

Safety Data Sheet

SECTION 1: Identification

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| Product Name | Iso-Propyl Alcohol, Purified (2-Propanol; Isopropanol) | | |
| Other Identifiers | Isopropyl Alcohol; 2-Propanol; Propan-2-ol; 84410-39, 84410-40 | | |
| Recommended Uses | General Laboratory Reagent/Chemical. | | |
| Uses Advised Against | Not intended for drug, food or household use. | | |
| Address | SPEX CertiPrep, LLC 203 Norcross Ave. Metuchen, NJ 08840 USA | | 24-Hour Emergency Telephone |
| Telephone | 1.732.549.7144 | | CHEMTREC (USA) 800-424-9300 CHEMTREC (International) 1 + 730-527-3887 |
| Website | www.spex.com | | |

SECTION 2: Hazard(s) Identification

Flammable liquids (Category 2)
 Serious eye damage/eye irritation (Category 2A)
 Specific target organ toxicity, single exposure (Category 3)

Hazards not otherwise classified or covered by GHS

None identified.

Signal Word

DANGER

Hazard Statements

Highly flammable liquid and vapour. Causes serious eye irritation. May cause drowsiness or dizziness.

Precautionary Statements

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. - No smoking. Keep container tightly closed. Keep cool. Ground/bond container and receiving equipment. Use explosion-proof equipment. Use only non-sparking tools. Take action to prevent static discharges. Avoid breathing mist or vapors. Wash areas of contact/exposure thoroughly after handling. Use only outdoors or in a well-ventilated area. Wear protective gloves and clothing and eye protection. IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash it before reuse. Rinse skin/hair with water. IF INHALED: Remove person to fresh air and keep comfortable for breathing. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing. Get medical help if you feel unwell. IF eye irritation persists: Get medical help. In case of fire: Use dry chemical, foam or carbon dioxide (CO2) for extinction. Store in a well-ventilated place. Store locked up. Dispose of contents/container in accordance with local, state, federal and international regulations.



SECTION 3: Composition / Information on Ingredients

| Component Name | Component Number CAS | Component Number EC | Component Weight % |
|----------------|----------------------|---------------------|--------------------|
| Isopropanol | 67-63-0 | 200-661-7 | 100 |

Safety Data Sheet

SECTION 4: First-Aid Measures

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| General Advice | Show this SDS to attending physician if medical treatment is needed. |
| Skin Contact | Rinse affected areas with plenty of water. If skin irritation develops, seek medical attention. |
| Eye Contact | Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do - continue rinsing. Seek immediate medical attention. |
| Inhalation | Remove person to fresh air and keep comfortable for breathing. If breathing is difficult or labored, seek medical attention. |
| Ingestion | Rinse mouth. Seek medical attention if feeling unwell. |
| Symptoms/effects | The most important known symptoms/effects are described in Section 2 of this Safety Data Sheet. |
| Treatment | Treat symptomatically. |

SECTION 5: Fire-Fighting Measures

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| Extinguishing Media | Use water, carbon dioxide, foam, dry chemical or sand/earth to extinguish. |
| Specific Hazards | Thermal decomposition may produce toxic or irritating fumes. |
| Actions for Firefighters | Wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode. Use water spray to cool containers. |

SECTION 6: Accidental Release Measures

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| Precautions and Procedures | Remove all sources of ignition. Vapors can accumulate. Ensure adequate ventilation. Use personal protective equipment as required. Evacuate unprotected personnel to safe areas. Keep people away from and upwind of spill/leak. |
| Environmental Precautions | As with any chemical, avoid release to the environment for the responsible stewardship of our planet. |
| Containment and Clean Up | Remove all sources of ignition. Have fire extinguishing agent available. Use only non-sparking tools and explosion-proof equipment. Wear respiratory protection, gloves, eye protection and protective clothing. Contain and absorb with inert absorbent material or vacuum up spillage and collect in suitable lidded container for disposal. |

