hazard in confined spaces such as sewers. If container is not properly cooled, it can rupture in the heat of a fire.

Protective equipment and precautions for firefighters

Firefighters must use full protective equipment, including NIOSH-approved positive pressure self-contained breathing apparatus to protect against potential hazardous combustion or decomposition products and oxygen deficiencies.

Fire Fighting Instructions In case of fire and/or explosion, do not breathe fumes. Move containers from fire area if you can do so without risk. Use water spray to keep fire-exposed containers cool.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal Precautions Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Eliminate all ignition sources (no smoking, flares, sparks, or flames in immediate area). Wear appropriate protective equipment and clothing during clean-up. Avoid breathing mist/vapors/spray. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ventilate closed spaces before entering them. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Flammable Liquid! Release causes an immediate fire or explosion hazard.

Environmental precautions

Environmental precautions Prevent spilled material from entering waterways. See Section 12 for additional Ecological Information.

Methods and material for containment and cleaning up

Methods for Containment Evacuate all non-essential personnel from immediate area and establish a "regulated zone" with site control and security. A vapor-suppressing foam may be used to reduce vapors. Eliminate all ignition sources. All equipment used when handling this material must be grounded. Prevent further leakage or spillage if safe to do so. Do not touch or walk through spilled material. Prevent spilled material from entering waterways, sewers, basements, or confined areas.

Methods for Clean-Up Absorb or cover with dry earth, sand, or other non-combustible material and transfer to appropriate waste containers. Use clean, non-sparking tools to collect absorbed material. Keep in suitable, closed containers for disposal.

For Large Spills For large spills, secure the area and control access. Dike far ahead of a liquid spill to ensure complete collection.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on Safe Handling Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wear protective gloves/protective clothing and eye/face protection. Do not breathe dusts or mists. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge. Use with local exhaust ventilation. Use spark-proof tools and explosion proof equipment. Keep in an area equipped with sprinklers. Avoid contact with skin, eyes or clothing. Do not eat, drink or smoke when using this product. Wash face, hands and any exposed skin thoroughly after handling. In case of insufficient ventilation, wear suitable respiratory equipment.

Conditions for safe storage, including any incompatibilities

Storage Conditions Keep containers tightly closed and store in a cool, dry, well-ventilated place, plainly labeled, and out of closed vehicles. Keep away from all ignition sources (pilot lights, electric motors, and static electricity). Ground all equipment containing this material. Containers should be able to withstand pressures expected from warming and cooling in storage. This flammable liquid should be stored in a separate safety cabinet or room. A refrigerated room is preferable for materials with a flash point temperature lower than 70 deg F (21 deg C). All electrical equipment in areas where this material is stored or handled should be installed in accordance with applicable regulatory requirements and the National Electrical Code. Store away from incompatible materials.

Incompatible Materials Acids. Strong oxidizing agents, such as liquid chlorine, other halogens, hydrogen peroxide and oxygen. Isocyanates.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

Cas No	Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
67-63-0	Isopropyl Alcohol	TWA: 200 ppm STEL: 400 ppm	TWA: 400 ppm TWA: 980 mg/m ³ (vacated) TWA: 400 ppm (vacated) TWA: 980 mg/m ³	IDLH: 2000 ppm 10% LEL TWA: 980 mg/m ³ TWA 400 ppm STEL: 500 ppm

			(vacated) STEL: 500 ppm (vacated) STEL: 1225 mg/m ³	STEL: 1225 mg/m ³
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Appropriate engineering controls

Engineering Controls	Showers Eyewash stations Ventilation systems
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Individual protection measures, such as personal protective equipment

Eye/Face Protection	Tight sealing safety goggles.
Skin and Body Protection	Wear suitable gloves. Nitrile, butyl rubber or neoprene gloves are recommended. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Wear suitable protective clothing. Long sleeved clothing. Chemical resistant apron. Antistatic boots.
Respiratory Protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. Respirator type: Chemical respirator with organic vapor cartridge.
General Comments	When using, do not smoke. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

9. PHYSICAL AND CHEMICAL PROPERTIES**Information on basic physical and chemical properties**

Physical state	Liquid	Odor	Alcohol-like
Color	Clear, colorless		
Property	Values	Remarks • Method	
pH	Not Available		
Melting point / freezing point	- 130 – 128.2 °F (-90 – 89 °C)		
Boiling point / boiling range	184 °F (83 °C)		
Flash point (closed cup)	53.6 – 69.1 °F (12.0 – 20.6 °C)		
Evaporation Rate	Not determined		
Flammability (Solid, Gas)	Not applicable		
Flammability Limit in Air			
Upper flammability or explosive limits	12.7 % v/v		
Lower flammability or explosive limits	2.0 % v/v		
Vapor Pressure	32.4 mmHg (20 °C)		
Vapor Density	2.1 (Air = 1)		
Relative Density	Not determined		
Water Solubility	Soluble		
Solubility in other solvents	Not determined		
Partition Coefficient	Not determined		
Autoignition temperature	750.2 °F (399 °C)		
Decomposition temperature	Not determined		
Kinematic viscosity	Not determined		
Dynamic Viscosity	Not determined		
Explosive Properties	Not explosive		
Oxidizing Properties	Not oxidizing.		

10. STABILITY AND REACTIVITY

Reactivity

Not reactive under normal conditions.

