

SAFETY DATA SHEET

This SDS complies with 29 CFR 1910.1200 (Hazard Communication Standard)
IMPORTANT: Read this SDS before handling & disposing of this product. Pass this information on to employees, customers, and users of this product.

SECTION 1 PRODUCT AND COMPANY IDENTIFICATION

1.1 Product Identifier

Product Identity Isopropyl Alcohol, Isopropanol, IPA, Isopropyl Alcohol 70%,
Alternate Names Isopropyl Alcohol 99%
Product Code 940-01

1.2 Relevant identified uses of the substance or mixture and uses advised against

Intended use Cleaning Solvent
Application Method See Label Instructions

1.3 Details of the supplier of the safety data sheet

Company Name United Formulas
601 6th St SW, Unit 5
Emergency
24 hour Emergency Great Falls, MT 59404
Telephone No.
Customer Service: United Infotrac: 1 800-535-5053
Formulas Emergency: (406) 727-4144

SECTION 2 HAZARDS IDENTIFICATION

This material is hazardous according to regulatory guidelines (see sDS Section 15).

CLASSIFICATION:

Flammable liquid: Category 2.
Eye irritation: Category 2A.
Specific target organ toxicant (central nervous system): Category 3.

LABEL:

Pictogram:



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/sparks/open flames/hot surfaces. -- No smoking.
- P233: Keep container tightly closed.
- P240: Ground / bond container and receiving equipment.
- P241: Use explosion-proof electrical, ventilating, and lighting equipment.
- P242: Use only non-sparking tools.
- P243: Take precautionary measures against static discharge.
- P261: Avoid breathing mist / vapors.
- P264: Wash skin thoroughly after handling.
- P271: Use only outdoors or in a well-ventilated area.
- P280: Wear protective gloves and eye / 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/physician if you feel unwell.
- P337 + P313: If eye irritation persists: Get medical advice/attention.
- P370 + P378: In case of fire: Use water fog, foam, dry chemical or carbon dioxide (CO2) to extinguish.
- P403 + P235: Store in a well-ventilated place. Keep cool.
- P405: Store locked up.
- P501: Dispose of contents and container in accordance with local regulations.

Contains: ISOPROPYL ALCOHOL

Other hazard information:

HAZARD NOT OTHERWISE CLASSIFIED (HNOC): None as defined under 29 CFR 1910. 1200.

PHYSICAL / CHEMICAL HAZARDS

Material can release vapors that readily form flammable mixtures. Vapor accumulation could flash and/or explode if ignited.

HEALTH HAZARDS

May be irritating to the skin, nose, throat, and lungs. May cause central nervous system depression. If swallowed, may be aspirated and cause lung damage.

ENVIRONMENTAL HAZARDS

No significant hazards.

NFPA Hazard ID:	Health:	2	Flammability :	3	Reactivity:	0
HMIS Hazard ID:	Health:	2*	Flammability :	3	Reactivity :	0

NOTE: This material should not be used for any other purpose than the intended use in Section 1 without expert advice. Health studies have shown that chemical exposure may cause potential human health risks which may vary from person to person.

SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

This material is defined as a substance.

Hazardous Substance(s) or Complex Substance(s) required for disclosure

Name	CAS#	Concentration*	GHS Hazard Codes
ISOPROPYL ALCOHOL	67-63-0	100 %	H225, H305, H336, H319(2A)

* All concentrations are percent by weight unless material is a gas. Gas concentrations are in percent by volume.

As per paragraph (i) of 29 CFR 1910.1200, formulation is considered a trade secret and specific chemical identity and exact percentage (concentration) of composition may have been withheld. Specific chemical identity and exact percentage composition will be provided to health professionals, employees, or designated representatives in accordance with applicable provisions of paragraph (i).

SECTION 4 FIRST AID MEASURES

INHALATION	Remove from further exposure. For those providing assistance, avoid exposure to yourself or others. Use adequate respiratory protection. If respirator irritation, dizziness, nausea or unconsciousness occurs, seek immediate medical assistance. If breathing has stopped, assist ventilation with a mechanical device or use mouth to mouth resuscitation.
SKIN CONTACT	Wash contact areas with soap and water. Remove contaminated clothing. Launder contaminated clothing before reuse
EYE CONTACT	Flush thoroughly with water for at least 15 minutes. Get medical assistance.
INGESTION	Seek immediate medical attention. Do not induce vomiting.
NOTE TO PHYSICIAN	If ingested, material may be aspirated into the lungs and cause chemical pneumonitis. Treat appropriately.

