**Safety Data Sheet: Isopropyl Alcohol 99%**

**Revision Date: January 1, 2022**

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| SECTION 1 PRODUCT AND COMPANY IDENTIFICATION |

**PRODUCT**

 **Product Name:** Isopropyl Alcohol 99%

**Intended Use:** Industrial Solvent

**COMPANY IDENTIFICATION**

 **Supplier:** Beacon Lubricants

 P.O Box 754

 Edinboro, PA 16412

**Emergency Telephone:** 1-877-734-7334 – Beacon Lubricants, Inc.
**Emergency Telephone:** 1-800-424-9300 (24 hours) – Chemtrec approval

**Website:** www.beaconlubricants.com

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| SECTION 2                                                HAZARDS IDENTIFICATION  |

This material is hazardous according to regulatory guidelines (M)SDS Section 15)

**Other hazard information:

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS):**

Flammable liquids Category 2

Eye irritation Category 2A

Skin Irritation Category 2

Specific Target Organ Toxicity- Signal Exposure (inhalation, oral) (narcotic effects)-Category 3

GHS Signal Word: DANGER

GHS Hazard Pictograms:



Hazard Statements:

Physical Hazards:

H225 Highly flammable liquid and vapour

Health Hazards:

H319 Causes serious eye irritation

H336 May cause drowsiness or dizziness

Environmental Hazards

Not classified as an environmental hazard under GHS criteria

Precautionary Statements:

Prevention:

P210 Keep away from heat/sparks/open flames/hot surfaces.

No smoking

P240 Ground/bound 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 mist or vapours.

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.

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.

P370 + P378 In case of fire: Use appropriate media to extinguish.

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.

P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P312: Call a POISON CENTER/doctor if you feel unwell.

Storage:

P403 + P233 Store in a well ventilated place. Keep container tightly closed.

P235 Keep cool

P405 Store locked up

Disposal:

P501 Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.

Other hazards which do not result in classification

Vapours are heavier than air. Vapours may travel across the ground and reach remote ignition sources causing a flashback fire danger.

Even with proper grounding and bonding, this material can still accumulate an electrostatic charge.

If sufficient charge is allowed to accumulate, electrostatic discharge and ignition of flammable air-vapour mixtures can occur.

Slightly irritating to respiratory system.

The classification of this material is based on OSHA HCS 2012 criteria.

**Note:**  This material should not be used for any other purpose than the indented 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.

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| SECTION 3                                COMPOSITION / INFORMATION ON INGREDIENTS |

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| --- | --- | --- | --- |
| CAS Number | Component | Common Name | Percent |
| 67-63-0 | Propan-2-ol (manufacturing) | Isopropyl Alcohol | <=100 |

As per paragraph (i) of 29 CFR 1910.1200, formulation is a 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).

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| SECTION 4                                                FIRST AID MEASURES |

 **INHALATION**
Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.

**SKIN CONTACT**
Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available. If persistent irritation occurs, obtain medical attention.

**EYE CONTACT**
Immediately flush eye(s) with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Transport to the nearest medial facility for additional treatment.

**INGESTION**
Call emergency number for your location/facility. If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever, shortness of breath, chest congestion or continued coughing or wheezing.

Most important symptoms: If material enters lungs, signs and symptoms may include coughing, choking, wheezing, difficulty in breathing, chest congestion, shortness of breath, and/or fever. Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision.

Protection of first-aiders: When administering first aid, ensure that you are wearing the appropriate personal protective equipment according to the incident, injury, and surroundings.

Indication of any immediate medical attention and special treatment needed: Potential for chemical pneumonitis. Call a doctor or poison control center for guidance.

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| SECTION 5                                                     FIRE FIGHTING MEASURES  |

Suitable extinguishing media: Alcohol-resistant foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

Unsuitable extinguishing media: None

Specific hazards during firefighting: The vapour is heavier than air, spreads along the ground and distant ignition is possible. Carbon monoxide may be evolved if incomplete combustion occurs.

Specific extinguishing methods: Clear fire area of all non-emergency personnel. Keep adjacent containers cool by spraying with water.

Special protective equipment for firefighters: Proper protective equipment including chemical resistant gloves are to be worn; chemical resistant suit is indicated if large contact with spilled product is expected. Self-Contained breath Apparatus must be worn when approaching a fire in a confined space. Select fire fighter’s clothing approved to relevant standards.

