

WEDOR CORPORATION

Safety Data Sheet Isopropyl Alcohol 91%

SECTION 1: Identification

1.1 Product identifier

Product name	Isopropyl Alcohol 91%
Product number	I 1001-91%
Substance name	ISOPROPANOL
EC no.	200-661-7
CAS no.	67-63-0
Index no.	603-117-00-0

1.4 Supplier's details

Name	Wedor Corporation
Address	1907 S. 89th Street West Allis, WI 53227 USA
Telephone	414-329-9041
Fax	414-329-9043
email	wayne@wedor.com

1.5 Emergency phone number(s)

800-424-9300

SECTION 2: Hazard identification

2.1 Classification of the substance or mixture

- Eye damage/irritation (chapter 3.3), Cat. 2A
- Flammable liquids (chapter 2.6), Cat. 2
- Specific target organ toxicity, single exposure (chapter 3.8), Cat. 3

2.2 GHS label elements, including precautionary statements

Pictogram



Signal word

Danger

Hazard statement(s)

H225	Highly flammable liquid and vapor
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H336	May cause drowsiness or dizziness

Precautionary statement(s)

P210	Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking.
P233	Keep container tightly closed.

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P240	Ground/bond container and receiving equipment.
P241	Use explosion-proof electrical/ventilating/lighting/equipment.
P242	Use only non-sparking tools.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
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.
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.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.
P312	Call a POISON CENTER or doctor if you feel unwell.
P337+P313	If eye irritation persists: Get medical advice/attention.
P370+P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P403+P233	Store in a well ventilated place. Keep container tightly closed.
P403+P235	Store in a well ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container in accordance with specified local, regional, national or international regulations

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Substance name	ISOPROPANOL
EC no.	200-661-7
CAS no.	67-63-0
Index no.	603-117-00-0
Other names / synonyms	2-propanol, Isopropanol, Isopropyl Alcohol, propan-2-ol

Hazardous components

1. Isopropyl Alcohol

Concentration	<= 91 %
EC no.	200-661-7
CAS no.	67-63-0
Index no.	603-117-00-0

- Flammable liquids (chapter 2.6), Cat. 2
- Eye damage/irritation (chapter 3.3), Cat. 2A
- Specific target organ toxicity, single exposure (chapter 3.8), Cat. 3
- H225, H319, H336

2. WATER

Concentration	<= 9 %
CAS no.	7732-18-5

SECTION 4: First-aid measures

4.1 Description of necessary first-aid measures

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General advice	Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.
If inhaled	If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.
In case of skin contact	Wash off with soap and plenty of water. Consult a physician.
In case of eye contact	Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.
If swallowed	Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician
Personal protective equipment for first-aid responders	First Aid responders should pay attention to self-protection and use the recommended protective clothing (chemical resistant gloves, splash protection). If potential for exposure exists refer to Section 8 for specific personal protective equipment.

4.2 Most important symptoms/effects, acute and delayed

Aside from the information found under Description of first aid measures (above) and Indication of immediate medical attention and special treatment needed (below), any additional important symptoms and effects are described in Section 11: Toxicology Information.

4.3 Indication of immediate medical attention and special treatment needed, if necessary

Maintain adequate ventilation and oxygenation of the patient. Because rapid absorption may occur through the lungs if aspirated and cause systemic effects, the decision of whether to induce vomiting or not should be made by a physician. If lavage is performed, suggest endotracheal and/or esophageal control. Danger from lung aspiration must be weighed against toxicity when considering emptying the stomach. Hemodialysis may be of benefit if substantial amounts have been ingested and the patient is showing signs of intoxication. Consider hemodialysis for patients with persistent hypo-tension or coma unresponsive to standard therapy (Isopropanol levels >400 - 500 mg/dl). (Goldfrank 1998, King et al, 1970). No specific antidote. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient. Skin contact may aggravate preexisting dermatitis.

