PURITAN PRODUCTS

Effective Date: 01/11/16
Replaces Revision: 01/01/13, 09/08/09

NON-EMERGENCY TELEPHONE
610-866-4225

24-HOUR CHEMTREC EMERGENCY TELEPHONE
800-424-9300

SDS – SAFETY DATA SHEET

1. Identification

Product Identifier: ISOPROPYL ALCOHOL (90 - 100%)
Synonyms: 2-Propanol, Sec-propyl Alcohol, Isopropanol, Sec-propanol, Dimethylcarbinol
Chemical Formula: (CH3)2CHOH
Recommended Use of the Chemical and Restrictions On Use: Laboratory Reagent
Manufacturer / Supplier: Puritan Products; 2290 Avenue A, Bethlehem, PA 18017 **Phone:** 610-866-4225
Emergency Phone Number: 24-Hour Chemtrec Emergency Telephone 800-424-9300

2. Hazard(s) Identification

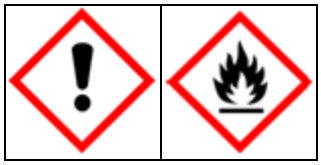
Classification of the Substance or Mixture:
Flammable liquids (Category 2)
Skin irritation (Category 3)
Eye irritation (Category 2A)
Specific target organ toxicity - single exposure (Category 3)

Risk Phrases:
R11: Highly flammable.
R36: Irritating to eyes.
R67: Vapors may cause drowsiness and dizziness.

Label Elements:

Trade Name: ISOPROPYL ALCOHOL (90 - 100%)

Signal Word: Danger



Hazard Statements:
H225: Highly flammable liquid and vapor.
H316: Causes mild skin irritation.
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.
P261: Avoid breathing dust / fume / gas / mist / vapors / spray.
P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

3. Composition / Information on Ingredients

CAS Number: 67-63-0
EC Number: 200-661-7
Index Number: 603-117-00-0
Molecular Weight: 60.1 g/mol

Ingredient	CAS Number	EC Number	Percent	Hazardous	Chemical Characterization
Isopropyl Alcohol	67-63-0	200-661-7	90 - 100%	Yes	Substance
Water	7732-18-5	231-791-2	0 - 10%	No	Mixture

4. First-aid Measures

Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give Oxygen. Call a physician.

Ingestion: DO NOT INDUCE VOMITING! Give large amounts of water to drink. Never give anything by mouth to an unconscious person. Get medical attention.

Skin Contact: In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Call a physician if irritation develops.

Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. Fire-fighting Measures

Fire: Flash point: 18.3C (64F) CC / Autoignition temperature: 399C (750F) / Flammable limits in air % by volume: lel: 2.0; uel: 12 / Listed fire data is for Pure Isopropyl Alcohol.

Explosion: Above flash point, vapor-air mixtures are explosive within flammable limits noted above. Contact with strong oxidizers may cause fire or explosion. Vapors can flow along surfaces to distant ignition source and flash back. Sensitive to static discharge.

Fire Extinguishing Media*:* Water spray, dry chemical, alcohol foam, or carbon dioxide. Water spray may be used to keep fire exposed containers cool, dilute spills to nonflammable mixtures, protect personnel attempting to stop leak and disperse vapors.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Ventilate area of leak or spill. Remove all sources of ignition. Wear appropriate personal protective equipment as specified in Section 8. Isolate hazard area. Keep unnecessary and unprotected personnel from entering.

Environmental Precautions and Methods and Materials for Containment and Cleaning Up: Contain and recover liquid when possible. Use non-sparking tools and equipment. Collect liquid in an appropriate container or absorb with an inert material (e. g., vermiculite, dry sand, earth,) and place in a chemical waste container. Do not use combustible materials, such as saw dust. Do not flush to sewer! If a leak or spill has not ignited, use water spray to disperse the vapors, to protect personnel attempting to stop leak, and to flush spills away from exposures.

7. Handling and Storage

Precautions for Safe Handling and Conditions for Safe Storage, Including Any Incompatibilities: Protect against physical damage. Store in a cool, dry well-ventilated location, away from any area where the fire hazard may be acute. Outside or detached storage is preferred. Separate from incompatibles. Containers should be bonded and grounded for transfers to avoid static sparks. Storage and use areas should be No Smoking areas. Use non-sparking type tools and equipment, including explosion proof ventilation. Containers of this material may be hazardous when empty since they retain product residues (vapors, liquid.) Observe all warnings and precautions listed for the product.