Section 7: Handling and Storage

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| Handling | Follow good hygiene procedures when handling chemical materials. Avoid contact with skin, eyes and clothing. Do not eat, drink, smoke or use personal items when handling this substance. Wear chemical resistant gloves, protective clothing and eye protection when handling this substance, as well as any other PPE recommended in any section of this SDS. Ground or bond containers. Use only non-sparking tools and explosion-proof equipment. Ensure adequate ventilation and absence of ignition sources. |
| Storage | Keep containers tightly closed in a cool and well-ventilated place. Avoid storage near heat, ignition sources or open flame. Protect from physical damage. Store separately from incompatible materials. Store locked up. |

Section 8: Exposure Controls / Personal Protection

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| Engineering Controls | As part of safe chemical handling, emergency eye wash fountains and safety showers should be available in handling areas. Provide sufficient ventilation measures to keep the airborne concentration below the applicable workplace exposure limits. | | | |
| Exposure Limits | Isopropyl alcohol | PEL-TWA | 980 mg/m ³ | US-OSHA |
| Exposure Limits | Isopropyl alcohol | REL-TWA | 400 ppm | US-NIOSH |
| Exposure Limits | Isopropyl alcohol | TLV-TWA | 200 ppm | US-ACGIH |
| Exposure Limits | Isopropyl alcohol | REL-STEEL | 500 ppm | US-NIOSH |
| Exposure Limits | Isopropyl alcohol | TLV-STEEL | 400 ppm | US-ACGIH |
| Eye Protection | Wear safety glasses with side shields or safety goggles. Wear face shield if there is risk of splashes. | | | |
| Skin Protection | Wear chemical resistant gloves and protective clothing. | | | |
| Respiratory Protection | Where exposure limits are exceeded and cannot be adequately controlled by other engineering means (such as a chemical fume hood), wear respiratory protection. | | | |

Section 9: Physical and Chemical Properties

Safety Data Sheet

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| Physical State | Liquid |
| Appearance/Color | Colorless |
| Odor | Rubbing alcohol |
| Odor Threshold | As low as 40 ppm |
| Melting/Freezing Point | -90°C |
| Boiling Point/Range | 82.5°C |
| Flammability | Flammable |
| Flammable/Explosive Limits | 2 - 12.7% |
| Flash Point | 12°C |
| Auto-Ignition Temperature | 399°C |
| Decomposition Temperature | Data not available |
| pH | Data not available |
| Viscosity | Data not available |
| Solubility (in water) | Miscible |
| Partition Coefficient (n-octanol/water) | 0.05 |
| Relative Density | .7808 |
| Vapor Pressure | 42 hPa at 20°C |
| Vapor Density | 2.07 |
| Evaporation Rate | 2.3 (butyl acetate = 1) |
| Particle Characteristics | Not applicable. |

Section 10: Stability and Reactivity

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| Reactivity | May create peroxides upon prolonged contact with air; this is accelerated in the presence of 2-butanone (methyl ethyl ketone). |
| Chemical Stability | Stable under normal conditions of handling and storage. |
| Hazardous Reactions | Based on available data, no reaction hazards have been identified that would occur during normal handling and storage. |
| Conditions to Avoid | Avoid contact with incompatible materials. Avoid breathing mist or vapors. Keep away from heat, sparks and open flame. |
| Incompatible Materials | Chromium trioxide, potassium t-butoxide, iodoxygenyl tetrafluoroborate, trinitromethane, hydrogen peroxide, barium perchlorate, nitroform, oleum, aluminum triisopropoxide, acids, acid anhydrides, halogens, aluminum, phosphorous trichloride, phosgene. |
| Hazardous Decomposition | Thermal decomposition can produce carbon oxides. |