SECTION 5: Fire-fighting measures

5.1 Suitable extinguishing media

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Specific hazards arising from the chemical

Carbon Oxides

5.3 Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary

Further information

Use water spray to cool unopened containers

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

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Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapors accumulating to from explosive concentrations. Vapors can accumulate in low areas. For personal protection see section 8

6.2 Environmental precautions

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

6.3 Methods and materials for containment and cleaning up

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13)

Reference to other sections

For disposal see section 13.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Keep away from heat, sparks and flame. Avoid contact with eyes. Avoid breathing vapor. Wash thoroughly after handling. Keep container closed. Use only with adequate ventilation. No smoking, open flames or sources of ignition in handling and storage area. Electrically bond and ground all containers and equipment before transfer or use of material. Use of non-sparking or explosion-proof equipment may be necessary, depending upon the type of operation. Containers, even those that have been emptied, can contain vapors. Do not cut, drill, grind, weld, or perform similar operations on or near empty containers. Vapors are heavier than air and may travel a long distance and accumulate in low lying areas. Ignition and/or flash back may occur. Never use air pressure for transferring product. See Section 8, EXPOSURE CONTROLS AND PERSONAL PROTECTION.

7.2 Conditions for safe storage, including any incompatibilities

Minimize sources of ignition, such as static build-up, heat, spark or flame. Keep container closed. Flammable mixtures may exist within the vapor space of containers at room temperature.

Storage stability

Shelf life: Use within 24 Month

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

1. Isopropyl alcohol (CAS: 67-63-0 EC: 200-661-7)

TWA: 200 ppm; USA (ACGIH)

2. Isopropyl alcohol (CAS: 67-63-0 EC: 200-661-7)

STEL: 400ppm; USA (ACGIH)

3. Isopropyl alcohol (CAS: 67-63-0 EC: 200-661-7)

PEL-TWA: 400 ppm 8 hours; USA (OSHA)

1989 United States 3/1989

4. Isopropyl alcohol (CAS: 67-63-0 EC: 200-661-7)

PEL-TWA: 980 mg/m³ 8 hours; USA (OSHA)

5. Isopropyl Alcohol (CAS: 67-63-0 EC: 200-661-7)

PEL-ST: 500ppm 15 minutes; USA (OSHA)

6. Isopropyl Alcohol (CAS: 67-63-0 EC: 200-661-7)

PEL-ST: 1225 mg/m³ 15 minutes; USA (OSHA)

7. Isopropyl Alcohol (CAS: 67-63-0 EC: 200-661-7)

REL-TWA: 400 ppm 10 hours; USA (NIOSH)

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8. Isopropyl Alcohol (CAS: 67-63-0 EC: 200-661-7)

REL-TWA: 980 mg/m³ 10 hours; USA (NIOSH)

9. Isopropyl Alcohol (CAS: 67-63-0 EC: 200-661-7)

REL-ST: 500 ppm 15 minutes; USA (NIOSH)

10. Isopropyl Alcohol (CAS: 67-63-0 EC: 200-661-7)

REL-ST: 1225 mg/m³ 15 minutes; USA (NIOSH)

11. Isopropyl Alcohol (CAS: 67-63-0 EC: 200-661-7)

PEL-TWA: 400 ppm 8 hours; USA (OSHA)

12. Isopropyl Alcohol (CAS: 67-63-0 EC: 200-661-7)

PEL-TWA: 980 mg/m³ 8 hours; USA (OSHA)

8.2 Appropriate engineering controls

Use engineering controls to maintain airborne level below exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use only with adequate ventilation. Local exhaust ventilation may be necessary for some operations.

8.3 Individual protection measures, such as personal protective equipment (PPE)

Pictograms



Eye/face protection

Use chemical goggles. If exposure causes eye discomfort, use a full-face respirator.

Skin protection

Use gloves chemically resistant to this material when prolonged or frequently repeated contact could occur. Examples of preferred glove barrier materials include: Chlorinated polyethylene. Natural rubber ("latex"). Neoprene. Nitrile/butadiene rubber ("nitrile" or "NBR"). Polyethylene. Ethyl vinyl alcohol laminate ("EVAL"). Polyvinyl chloride ("PVC" or "vinyl"). Examples of acceptable glove barrier materials include: Polyvinyl alcohol ("PVA"). NOTICE: The selection of a specific glove for a particular application and duration of use in a workplace should also take into account all relevant workplace factors such as, but not limited to: Other chemicals which may be handled, physical requirements (cut/puncture protection, dexterity, thermal protection), potential body reactions to glove materials, as well as the instructions/specifications provided by the glove supplier.