8. Exposure Controls / Personal Protection

Airborne Exposure Limits:
For Isopropyl Alcohol (2-Propanol):
OSHA Permissible Exposure Limit (PEL): 400 ppm (TWA)
ACGIH Threshold Limit Value (TLV): 400 ppm (TWA), 500 ppm (STEL)

Ventilation System: A system of local and / or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved): If the exposure limit is exceeded, a full face piece respirator with organic vapor cartridge may be worn up to 50 times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full face piece positive-pressure, air-supplied respirator. WARNING: Air purifying respirators do not protect workers in Oxygen-deficient atmospheres.

Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact. Neoprene and nitrile rubber are recommended materials.

Eye Protection: Use chemical safety goggles and / or a full face shield where splashing is possible. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance: Clear, colorless liquid
Odor: Rubbing Alcohol
Odor Threshold: Not determined
pH: Not available
% Volatiles by volume @ 21C (70F): 100
Melting Point: -89C (-128F)
Boiling Point / Boiling Range: 79 - 81C (174 - 178F)
Flash Point: 53.6F (12C) Closed Cup
Evaporation Rate (BuAC=1): 2
Flammability: Concentrated isopropyl alcohol can be ignited
Upper / Lower Flammability or Explosive Limits: Upper – 12.7 / Lower – 2 in air, % by volume
Vapor Pressure (mm Hg): 44 @ 25C (77F)
Vapor Density (Air=1): 2
Relative Density: 0.786 g/cc for anhydrous IPA
Solubility: Miscible in water
Partition Coefficient: n-octanol / water: log Pow: 0.05
Auto-ignition Temperature: 425C (797F)
Decomposition Temperature: No data available
Viscosity: 2.4 mPa at 20C

10. Stability and Reactivity

Reactivity and / or Chemical Stability: Stable under ordinary conditions of use and storage. Heat and sunlight can contribute to instability.

Possibility of Hazardous Reactions and Conditions to Avoid: Heat, flame, ignition sources, incompatibles.

Incompatible Materials: Strong oxidizers, Acetaldehyde, acids, Chlorine, Ethylene Oxide, Hydrogen - Palladium combination, Hydrogen Peroxide - Sulfuric Acid combination, Potassium Tert-butoxide, Hypochlorous Acid, isocyanates, Nitroform, Phosgene, Aluminum, Oleum, and Perchloric Acid.

Hazardous Decomposition Products: Carbon Dioxide and Carbon Monoxide may form when heated to decomposition.

11. Toxicological Information

Emergency Overview: WARNING! FLAMMABLE LIQUID AND VAPOR. HARMFUL IF SWALLOWED OR INHALED. CAUSES IRRITATION TO EYES AND RESPIRATORY TRACT. AFFECTS CENTRAL NERVOUS SYSTEM. MAY BE HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE IRRITATION TO SKIN.

Potential Health Effects:

Inhalation: Inhalation of vapors irritates the respiratory tract. Exposure to high concentrations has a narcotic effect, producing symptoms of dizziness, drowsiness, headache, staggering, unconsciousness and possibly death.

Ingestion: Can cause drowsiness, unconsciousness, and death. Gastrointestinal pain, cramps, nausea, vomiting, and diarrhea may also result. The single lethal dose for a human adult = about 250 mls (8 ounces).

Skin Contact: May cause irritation with redness and pain. May be absorbed through the skin with possible systemic effects.

Eye Contact: Vapors cause eye irritation. Splashes cause severe irritation, possible corneal burns and eye damage.

Chronic Exposure: Chronic exposure may cause skin effects.

Aggravation of Pre-existing Conditions: Persons with pre-existing skin disorders or impaired liver, kidney, or pulmonary function may be more susceptible to the effects of this agent.

Specific Target Organ Toxicity - Single Exposure (Globally Harmonized System:) May cause drowsiness or dizziness.

Specific Target Organ Toxicity - Repeated Exposure (Globally Harmonized System:) No data available.