Chemical stability

Stable under recommended storage conditions.

Possibility of hazardous reactions

None under normal processing.

Conditions to Avoid

Keep out of reach of children. Keep away from heat, flame and other potential ignition sources. Avoid temperatures exceeding the flash point. Avoid direct light. Contact with incompatible materials.

Incompatible materials

Acids. Strong oxidizers such as liquid chlorine, halogens, hydrogen peroxide and oxygen. Isocyanates.

Hazardous decomposition products

No additional hazardous decomposition products were identified other than the combustion products identified in Section 5 of this SDS.

11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure

Product Information

Inhalation	Do not inhale.
Skin Contact	Avoid contact with skin. Repeat exposure may cause skin dryness or cracking.
Eye Contact	Avoid contact with eyes. Causes serious eye irritation.
Ingestion	May be harmful if swallowed.

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Isopropyl Alcohol	4710 mg/kg (rat)	12870 mg/kg (rabbit)	72.6 mg/L (rat) 4 h

Symptoms related to the physical, chemical and toxicological characteristics

Symptoms	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision.
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Delayed and immediate effects as well as chronic effects from short and long-term exposure

Inhalation	May cause drowsiness and dizziness. Headache. Nausea, vomiting. Prolonged inhalation may be harmful.
Skin corrosion/irritation	Prolonged or repeated skin contact may cause drying, cracking, or irritation.
Eye Irritation	Causes serious eye irritation.
Chronic Hazards	No known effect based on information supplied.
Carcinogenicity	Not classifiable as to carcinogenicity to humans.

IARC Monographs. Overall Evaluation of Carcinogenicity

Not listed.

NTP Report on Carcinogens

Not listed.

OSHA Specifically Regulated Substances (29 CFR 1920.1001-1053)

Not regulated.

Reproductive Toxicity

This product is not expected to cause reproductive or developmental effects.

12. ECOLOGICAL INFORMATION**Ecotoxicity**

The environmental impact of this product has not been fully investigated.

Component Information

Isopropyl Alcohol	LC50: > 10000 mg/l	Crustacea - Daphnia magna	24 hrs
	LC50: 9640 mg/l	Fish – Pimephales promelas	96 hrs
	EC50: > 100 mg/l	Crustacea – Daphnia magna	21 days
	NOEC: 141 mg/l	Crustacea – Daphnia magna	16 days
	NOEC: 30 mg/l	Crustacea – Daphnia magna	21 days

Persistence/Degradability

No data is available on the degradability of any ingredients in the mixture.

Bioaccumulative potential**Partition coefficient n-octanol / water (log Kow)**

Isopropyl alcohol 0.05

Mobility

Expected to be mobile in soil.

Other Adverse Effects

Not determined

13. DISPOSAL CONSIDERATIONS**Waste Treatment Methods****Disposal of Wastes**

Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Incinerate the material under controlled conditions in an approved incinerator. Do not incinerate sealed containers. Dispose of contents/container in accordance with local/regional/national/international regulations.

Contaminated Packaging

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION**Note**

Read safety instructions, SDS and emergency procedures before handling.

DOT

UN/ID No	UN1219
Proper Shipping Name	Isopropanol Solution
Hazard class	3
Packing Group	II
Environmental hazards	
Marine pollutant	No.
Special provisions	IB2, T4, TP1

Packing exceptions	4b, 150
Packaging non bulk	202
Packaging bulk	242

IATA

UN number	UN1219
Proper Shipping Name	Isopropanol Solution
Transport hazard class(es)	3
Packing Group	II
Environmental hazards	No.
ERG Code	3L

IMDG

UN number	UN1219
Proper Shipping Name	Isopropanol Solution
Transport hazard class(es)	3
Packing Group	II
Marine Pollutant	This material does not meet the definition of a marine pollutant per 49 CFR 171.8
EmS	F-E, S-D

15. REGULATORY INFORMATION

International Inventories

Chemical name	TSCA	TSCA Inventory Status	DSL/NDSL	EINECS/ELINCS	ENCS	IECSC	KECL	AICS
2-Propanol	X	ACTIVE	X	200-661-7	X	X	KE-29363	X

Legend:

TSCA - United States Toxic Substances Control Act Section 8(b) Inventory

DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances

ENCS - Japan Existing and New Chemical Substances

IECSC - China Inventory of Existing Chemical Substances

KECL - Korean Existing and Evaluated Chemical Substances

AICS - Australian Inventory of Chemical Substances

US Federal Regulations

Chemical name	CAS/313	Section 302 EHS TPQ	Section 304 EHS RQ	CERCLA RQ	SARA 313	RCRA Code	CAA 112 (r) TQ
Isopropyl Alcohol	67-63-0	-	-	-	-	-	-

U.S. State Right-to-Know Regulations

Component	Massachusetts	New Jersey	Pennsylvania	California	Rhode Island
Isopropyl Alcohol	X	X	X	X	X

16. OTHER INFORMATION

<u>NFPA</u>	Health Hazards 2	Flammability 3	Instability 0	Special Hazards Not determined
<u>HMIS</u>	Health Hazards 2	Flammability 3	Physical hazards 0	Personal Protection Not determined

Issue Date: 22-Jan-2023

Revision Date: 22-Jan-2023

Revision Note:

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

End of Safety Data Sheet