SECTION 5 FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA Appropriate Extinguishing Media: Use water fog, foam , dry chemical or carbon dioxide (CO2) to extinguish flames.
 Inappropriate Extinguishing Media: Straight Streams of Water

FIRE FIGHTING Fire Fighting Instructions: Evacuate area. If a leak or spill has not ignited, use water spray to disperse the vapors and to protect personnel attempting to stop a leak . Prevent runoff from fire control or dilution from entering streams , sewers, or drinking water supply. Firefighters should use standard protective equipment and in enclosed

spaces, self-contained breathing apparatus (SCBA) . Use water spray to cool fire exposed surfaces and to protect personnel.

Unusual Fire Hazards: Highly flammable. Vapors are flammable and heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger. Hazardous material. Firefighters should consider protective equipment indicated in Section 8.

Hazardous Combustion Products: Smoke, Fume, Incomplete combustion products, Oxides of carbon

FLAMMABILITY PROPERTIES

Flash Point (Method]: 12°C (54°F) [ASTM D-56]
 Flammable Limits (Approximate volume % in air): LEL: 2.0 UEL: 13
 Autoignition Temperature: >350°C (662°F)

SECTION 6 ACCIDENTAL RELEASE MEASURES

NOTIFICATION PROCEDURES

In the event of a spill or accidental release, notify relevant authorities in accordance with all applicable regulations. US regulations require reporting releases of this material to the environment which exceed the applicable reportable quantity or oil spills which could reach any waterway including intermittent dry creeks. The National Response Center can be reached at (800)424-8802 .

PROTECTIVE MEASURES

Avoid contact with spilled material. Warn or evacuate occupants in surrounding and downwind areas if required due to toxicity or flammability of the material. See Section 5 for fire fighting information. See the Hazard Identification Section for Significant Hazards. See Section 4 for First Aid Advice. See Section 8 for advice on the minimum requirements for personal protective equipment. Additional protective measures may be necessary, depending on the specific circumstances and/or the expert judgment of the emergency responders.

SPILL MANAGEMENT

Land Spill: Eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do it without risk. All equipment used when handling the product must be grounded . Do not touch or walk through spilled material. Prevent entry into waterways , sewer, basements or confined areas. A vapor suppressing foam may be used to reduce vapors. Use clean non-sparking tools to collect absorbed material. Absorb or cover with dry earth, sand or other non-combustible material and transfer to containers. Large Spills: Water spray may reduce vapor; but may not prevent ignition in closed spaces. Recover by pumping or with suitable absorbent.

Water Spill: Stop leak if you can do it without risk. Eliminate sources of ignition. Warn other shipping . Seek the advice of a specialist before using dispersants.

Water spill and land spill recommendations are based on the most likely spill scenario for this material; however, geographic conditions, wind, temperature , (and in the case of a water spill) wave and current direction and speed may greatly influence the appropriate

action to be taken. For this reason, local experts should be consulted. Note: Local regulations may prescribe or limit action to be taken.

ENVIRONMENTAL PRECAUTIONS Large Spills: Dike far ahead of liquid spill for later recovery and disposal. Prevent entry into waterways, sewers, basements or confined areas.

