

SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Isopropyl Alcohol

SYNONYMS: Isopropanol, 2-Propanol, IPA

PRODUCT CODES: 1914-5, 1934-5, 1985-5

MANUFACTURER: Birch Biotech, LLC

ADDRESS: 690 Stockton Drive, Suite 106, Exton, PA 19341

CHEMTREC PHONE: 800-424-9300

SUPPORT: 484-318-2754

PRODUCT USE: HPLC, GC, ACS experiments, Spectrophotometry

PREPARED BY: AA

SECTION 1 NOTES:

SECTION 2: HAZARDS IDENTIFICATION

GHS CLASSIFICATION: Flammable liquid Category 2, Serious eye damage/irritation Category 2A; Acute Toxicity, Specific Target Organ Toxicity – single exposure (central nervous system) Category 3; Specific Organ Toxicity–Repeated Exposure, Category 2



Signal Word: Danger!

Hazard Phrases	
H225	Highly flammable liquid and vapor
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H335	May cause respiratory irritation
H373	May cause damage to organs through prolonged or repeated exposure.

Precautionary Phrases	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P281	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P261	Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P270	Do not eat, drink or smoke when using this product.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P264	Wash hands thoroughly after handling.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/ physician if you feel unwell.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
H332	IF INHALED: Remove victim to fresh air and keep at rest in a comfortable position for breathing. Call a POISON CENTER or doctor/physician if you feel unwell
P403+P233	Store in a well- ventilated place. Keep container tightly closed.
P405	Store locked up.

SECTION 2 NOTES:

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT:</u>	<u>CAS NO.</u>	<u>% VOL</u>
Isopropyl Alcohol	67-63-0	>99%

SECTION 3 NOTES:

SECTION 4: FIRST AID MEASURES

EYES: Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention if irritation persists.

SKIN: In case of contact, flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. If skin irritation occurs: Get medical attention/advice.

INGESTION: Call medical doctor or poison control center immediately. Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.

INHALATION: Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention if you feel unwell.

MOST IMPORTANT SYMPTOMS AND EFFECTS: Difficulty in breathing. May cause central nervous system depression: Inhalation of high vapor concentrations may cause symptoms like headache, dizziness, tiredness, nausea and vomiting

SECTION 4 NOTES:

Note to Physician: Treat symptomatically

SECTION 5: FIRE-FIGHTING MEASURES

FLAMMABILITY OF THE PRODUCT: OSHA/NFPA Class IB Flammable Liquid

FLASH POINT: 12°C (53°F) – TAG

AUTOIGNITION TEMPERATURE: 399°C (750°F)

NFPA HAZARD CLASSIFICATION

HEALTH:2 FLAMMABILITY: 3 REACTIVITY: 0

HMIS HAZARD CLASSIFICATION

HEALTH:2 FLAMMABILITY: 3 REACTIVITY: 0

EXTINGUISHING MEDIA: Small fire – use DRY chemical powder, CO₂, water spray or alcohol resistant foam. Large fire – use alcohol resistant foam, water spray or fog. Cool all affected containers with flooding quantities of water.

NOT SUITABLE: Do not use water jet.

SPECIAL FIRE FIGHTING PROCEDURES: Wear self-contained breathing apparatus and protective clothing to protect contact with skin and eyes. Keep unopened containers cool by spraying with water. Alcohols burn with a pale blue flame which may be difficult to see under normal lighting conditions. Fight fire from maximum distance or use unmanned hose holders or monitor nozzles.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide

UNUSUAL FIRE AND EXPLOSION HAZARDS: May produce a floating fire hazard. Vapors may travel to source of ignition and flash back. Vapors may settle on low or confined spaces.

SECTION 5 NOTES: Static ignition hazard can result from handling and use. Keep away from sparking tool

SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES:

Small spill and leak: Ensure adequate ventilation. Remove all sources of ignition. Dilute with water and mop, or absorb with an inert dry material and place in appropriate waste disposal container.

Large spill and leak: Keep away from heat and ignition sources. Stop leak if without risk. Absorb with DRY earth, sand, or other non-combustible material. Avoid skin and eye contact. Prevent entry into sewers, basements or confined areas; dike if needed. Additional protective equipment such as full-face respirator, full body suit and boots may be required.