Section 11: Toxicological Information

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| Acute Toxicity - Oral | LD50 (rat) 5000 mg/kg |
| Acute Toxicity - Dermal | LD50 (rabbit) 12800 mg/kg |
| Acute Toxicity - Inhalation | LC50 (rat) 16000 ppm/8H |
| Skin Corrosion/Irritation | This material is not expected to cause skin irritation under normal conditions. |
| Eye Damage/Irritation | Can cause serious eye irritation. |
| Respiratory Sensitization | Not expected to cause respiratory sensitization. |
| Skin Sensitization | Not expected to cause skin sensitization. |
| Germ Cell Mutagenicity | Based on available data, this substance does not meet the criteria set forth for classification as causing germ cell mutagenicity. |
| Carcinogenicity | This substance contains a chemical that is not classifiable as to its carcinogenicity to humans in IARC studies. |
| Reproductive Toxicity | Based on available data, this substance does not meet the criteria set forth for classification as a reproductive toxin. |
| STOT Single Exposure | May cause drowsiness or dizziness. |
| STOT Repeated Exposure | None known. |
| Aspiration Hazard | This substance is not considered to be an aspiration hazard. |
| Other Information | No additional information available. |

Section 12: Ecological Information

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| Toxicity Values | Does not meet the criteria of ecotoxin. |
| Persistence/Biodegradability | Data is not available for this substance that does not meet the criteria of ecotoxin. |
| Bioaccumulation Potential | Data is not available for this substance that does not meet the criteria of ecotoxin. |
| Mobility in Soil | Data is not available for this substance that does not meet the criteria of ecotoxin. |
| Other Adverse Effects | None known. |

Section 13: Disposal Considerations

Discharge, treatment, or disposal may be subject to national, state, regional or local laws. Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Since emptied containers retain product residue, follow label warnings even after container is emptied. Dispose in accordance with national, state, regional and local regulations.

Section 14: Transport Information

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| UN Number | UN1219 |
| Proper Shipping Name, Hazard Class | ISOPROPANOL, 3 |
| Packing Group | II |
| Marine Pollutant | Not classified as a marine pollutant. |

Section 15: Regulatory Information

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| USA TSCA | On or in compliance with the inventory. |
| USA SARA 302/304 | Isopropanol, TPQ 4540 kg (10,000 lbs) |
| USA SARA 311/312 | Isopropanol |
| USA SARA 313 (TRI) | Does not apply. |
| Canada DSL/NDSL | On or in compliance with DSL. |
| California Proposition 65 | This product contains no substances on the list. |

Section 16: Other Information

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| Acronyms | ACGIH | American Conference of Governmental Industrial Hygienists (USA) |
| | ATE | Acute Toxicity Estimate (calculated toxicity value) |
| | BCF | Bioconcentration Factor |
| | CERCLA | Comprehensive Environmental Response, Compensation and Liability Act (USA) |
| | DOT | Department of Transportation (USA) |
| | DSL | Domestic Substances List (Canada) |
| | EHS | Extremely Hazardous Substance |
| | EPA | Environmental Protection Agency (United States) |
| | GHS | Globally Harmonized System |
| | IARC | International Agency for Research on Cancer |
| | IDLH | Immediately Dangerous to Life and Health |
| | NTP | National Toxicology Program (USA) |
| | OSHA | Occupational Safety and Health Administration (USA) |
| | PEL | Permissible Exposure Limit |
| | PNOR | Particulates Not Otherwise Classified |
| | PPE | Personal Protective Equipment |
| | ppb | Parts per billion |
| | ppm | Parts per million |
| | RQ | Reportable Quantity |
| | SARA | Superfund Amendments and Reauthorization Act (USA) |
| | TLV | Threshold Limit Value |
| | TPQ | Threshold Planning Quantity |
| | TRI | Toxic Release Inventory (USA) |
| | TSCA | Toxic Substances Control Act (USA) |
| | TWA | Time Weighted Average |
| | UN | United Nations |

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This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Department issuing SDS: product safety department

Contact: SPEX CertiPrep, LLC. 1-732-549-7144