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| SECTION 6                                                           ACCIDENTAL RELEASE MEASURES  |

Personal precautions, protective equipment, and emergency procedures: Observe the relevant local and international regulations. Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. Local authorities should be advised if significant spillages cannot be contained. The vapour is heavier than air, spreads along the ground and distant ignition is possible. Vapour may form an explosive mixture with air. Avoid contact with skin, eyes, and clothing. Isolate hazard area and deny entry to unnecessary or unprotected personnel. Stay upwind and keep out of low areas.

Environmental Precautions: Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches, or rivers by using sand, earth, or other appropriate barriers. Attempt to disperse the vapour or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and ground (earthing) all equipment. Ventilate contaminated area thoroughly. Monitor area with combustible gas indicator.

Methods and materials for containment and cleaning up: For large liquid spills (>1 drum), transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely. For small liquid (<1 drum), transfer by mechanical means to a labeled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.

Additional advice: For guidance on selection of personal protective equipment see Chapter 8 of this Safety Data Sheet. For guidance on disposal of spilled material see Chapter 13 of this Safety Data Sheet. U.S. regulations may require reporting release of this material to the environment which exceed the reportable quantity to the National Response Center at 800-424-8802.

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| SECTION 7                                                HANDLING AND STORAGE  |

Technical measures: Avoid breathing of or direct contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Chapter 8 of this SDS. Use the information in this data sheet as input to a risk assessment of location circumstances to help determine appropriate controls for safe handling, storage and disposal of this material. Ensure that all local regulations regarding handling and storage facilities are followed.

Advice on safe handling: Avoid contact with skin, eyes and clothing. Use local exhaust ventilation if there is a risk of inhalation of vapours, mists or aerosols. Bulk storage tanks should be diked (bunded). Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment to reduce the risk. The vapours in the head space of the storage vessel may lie in the flammable/explosive range and hence may be flammable. Properly dispose of any contaminated rags or cleaning materials in order to prevent fires. Do NOT use compressed air for filling, discharging, or handling operations.

Avoidance of contract: Strong oxidizing agents.

Product Transfer: Refer to guidance under Handling section.

Conditions for safe storage: The vapour is heavier than air. Beware of accumulation in pits and confined spaces. Refer to section 15 for any additional specific legislation covering the packaging and storage of this product.

Packaging Material: Suitable material: For containers, or container linings use mild steel, stainless steel. Unsuitable material: Natural, butyl, neoprene or nitrile rubbers.

Container Advice: Containers, even those that have been emptied, can contain explosive vapours. Do not cut, drill, grind, weld or perform similar operations on or near containers.

Specific use: N/A

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| SECTION 8                                    EXPOSURE CONTROLS / PERSONAL PROTECTION |

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| Components | CAS-No | Value type | Control parameters | Basis |
| Isopropyl alcohol | 67-63-0 | TWA | 200 ppm | AGIH |
| Isopropyl alcohol |  | STEL | 400 ppm | ACGIH |
| Isopropyl alcohol |  | TWA | 400 ppm980 mg/m3 | OSHA Z-1 |

Biological occupational exposure limits

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| --- | --- | --- | --- | --- | --- | --- |
| Components | CAS-NO | Control parameters | Biological specimen | Sampling time | Permissible concentration | Basis |
| Isopropyl alcohol | 67-63-0 | Acetone | Urine | End of shift at end of work-week | 40 mg/l | ACGIH BEI |

Engineering measures: The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Use sealed systems as far as possible. Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits. Local exhaust ventilation is recommended. Firewater monitors and deluge systems are recommended. Eye washes and showers for emergency use. Where material is heated, sprayed, or mist formed, there is greater potential for airborne concentrations to be generated.

General Information:

Always observe good personal hygiene measures, such as washing hands after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Discard contaminated clothing and footwear that cannot be cleaned. Practice good housekeeping. Define procedures for safe handling and maintenance of controls. Educate and train workers in the hazards and control measures relevant to normal activities associated with this product. Ensure appropriate selection, testing, and maintenance of equipment used to control exposure – personal protective equipment, local exhaust ventilation. Drain down system prior to equipment break in or maintenance. Retain drain downs in sealed storage pending disposal or subsequent recycle.

Personal protective equipment

Respiratory protection: If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are unsuitable (e.g. airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. If air-filtering respirators are suitable for conditions of use: select a filter suitable for organic gases and vapours. Respirator selection, use and maintenance should be in accordance with the requirements of the OSHA Respiratory Protection Standard.