SECTION 7 HANDLING AND STORAGE	
HANDLING	<p>Avoid contact with eyes. Prevent exposure to ignition sources, for example use non-sparking tools and explosion-proof equipment. Potentially toxic/irritating fumes/vapors may be evolved from heated or agitated material. Use only with adequate ventilation . Use proper bonding and/or ground procedures. However, bonding and grounds may not eliminate the hazard from static accumulation. Peroxides may form upon prolonged storage. Exposure to light, heat or air significantly increases peroxide formation. If evaporated to a residue, the mixture of peroxides residue and material vapor may explode when exposed to heat or shock. Prevent small spills and leakage to avoid slip hazard</p> <p>Loading/Unloading Temperature: Ambient Transport Temperature: Ambient Transport Pressure: Ambient Static Accumulator: This material is not a static accumulator.</p>
STORAGE	<p>Ample fire water supply should be available. A fixed sprinkler/deluge system is recommended. Keep container closed. Handle containers with care. Open slowly in order to control possible pressure release. Store in a cool, well-ventilated area. Outside or detached storage preferred. Storage containers should be grounded and bonded. Fixed storage containers, transfer containers and associated equipment should be grounded and bonded to prevent accumulation of static charge. Storage Temperature: [Ambient] Storage Pressure: [Ambient] Suitable Containers/Packing: Drums; Tank Cars; Tank Trucks; Tankers; Barges Suitable Materials and Coatings (Chemical Compatibility): Carbon Steel; Stainless Steel; Polyester; Teflon; Polyethylene; Polypropylene; Copper Bronze; Epoxy Phenolic; Zinc; Vinyls Unsuitable Materials and Coatings: Aluminum; Cast iron; Polystyrene; Ethylene-propylene-diene monomer (EPDM); Monel; Butyl Rubber; Natural Rubber</p>

SECTION 8	EXPOSURE CONTROLS/PERSONAL PROTECTION
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Exposure Limit Values

Exposure limits/standards (note: exposure limits are not additive)

Substance Name	Form	Limit/Standard		Note	Source	
ISOPROPYL ALCOHOL		TWA	980 MG/M3	440 PPM	N/A	OSHA Z1`
ISOPROPYL ALCOHOL		STEL	400 PPM		N/A	ACGIH

ISOPROPYL ALCOHOL		TWA	200 ppm		N/A	ACGIH
Note: Limits/standards shown for guidance only. Follow applicable regulations..						
Biological Limits						
Substance	Specimen	Sampling Time		Determinant	Source	
ISOPROPYL ALCOHOL	Urine	End of shift at end of work wk	40 mg/l	Acetone	ACGIH BELs (BEIs)	

ENGINEERING CONTROLS	The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Control measures to consider: Adequate ventilation should be provided so that exposure limits are not exceeded. Use explosion-proof ventilation equipment.
PERSONAL PROTECTION	Personal protective equipment selections vary based on potential exposure conditions such as applications, handling practices, concentration and ventilation. Information on the selection of protective equipment for use with this material, as provided below, is based upon intended, normal usage.
Respiratory Protection:	If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable. Types of respirators to be considered for this material include: Half-face filter respirator
	For high airborne concentrations, use an approved supplied-air respirator, operated in positive pressure mode. Supplied air respirators with an escape bottle may be appropriate when oxygen levels are inadequate, gas/vapor warning properties are poor, or if air purifying filter capacity/rating may be exceeded.
Hand Protection:	Any specific glove information provided is based on published literature and glove manufacturer data. Glove suitability and breakthrough time will differ depending on the specific use conditions. Contact the glove manufacturer for specific advice on glove selection and breakthrough times for your use conditions. Inspect and replace worn or damaged gloves. The types of gloves to be considered for this material include: If prolonged or repeated contact is likely, chemical resistant gloves are recommended. If contact with forearms is likely, wear gauntlet style gloves.
Eye Protection:	Chemical goggles are recommended.

REACTIVITY	See sub-sections below.
STABILITY	Under normal storage conditions peroxides may accumulate and explode when subjected to heat or shock. Distillation or evaporation increases peroxide formation and increases the explosion hazard.
CONDITIONS TO AVOID	Avoid heat, sparks, open flames and other ignition sources.
MATERIALS TO AVOID	Aldehydes , Amines, Strong oxidizers. Caustics. Chlorinated Compounds , Alkanolamines
HAZARDOUS DECOMPOSITION PRODUCTS	Material does not decompose at ambient temperatures.
POSSIBILITY OF HAZARDOUS REACTIONS	Hazardous polymerization will not occur.