Body protection

Wear clean, body-covering clothing

Respiratory protection

Respiratory protection should be worn when there is a potential to exceed the exposure limit requirements or guidelines. If there are no applicable exposure limit requirements or guidelines, use an approved respirator. Selection of air-purifying or positive-pressure supplied-air will depend on the specific operation and the potential airborne concentration of the material. For emergency conditions, use an approved positive-pressure self-contained breathing apparatus. In confined or poorly ventilated areas, use an approved self-contained breathing apparatus or positive pressure air line with auxiliary self-contained air supply.

The following should be effective types of air-purifying respirators: Organic vapor cartridge.

Thermal hazards

Thermally stable at typical use temperatures

SECTION 9: Physical and chemical properties

Information on basic physical and chemical properties

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Appearance/form	Liquid Colorless
Odor	Alcohols
Odor threshold	No test data available
pH	No test data available
Melting point/freezing point	Freeze point: -89 deg C (-128 degF)
Initial boiling point and boiling range	82 deg C (180 deg F)
Flash point	closed cup 61 deg. F Tag Closed Cup
Evaporation rate	2.9
Flammability (solid, gas)	Flammable liquid
Upper/lower flammability limits	No test data
Upper/lower explosive limits	Upper 12.0% vol, Lower 2.0% vol
Vapor pressure	33 mmHg at 20 deg C
Vapor density	2.1
Relative density	0.7855 at 20 deg C (68 deg F)
Solubility(ies)	Water 100% at 20 deg C
Partition coefficient: n-octanol/water	log Pow: 0.05 Measured
Auto-ignition temperature	399 deg C (750 deg F)
Decomposition temperature	No test data available
Viscosity	No test data available
Explosive properties	Not explosive
Oxidizing properties	No

Other safety information

Liquid Density: 0.785 g/cm³ at 20 deg C (68 deg F)
Molecular weight: 60 g/mol
Molecular formula: (CH₃)₂CHOH

Note: The physical data presented above are typical values and should not be construed as a specification.

SECTION 10: Stability and reactivity

10.1 Reactivity

no data available

10.2 Chemical stability

Thermally stable at typical use temperatures

10.3 Possibility of hazardous reactions

Polymerization will not occur.

10.4 Conditions to avoid

Exposure to elevated temperatures can cause product to decompose. Avoid static discharge.

10.5 Incompatible materials

Avoid contact with: Aldehydes. Halogenated organics. Halogens. Strong acids. Strong oxidizers.

10.6 Hazardous decomposition products

Decomposition products depend upon temperature, air supply and the presence of other materials.

SECTION 11: Toxicological information

Information on toxicological effects

Acute toxicity

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Acute oral toxicity

Low toxicity if swallowed. Small amounts swallowed incidentally as a result of normal handling operations are not likely to cause injury; however, swallowing larger amounts may cause injury. May cause central nervous system depression. May cause nausea and vomiting. Signs and symptoms of excessive exposure may include: Facial flushing. Low blood pressure. Irregular heartbeats.

LD50, Rat, 5,840 mg/kg OECD 401 or equivalent
Lethal Dose, Humans, 100 ml Estimated.

Acute dermal toxicity

Prolonged skin contact is unlikely to result in absorption of harmful amounts.

Acute inhalation toxicity

With good ventilation, single exposure is not likely to be hazardous. In poorly ventilated areas, vapors or mists may accumulate and cause respiratory irritation. Prolonged excessive exposure may cause adverse effects. Excessive exposure (400 ppm) to Isopropanol may cause eye, nose and throat irritation. In coordination, confusion, hypotension, hypothermia, circulatory collapse, respiratory arrest and death may follow a longer duration or higher levels. Observations in animals include middle ear lining damage upon exposure to vapors of Isopropanol. However, the relevance of this to humans is unknown

LC50, Rat, male and female, 6 Hour, vapor, > 10000 ppm

LD50, Rabbit, > 12,800 mg/kg

Skin corrosion/irritation

Prolonged exposure not likely to cause significant skin irritation.
May cause drying and flaking of the skin.