Hand protection remarks: Where hand contact with the product may occur the use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection. Longer term protection: Butyl rubber. Nitrile rubber. Incidental contact/splash protection: PVC or neoprene rubber gloves with breakthrough time of more than 240 minutes with preference for >480 minutes where suitable gloves can be identified. For short term/splash protection we recommend the same, but recognize that suitable gloves offering this level of protection may not be available and in this case a lower breakthrough time may not be available and in this case a lower breakthrough time maybe acceptable so long as appropriate maintenance and replacement regimes are followed. Glove thickness is not a good predictor of glove resistance to a chemical as it is dependent on the exact composition of the glove material. Glove thickness should be typically greater than 0.35mm depending on the glove make and model. Suitability and durability of a glove is dependent on usage like frequency and duration of contact, chemical resistance of glove material, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Personal hygiene is a key element of effective hand care. Gloves must only be worn on clean hands. After using gloves, hands should be washed and dried thoroughly. Application of a non-perfumed moisturizer is recommended.

Eye Protection: Wear googles for use against liquids and gas. Wear full face shield if splashes are likely to occur.

Skin and body protection: Wear antistatic and flame retardant clothing if a local risk assessment deems it so. Skin protection is not required under normal conditions of use. For prolonged or repeated exposures use impervious clothing over parts of the body subject to exposure. If repeated and/or prolonged skin exposure to the substance is likely, then wear suitable gloves tested to relevant Standard, and provide employee skin care programmes.

Protective measures: Personal protective equipment should meet recommended national standards. Check with PPE suppliers.

Thermal hazards: N/A

Hygiene measures: Wash hands before eating, drinking, smoking, and using the toilet. Launder contaminated clothing before re-use.

Environmental exposure controls

General advice: Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapour. Minimize release to the environment. An environmental assessment must be made to ensure compliance with local environmental legislation. Information on accidental release measures are to be found in section 6.

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| SECTION 9                                                PHYSICAL AND CHEMICAL PROPERTIES |

 **Note: Physical and chemical properties are provided for safety, health and environmental considerations only and may not fully represent product specifications. Contact the supplier for additional information.**

**GENERAL INFORMATION**
Appearance: Clear

Physical State: Liquid

Odor: Characteristic

Odor Threshold: ~ 90.00 mg/m3

pH: N/A

Melting Point/Freezing Point: -88C / -126.2F

Boiling Point/Boiling Range: 82-82 C at 1,013 hPa / 180 – 181 F

Flash Point: 12C /54F Method: (TCC)

Ignition temperature: 399°C

Lower explosion limit: 2 vol %

Upper explosion limit: 12 vol %

Flammability (solid, gas): N/A

Oxidizing properties: Not considered an oxidizing agent

Autoignition temperature: ~399°C

Molecular weight: 60.09 g/mol

Decomposition temperature: not determined

Melting point/freezing point: -88°C

Boiling point/boiling range: 82°C at 1,013 hPa

Vapor pressure: 44 hPa at 20°C

Density: 0.79 g/cm 3at 20°C (water = 1.0 at 4°C) (39.2°F))

Water solubility: Miscible

Partition coefficient: n-octanol/water: log Pow: 0.05 at 25°C

Viscosity, dynamic: 2.04 Centipoise at 25°C

Viscosity, kinematic: 2.6 mm2/s at 25°C

Relative vapor density: 2.07 at 15-20 °C (Air = 1.0)

Explosive properties: Not explosive

Other information: No additional information available

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| SECTION 10                                                STABILITY AND REACTIVITY  |

Reactivity: Will not occur

Chemical stability: no hazardous reaction is expected when handled and stored according to provisions.

Possibility of hazardous reactions: Will not occur

Conditions to avoid: Avoid heat, sparks, open flames and other ignition sources, and oxidizing conditions

Incompatible materials: Strong oxidizing agents, Acetaldehyde, Chlorine, Ethylene Oxide, Acids, Isocyanates

Hazardous decomposition products: Not expected to decompose under normal conditions

Thermal decomposition: incomplete combustion will form carbon monoxide and other toxic vapors

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| SECTION 11                                                   TOXICOLOGICAL INFORMATION |

Basis for assessment: Information given is based on product testing.

Information on likely routes of exposure

Exposure may occur via inhalation, ingestion, skin absorption, skin or eye contact, and accidental ingestion.

Acute toxicity

Product:

Acute oral toxicity: LD50 (Rat): >4396 mg/kg – Ingestion may cause gastrointestinal effects, hypothermia, cardiac effects, liver changes, kidney damage, and CNS effects

Acute inhalation toxicity: LC50: 46.6 mg/l, Exposure time: 8 Hours, Species: Rats

High vapor concentrations may cause irritation of the eyes, nose, and/or throat, changes to the liver, lung, spleen, and dizziness, narcosis, and muscle relaxation, with respiratory arrest and death in cases of severe over exposure).