Numerical Measures of Toxicity: Cancer Lists: NTP Carcinogen

Ingredient	Known	Anticipated	IARC Category
Isopropyl Alcohol (67-63-0)	No	No	3
Water (7732-18-5)	No	No	None

Acute Toxicity:
Oral rat LD50: 5045 mg/kg; skin rabbit LD50: 12.8 gm/kg; inhalation rat LC50: 16,000 ppm/8-hour
Investigated as a tumorigen, mutagen, reproductive effecter.

12. Ecological Information

Ecotoxicity: This material is not expected to be toxic to aquatic life. The LC50/96-hour values for fish are over 100 mg/l.

Persistence and Degradability: When released into the soil, this material may biodegrade to a moderate extent. When released into water, this material may biodegrade to a moderate extent. When released into the air, this material is expected to be readily degraded by reaction with photochemically produced hydroxyl radicals.

Bioaccumulative Potential: This material is not expected to significantly bioaccumulate.

Mobility in Soil: When released into the soil, this material is expected to quickly evaporate. When released into the soil, this material may leach into groundwater.

Other adverse effects: When released to water, this material is expected to quickly evaporate. When released into the water, this material is expected to have a half-life between 1 and 10 days. When released into the air, this material is expected to have a half-life between 1 and 10 days. When released into the air, this material may be removed from the atmosphere to a moderate extent by wet deposition.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be handled as hazardous waste and sent to a RCRA approved incinerator or disposed in a RCRA approved waste facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

UN Number: UN1219
UN Proper Shipping Name: ISOPROPANOL
Packing Group: II

DOT **IMDG** **IATA**

Land Transport ADR/RID and GGVS/GGVE (Cross Border / Domestic)
Transport Hazard Class(es): 3

Maritime Transport IMDG/GGVSea
Transport Hazard Class(es): 3
Marine Pollutant: No

Air Transport ICAO-TI and IATA-DGR
Transport Hazard Class(es): 3

Transport in Bulk according to Annex II of MARPOL 73/78 and the IBC Code

Special Precautions for User: No additional information

15. Regulatory Information

Chemical Inventory Status – Part 1

Ingredient	TSCA	EC	Japan	Australia
Isopropyl Alcohol (67-63-0)	Yes	Yes	Yes	Yes
Water (7732-18-5)	Yes	Yes	Yes	Yes

Chemical Inventory Status – Part 2

Ingredient	Korea	Canada		Phil.
		DSL	NDSL	
Isopropyl Alcohol (67-63-0)	Yes	Yes	No	Yes
Water (7732-18-5)	Yes	Yes	No	Yes

Federal, State & International Regulations - Part 1

	SARA 302		SARA 313	
Ingredient	RQ	TPQ	List Chemical	Catg.
Isopropyl Alcohol (67-63-0)	No	No	Yes	No
Water (7732-18-5)	No	No	No	No

Federal, State & International Regulations - Part 2

	RCRA		TSCA
Ingredient	CERCLA	261.33	8(d)
Isopropyl Alcohol (67-63-0)	No	No	No
Water (7732-18-5)	No	No	No

Chemical Weapons Convention: No		**TSCA 12(b):** No		**CDTA:** Yes
SARA 311/312:	**Acute:** Yes	**Chronic:** Yes	**Fire:** Yes	**Pressure**: No
Reactivity: No		Mixture / Liquid		

Australian Hazchem Code: 2[S]2

Poison Schedule: None allocated

16. Other Information

THE INFORMATION CONTAINED IN THIS DATA SHEET IS BASED ON THE DATA AVAILABLE TO PURITAN PRODUCTS AT THIS TIME. WHILE BELIEVED TO BE ACCURATE, PURITAN PRODUCTS DOES NOT CLAIM IT TO BE ALL INCLUSIVE. IT IS PROVIDED INDEPENDENT OF ANY SALE OF THE PRODUCT, FOR THE PURPOSE OF HAZARD COMMUNICATION, AND AS A GUIDE FOR THE APPROPRIATE PRECAUTIONARY HANDLING OF THE PRODUCT BY PROPERLY TRAINED INDIVIDUALS. IT IS NOT INTENDED TO PROVIDE PRODUCT PERFORMANCE OR APPLICABILITY INFORMATION, AND NO EXPRESS OR IMPLIED WARRANTY OF ANY KIND IS MADE WITH RESPECT TO THE PRODUCT, THE UNDERLYING PRODUCT DATA, OR THE INFORMATION CONTAINED HEREIN.

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