Serious eye damage/irritation

May cause pain disproportionate to the level of irritation to eye tissues.
May cause moderate eye irritation.
May cause moderate corneal injury.
Vapor may cause eye irritation experienced as mild discomfort and redness.
Vapor may cause lacrimation (tears).

Respiratory or skin sensitization

Sensitization
Did not demonstrate the potential for contact allergy in mice.
Did not cause allergic skin reactions when tested in guinea pigs.

For respiratory sensitization:
No relevant data found.

Germ cell mutagenicity

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative

Carcinogenicity

Did not cause cancer in laboratory animals

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Reproductive toxicity

In animal studies, did not interfere with reproduction. In animal studies, did not interfere with fertility

Summary of evaluation of the CMR properties

Mutagenicity

In vitro genetic toxicity studies were negative. Animal genetic toxicity studies were negative.

Aspiration Hazard

May be harmful if swallowed and enters airways.

STOT-single exposure

Specific Target Organ Systemic Toxicity (Single Exposure)

May cause drowsiness or dizziness.

Route of Exposure: Ingestion

Target Organs: Central nervous system

STOT-repeated exposure

Specific Target Organ Systemic Toxicity (Repeated Exposure)

In animals, effects have been reported on the following organs:

Kidney.

Liver.

Kidney effects have been observed in male rats. These effects are believed to be species specific and unlikely to occur in humans.

Observations in animals include:

Lethargy.

Aspiration hazard

May be harmful if swallowed and enters airways

SECTION 12: Ecological information

Toxicity

Toxicity

Acute toxicity to fish

Material is practically non-toxic to aquatic organisms on an acute basis (LC50/EC50/EL50/LL50 >100 mg/L in the most sensitive species tested).

Acute toxicity to aquatic invertebrates

LC50, Daphnia magna (Water flea), static test, 24 Hour, > 1,000 mg/l, OECD Test Guideline 202 or Equivalent

Acute toxicity to algae/aquatic plants

NOEC, alga Scenedesmus sp., static test, 7 d, Growth inhibition (cell density reduction), 1,800 mg/l

ErC50, alga Scenedesmus sp., static test, 72 Hour, Growth rate inhibition, > 1,000 mg/l

Chronic aquatic toxicity

Chronic toxicity to aquatic invertebrates

NOEC, Daphnia magna (Water flea), semi-static test, 21 d, 30 mg/l

LC50, Pimephales promelas (fathead minnow), flow-through test, 96 Hour, 9,640 mg/l, OECD Test Guideline 203 or Equivalent

Persistence and degradability

Persistence and degradability

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Biodegradability: Material is readily biodegradable. Passes OECD test(s) for ready biodegradability.
10-day Window: Pass
Biodegradation: 95 %
Exposure time: 21 d
Method: OECD Test Guideline 301E or Equivalent
10-day Window: Pass
Biodegradation: 53 %
Exposure time: 5 d
Method: Other guidelines

Theoretical Oxygen Demand: 2.40 mg/mg

Chemical Oxygen Demand: 2.09 mg/mg

Biological oxygen demand (BOD)

Incubation time	BOD	Photodegradation
Test Type: 5d	20-72%	Half-life (indirect photolysis)
Sensitizer: 20d	78-86%	OH radicals
		Atmospheric half-life:
1.472 d		
Method: Estimated		

Bioaccumulative potential

Bioaccumulation: Bioconcentration potential is low (BCF < 100 or Log Pow < 3).
Partition coefficient: n-octanol/water(log Pow): 0.05 Measured

Mobility in soil

Potential for mobility in soil is very high (Koc between 0 and 50).
Partition coefficient(Koc): 1.1 Estimated