SECTION 11**TOXICOLOGICAL INFORMATION**

Hazard Class	Conclusion / Remarks
Inhalation	
Acute Toxicity : (Rat) 6 hour(s) LC50 > 25000 mg/m3 (Vapor)	Minimally Toxic. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 403
Irritation: No end point data for material.	Elevated temperatures or mechanical action may form vapors, mist, or fumes which may be irritating to the eyes, nose, throat, or lungs
Ingestion	
Acute Toxicity (Rat): LD50 5840 mg/kg	Minimally Toxic. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 401
Skin	
Acute Toxicity (Rabbit): LD50 13900 mg/kg	Minimally Toxic. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 402
Skin Corrosion/Irritation: Data available.	May dry the skin leading to discomfort and dermatitis. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 404
Eye	
Serious Eye Damage/Irritation: Data available.	Irritating and will injure eye tissue. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 405
Sensitization	
Respiratory Sensitization: No end point data for material.	Not expected to be a respiratory sensitizer.
Skin Sensitization: Data available.	Not expected to be a skin sensitizer. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 406
Aspiration: Data available.	May be harmful if swallowed and enters airways. Based on physico-chemical properties of the material.
Germ Cell Mutagenicity: Data available.	Not expected to be a germ cell mutagen. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 471 474 476

Carcinogenicity: Data available.	Not expected to cause cancer. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 451
Reproductive Toxicity: Data available.	Not expected to be a reproductive toxicant. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 414 415 416
Lactation: No end point data for material.	Not expected to cause harm to breast-fed children.
Specific Target Organ Toxicity (STOT)	
Single Exposure: No end point data for material.	May cause drowsiness or dizziness.
Repeated Exposure: Data available.	Not expected to cause organ damage from prolonged or repeated exposure. Based on test data for the material. Test(s) equivalent or similar to OECD Guideline 413

OTHER INFORMATION

For the product itself:

Vapor concentrations above recommended exposure levels are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anesthetic and may have other central nervous system effects. Prolonged and/or repeated skin contact with low viscosity materials may defat the skin resulting in possible irritation and dermatitis. Small amounts of liquid aspirated into the lungs during ingestion or from vomiting may cause chemical pneumonitis or pulmonary edema.

The following ingredients are cited on the lists below: None.

--REGULATORY LISTS SEARCHED

- 1 = NTP CARC
- 2 = NTP SUS

- 3 = IARC 1
- 4 = IARC 2A

- 5 = IARC 2B
- 6 = OSHA CARC

SECTION 12 ECOLOGICAL INFORMATION	
The information given is based on data available for the material, the components of the material, and similar materials	
ECOTOXICITY	Material -- Not expected to demonstrate chronic toxicity to aquatic organisms.
MOBILITY	Material -- Expected to remain in water or migrate through soil.
PERSISTENCE AND DEGRADABILITY	
Biodegradation:	Material -- Expected to be readily biodegradable.
Hydrolysis:	Material -- Transformation due to hydrolysis not expected to be significant
Photolysis:	Material -- Transformation due to photolysis not expected to be significant.
Atmospheric Oxidation:	Material -- Expected to degrade at a moderate rate in air

Other Ecological Information	VOC (EPA Method 24) 6.551 lbs/gal
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ECOLOGICAL DATA

Ecotoxicity

Test	Duration	Organism Type	Test Results
Aquatic - Acute Toxicity	24 hour(s)	Daphnia magna	LC50 9714 mg/l: data for the material
Aquatic - Acute Toxicity	96 hour(s)	Pimephales promelas	LC50 9640 mg/l: data for the material
Aquatic - Acute Toxicity	8 day(s)	Alga	LOEC 1000 mg/l: data for the material

Persistence, Degradability and Bioaccumulation Potential

Media	Test Type	Duration	Test Results
Octanol-Water	Calculated		log Kow 0.05 : material
Water	Ready Biodegradability	5 day(s)	Percent Degraded 53 : material

SECTION 13 DISPOSAL CONSIDERATIONS

Disposal recommendations based on material as supplied. Disposal must be in accordance with current applicable laws and regulations, and material characteristics at time of disposal.