SECTION 6 NOTES:

SECTION 7: HANDLING AND STORAGE

HANDLING: Do not get in eyes or on skin. Do not breathe vapor or mist. If potential for splashing exists, protect skin by using sleeve protectors, aprons and face-shield. Immediately remove contaminated clothing. Wash thoroughly after handling.

STORAGE: Keep away from sources of ignition. Keep containers closed and out of reach of children. Ground all equipment containing material. Containers which are opened must be resealed and kept upright to prevent leakage. Store at room temperature.

SECTION 7 NOTES:

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

ENGINEERING CONTROLS: General mechanical ventilation or laboratory fume hood. Ensure that eyewash stations and quick drench showers are close to the workstation.

PERSONAL PROTECTIVE MEASURES: Wear gloves, lab coat, eye protection and impervious footwear. Approved/certified respirator if airborne concentrations exceed exposure limits

ENVIRONMENTAL EXPOSURE CONTROLS: Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

WORK HYGIENIC PRACTICES: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

EXPOSURE GUIDELINES:**OSHA Permissible Exposure Limits (PELs):**

Reagent	CAS#	OSHA PEL TWA
Isopropyl Alcohol	67-63-0	400 ppm

ACGIH Threshold Limit values (TLVs):

Reagent	CAS#	ACGIH PEL TWA	ACGIH STEL
Isopropyl Alcohol	67-63-0	200 ppm	400 ppm

SECTION 8 NOTES:

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear, colorless

ODOR: Characteristic alcohol

PHYSICAL STATE: Liquid

pH AS SUPPLIED: Not available

BOILING POINT: 83°C (181°F)

MELTING POINT/FREEZING POINT: -90°C (-130°F)

VAPOR PRESSURE (mmHg): 4.4 kPa @ 20°C

VAPOR DENSITY (AIR = 1): 2.1

SPECIFIC GRAVITY: 0.785

EVAPORATION RATE: Specific data not available, expected to be rapid.

SOLUBILITY IN WATER: Soluble in water

MOLECULAR WEIGHT: 60.1 g/mol

VISCOSITY: Not established

SECTION 9 NOTES:

SECTION 10: STABILITY AND REACTIVITY

STABILITY: Product is stable under normal conditions of use.

CONDITIONS TO AVOID (STABILITY): Avoid heat, sparks, flames, and all other sources of ignition.

INCOMPATIBILITY (MATERIAL TO AVOID): Ammonia, Peroxides, Alkali metals, Reducing agents, Strong inorganic acids, Oxidizing agents, Halogens

HAZARDOUS DECOMPOSITION OR BY-PRODUCTS: Vapors may form explosive mixture with air. Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: oxides of carbon.

HAZARDOUS POLYMERIZATION: No hazardous polymerization

CONDITIONS TO AVOID: Heat, open flame

SECTION 10 NOTES:

SECTION 11: TOXICOLOGICAL INFORMATION

ACUTE TOXICITY:

Oral: Isopropyl alcohol: LD50 (oral, rat) = 5,045 mg/kg

Inhalation: Isopropyl Alcohol: LC50 (Inhalation, rat) = 87.6 mg/k 8 hrs

Dermal LD50: Isopropyl Alcohol: Rabbit LD50 = 12,800 mg/kg

Skin corrosion/irritation: Isopropyl alcohol: Rabbit = Mild skin irritation

Eyes: Isopropyl Alcohol: Mildly irritating to the eye at airborne concentrations of 400 ppm, unpleasant at 800 ppm.

Respiratory or skin sensitization: No data available

Germ cell mutagenicity: No data available

Carcinogenicity:

NIOSH: Not classifiable as a human carcinogen ACGIH: Not classifiable as a human carcinogen

NTP: Not classifiable as a human carcinogen IARC: Not classifiable as a human carcinogen

Aspiration hazard: no data available

POTENTIAL HEALTH EFFECTS

EYES: May cause irritation to the eyes.

SKIN: May cause skin irritation. Can cause dermatitis by de-fatting the skin from prolonged or repeated contact.

INGESTION: May be harmful if ingested.

INHALATION: May be harmful if inhaled. May cause respiratory tract irritation. Vapors may cause drowsiness and dizziness.