SECTION 13: Disposal considerations

Disposal of the product

DO NOT DUMP INTO ANY SEWERS, ON THE GROUND, OR INTO ANY BODY OF WATER. All disposal practices must be in compliance with all Federal, State/Provincial and local laws and regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. AS YOUR SUPPLIER, WE HAVE NO CONTROL OVER THE MANAGEMENT PRACTICES OR MANUFACTURING PROCESSES OF PARTIES HANDLING OR USING THIS MATERIAL. THE INFORMATION PRESENTED HERE PERTAINS ONLY TO THE PRODUCT AS SHIPPED IN ITS INTENDED CONDITION AS DESCRIBED IN MSDS SECTION: Composition Information. FOR UNUSED & UNCONTAMINATED PRODUCT, the preferred options include sending to a licensed, permitted: Incinerator or other thermal destruction device.

SECTION 14: Transport information

DOT (US)

UN Number: UN1219

Class: 3

Packing Group: II

Proper Shipping Name: Isopropyl Alcohol

Marine pollutant: No

IMDG

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UN Number: UN1219
Class: 3
Packing Group: II
EMS Number:
Proper Shipping Name: Isopropyl Alcohol

IATA

UN Number: UN1219
Class: 3
Packing Group: II
Proper Shipping Name: Isopropyl Alcohol

SECTION 15: Regulatory information

15.1 Safety, health and environmental regulations specific for the product in question

OSHA Hazard Communication Standard

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29CFR1910.1200

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community right to know act of 1986) Section 311 and 312

Fire Hazard, Acute Health Hazard, Chronic Health Hazard

Superfund Amendments and Reauthorization Act of 1986 Title III (Emergency Planning and Community Right to Know Act of 1986) Section 313

Isopropanol 67-63-0

Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) Section 103

This product contains the following substance which are subject to CX

Pennsylvania (Worker and Community Right to Know ACT): Pennsylvania Hazardous Substances List and/or Pennsylvania Environmental Hazardous Substance List:

The following product components are cited in the Pennsylvania Hazardous Substance List and/or the Pennsylvania Environmental Substance List, and are present at levels which require reporting. Isopropanol CASRN: 67-63-0

California Proposition 65 (Safe Drinking Water and Toxic Enforcement Act of 1986)

This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at level which would require a warning under the statute

United States TSCA Inventory (TSCA)

All components of this product are in compliance with the inventory listing requirements of the U.S. Toxic Substance Control Act (TSCA) Chemical Substance Inventory.

15.2 Chemical Safety Assessment

Canada Label requirements : Class B-2: Flammable Liquid

Class D-2B: Material causing other toxic effects (Toxic)

Caution: HMIS ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks although HMIS ratings are not required on SDSs under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS ratings are to be used with a fully implemented HMIS program. HMIS is a registered mark of the National Paint and Coatings Association (NPCA).

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Copyright 2001 National Fire Protection Association, Quincy, MA 02269. This warning system is intended to be interpreted and applied only by properly trained individuals to identify fire, health and reactivity hazards of chemicals. The user is referred to certain limited number of chemicals with recommended classifications in NFPA 49 and NFPA 325, which would be used as a guideline only. Whether the chemicals are classified by NFPA or not, anyone using the 704 systems to classify chemicals does so at their own risk.

HMIS Rating

ISOPROPANOL	
HEALTH	2
FLAMMABILITY	3
PHYSICAL HAZARD	0
PERSONAL PROTECTION	

NFPA Rating



SECTION 16: Other information

Date of Issue/Date of Revision 2/09/2016

16.1 Further information/disclaimer

The data contained herein is drawn from recognized sources and believed to be accurate as the date of issue. This information is intended for use by persons who have or should obtain professional knowledge and experience in the subjects discussed, and is presented only for your evaluation of the suitability of this product for your use, and for compliance with Federal and State regulations. The manufacturer makes no warranty, express or implied, and disclaims all liability for the accuracy, completeness, and reliability of any information contained herein.

16.2 Preparation information

Prepared by: Wayne Benz 2.09.2016