DISPOSAL RECOMMENDATIONS	Product is suitable for burning in an enclosed controlled burner for fuel value or disposal by supervised incineration at very high temperatures to prevent formation of undesirable combustion products.
REGULATORY DISPOSAL INFORMATION	RCRA Information: Disposal of unused product may be subject to RCRA regulations (40 CFR 261). Disposal of the used product may also be regulated due to ignitability, corrosivity, reactivity or toxicity as determined by the Toxicity Characteristic Leaching Procedure (TCLP). Potential RCRA characteristics: IGNITABILITY.

Empty Container Warning Empty Container Warning (where applicable): Empty containers may contain residue and can be dangerous. Do not attempt to refill or clean containers without proper instructions. Empty drums should be completely drained and safely stored until appropriately reconditioned or disposed. Empty containers should be taken for recycling, recovery, or disposal through suitably qualified or licensed contractor and in accordance with governmental regulations. DO NOT PRESSURISE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION. THEY MAY EXPLODE AND CAUSE INJURY OR DEATH.

SECTION 14 TRANSPORT INFORMATION

LAND (DOT)
 Proper Shipping Name: ISOPROPANOL
 Hazard Class & Division: 3
 ID Number: UN1219
 Packing Group: II
 ERG Number: 129
 Label(s): 3
 Transport Document Name: UN1219, ISOPROPANOL, 3, PG II

LAND (TOG)
 Proper Shipping Name: ISOPROPANOL
 Hazard Class & Division: 3
 UN Number: UN1219
 Packing Group: II

SEA (IMDG)
 Proper Shipping Name: ISOPROPANOL
 Hazard Class & Division: 3
 EMS Number: F-E, S-D
 UN Number: UN1219
 Packing Group: II
 Marine Pollutant: No
 Label(s): 3
 Transport Document Name: UN1219, ISOPROPANOL, 3, PG II, (12°C c.c.)

AIR (IATA)
 Proper Shipping Name: ISOPROPYL ALCOHOL
 Hazard Class & Division: 3
 UN Number: UN1219
 Packing Group: II
 Label(s)/Mark(s): 3
 Transport Document Name: UN1219, ISOPROPYL ALCOHOL, 3, PG II

SECTION 15 REGULATORY INFORMATION

OSHA HAZARD COMMUNICATION STANDARD: This material is considered hazardous in accordance with OSHA HazCom 2012, 29 CFR 1910.1200.

Listed or exempt from listing/notification on the following chemical inventories: AICS, DSL, ENCS, IECSC, KECI, PICCS, TSCA

EPCRA SECTION 302: This material contains no extremely hazardous substances.

SARA (311/312) REPORTABLE HAZARD CATEGORIES: Fire. Immediate Health. Delayed Health.

SARA (313) TOXIC RELEASE INVENTORY:

Chemical Name	CAS Number	Typical Value
ISOPROPYL ALCOHOL	67-63-0	100 %

Isopropyl alcohol is reportable under SARA 313 only when it is manufactured in a strong acid process.

The following ingredients are cited on the lists below:

Chemical Name	CAS Number	List Citations
ISOPROPYL ALCOHOL	67-63-0	1,4,13,16,17,18,19

--REGULATORY LISTS SEARCHED--

1 = ACGIH ALL	11 = CA P65 REPRO
2 = ACGIH A1	12 = CA RTK
3 = ACGIH A2	13 = IL RTK
4 = OSHA Z	14 = LA RTK
5 = TSCA 4	15 = MI 293
6 = TSCA 5a2	16 = MN RTK
7 = TSCA 5e	17 = NJ RTK
8 = TSCA 6	18 = PA RTK
9 = TSCA 12b	19 = RI RTK
10 = CA P65 CARC	

Code key: CARC=Carcinogen; REPRO=Reproductive

SECTION 16	OTHER INFORMATION
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N/D = Not determined , N/A = Not applicable

KEY TO THE H-CODES CONTAINED IN SECTION 3 OF THIS DOCUMENT (for information only):

- H225: Highly flammable liquid and vapor; Flammable Liquid, Cat 2
- H305: May be harmful if swallowed and enters airways; Aspiration, Cat 2
- H319(2A): Causes serious eye irritation; Serious Eye Damage/Irr. Cat 2A
- H336: May cause drowsiness or dizziness; Target Organ Single, Narcotic

This is the first version in the GHS SDS format. Listings of changes from previous versions in other formats are not applicable.

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