CHRONIC HEALTH HAZARDS: Effects may be delayed. Prolonged exposure can cause liver, kidney, and heart damage.

Long term exposure can cause loss of appetite, weight loss, nervousness, memory loss, mental retardation. Repeated skin exposure may cause defatting of the skin.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:

Dermatitis, emphysema, bronchitis and conjunctivitis.

SIGNS AND SYMPTOMS OF EXPOSURE: Central nervous system depression, narcosis, damage to heart.

ROUTES OF ENTRY: Skin/eye contact, inhalation

TARGET ORGANS: Kidney, Liver

SECTION 11 NOTES:

SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL TOXICITY:

Isopropyl Alcohol 67-63-0

Acute Fish Toxicity:

LC50 / 96 hours Pimephales promelas: 9,640 mg/L

Toxic to Daphnia and Other Aquatic Invertebrates:

EC50 / 24 h / Water Flea – 5,102 mg/L

Toxicity to Aquatic Plants EC50 / 72 hours Desmodemus subspicatus > 2,000 mg/L

Toxicity to Daphnia and other aquatic invertebrates:

Immobilization EC50 / 24 h / Water Flea – 6,851 mg/L

PERSISTENCE AND DEGRADABILITY: Biodegradation is expected

BIOACCUMULATIVE POTENTIAL: Bioaccumulation is unlikely.

MOBILITY IN SOIL: No data available

PBT and vPvB ASSESSMENT: Not required.

SECTION 12 NOTES:

SECTION 13: DISPOSAL CONSIDERATIONS

WASTE DISPOSAL METHOD: Unused product: dispose as a regulated hazardous waste. Burn in a chemical incinerator equipped with an afterburner and scrubber. Take extra care in lighting as this material is highly flammable. Spent product or spill clean up– follow all provincial, local, state, and federal regulations.

SECTION 13 NOTES:

SECTION 14: TRANSPORT INFORMATION

U.S. DEPARTMENT OF TRANSPORTATION:

UN No. UN1219

Proper Shipping Name: ISOPROPANOL

Hazard Class:3

Packing Group: II

Label Statement: Flammable liquid

IMDG

UN No. UN1219

Proper Shipping Name: ISOPROPANOL

Hazard Class:3

Packing Group: II

EMS-No: F-E, S-D

Marine pollutant: No

IATA

UN No. UN1219

Proper Shipping Name: ISOPROPANOL

Hazard Class:3

Packing Group: II

SECTION 14 NOTES:

SECTION 15: REGULATORY INFORMATION

United States

HCS Classification: Flammable liquid, Target organ effects, Irritant

U.S. Federal regulations:

TSCA 8(a) IUR: Listed on inventory.

United States inventory (TSCA 8b): Listed on inventory.

SARA 302/304/311/312 extremely hazardous substances: No products were found.

SARA 302/304 emergency planning and notification: No products were found.

SARA 302/304/311/312 hazardous chemicals: No products were found.

SARA 311/312 MSDS distribution - chemical inventory - hazard identification:

Acute Health Hazard; Chronic Health Hazard, Fire Hazard

SARA 313 Form R – Reporting: The following components are subject to reporting levels established by SARA Title III, Section 313: ISOPROPANOL (CAS# 67-63-0)

DEA List I & II Chemicals

(Precursor Chemicals): Not Listed

CERCLA: Not reportable

RTK STATES: Isopropyl Alcohol 67-63-0 NJ, PA, MA

California Prop. 65

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

CANADA

WHMIS (Canada): Class D-2B: Toxic material causing other toxic effects
Class B-2: Flammable liquid

Canadian lists:

CEPA Toxic substances: The following components are listed: None

Canadian ARET: None of the components are listed.

Canadian NPRI: The following components are listed: None

CEPA DSL / CEPA NDSL:

All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International regulations

International lists: (EINECS): This product is on the European Inventory of Existing Commercial Chemical Substances.

SECTION 15 NOTES:

SECTION 16: OTHER INFORMATION

National Fire Protection Association (NFPA)



DISCLAIMER: This Safety Data Sheet has been prepared in accordance with the Globally Harmonized System for the Classification and Labelling of Chemicals (GHS). To the best of our knowledge, the information contained herein is accurate. However, neither

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