Acute dermal toxicity: LD50 12,870 Species: Rabbit

High exposures may cause systemic toxicity

Skin corrosion/irritation: Liquid may cause slight skin irritation. Exposure of liquid to the underdeveloped skin of premature infants may cause severe irritation

Serious eye damage/eye irritation: Causes serious eye irritation

Respiratory or skin: Respiratory sensitization

Carcinogenicity: Not classified

Germ cell mutagenicity: Not classified

Reproductive toxicity: Not classified

Target organ systemic Toxicant – signal exposure – May cause drowsiness or dizziness

Target organ systemic – Based on repeated exposure toxicity value, not classified

Aspiration hazard: May be harmful if swallowed and enters airways

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| SECTION 12                                                ECOLOGICAL INFORMATION  |

Basis for assessment: Information given is based on product testing

Ecotoxicity

Product:

Toxicity to fish (acute toxicity): Remarks: practically non toxic

Toxicity to daphnia and other aquatic invertebrates (acute toxicity) Practically non toxic

Toxicity to algae: practically non toxic

Toxicity to fish: N/A

Toxicity to microorganisms: Practically non toxic

Persistence and degradability

Product:

Bioaccumulation: remarks – Does not bioaccumulate significantly

Mobility in soil

Product:

Mobility – remarks – Dissolves in water. If the product enters soil, one or more constituents will or may be mobile and may contaminate ground water.

Other adverse effects – Additional ecological information: Does not have ozone depletion potential.

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| SECTION 13                                                 DISPOSAL CONSIDERATIONS |

Disposal Methods: Waste from residues: Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generate to determine the proper waste classification and disposal methods in compliance with applicable regulations. Do not dispose into the environment, in drains or in water courses. Waste product should not be allowed to contaminate soil or water.

Contaminated packaging: Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not, puncture, cut, or weld uncleaned drums. Send to drum recoverer or metal reclaimer.

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| SECTION 14                                                TRANSPORT INFORMATION  |

National Regulations

US Department of Transportation Classification (49 CFR Parts 171-180)

UN/ID/NA Number – UN 1219

Proper Shipping name: ISOPROPANOL

Class: 3

Packing group: II

Labels: 3

ERG Code: 129

Marine pollutant: no

International Regulations

IATA-DGR

UN/ID No. : UN 1219

Proper Shipping Name: ISOPROPANOL

Class: 3

Packing group: II

Labels: 3

IMDG-CODE

UN Number : UN 1219

Proper shipping name: ISOPROPANOL

Class: 3

Packing group: II

Labels: 3

Marine Pollutant: No

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

Pollution Cat: Z

Ship type: 3

Product name: Isopropyl alcohol

Special precautions for users: Refer to Chapter 7, handling & storage, for special precautions which a user needs to be aware of or needs to comply with in connection with transport.

Additional information: This product may be transported under nitrogen blanketing. Nitrogen is an odorless and invisible gas. Exposure to nitrogen enriched atmospheres displaces available oxygen which may cause asphyxiation or death. Personnel must observe strict safety precautions when involved with a confined space entry.

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| SECTION 15                                                    REGULATORY INFORMATION |

EPCRA – Emergency planning and community right to know act – this material does not contain any components with a CERCLA RQ.

SARA 304 Extremely Hazardous Substances Reportable Quantity – this material does not contain any components with a section 304 EHS RQ.

SARA 302 Extremely Hazardous Substances Threshold Planning Quantity – This material does not contain any components with a section 302 EHS TPQ.

SARA 311/312 Hazards: Flammable (gases, aerosols, liquids, or solids) Serious eye damage or eye irritation. Specific target organ toxicity (single or repeated exposure)

SARA 313: The following components are subject to reporting levels established by SARA Title III, Section 313: Isopropyl alcohol 67-63-0 >=90 - <=100%

Clean water act: this product does not contain any Hazardous Chemicals listed under the U.S. CleanWater Act, Section 311, Table 117.3

US State Regulations

Pennsylvania Right To Know – Isopropyl Alcohol – 67-63-0

California Prop. 65 – This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

California List of Hazardous Substances – Isopropyl Alcohol 0 67-63-0

Other regulations: The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

The components of this product are reported in the following inventories

AICS: Listed

DSL: Listed

IECSC: Listed

ENCS: Listed

KECI: Listed

NZloC: Listed

PICCS: Listed

EINECS: Listed

TSCA: Listed

TCSI: Listed

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| SECTION 16                                                        OTHER INFORMATION |

Further information:

NFPA Rating (Health, Fire, Reactivity) – 1,3,0

THIS SAFETY DATA SHEET CONTAINS THE FOLLOWING REVISIONS:
Updates made in accordance with implementations of GHS requirements.

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