500 Greenview Court
Vernon Hills, Illinois 60061-1862
Phone: (847) 968-5050

**CHEMTREC 24 Hour Emergency**
**Phone Number (800) 424-9300**
For laboratory and industrial use only.
Not for drug, food or household use.

| | |
|---|---|
| **Product** | **ISOPROPYL ALCOHOL** |
| **Synonyms** | 2-Propanol ; Isopropanol |

## Section 2 Hazards identification

**Signal word:** DANGER
**Pictograms:** GHS02 / GHS07
**Target organs:** Central nervous system, Liver, Kidneys.



**GHS Classification:**
Flammable liquid (Category 2)
Eye irritation (Category 2)
STOT-SE (Category 3)

**GHS Label information**: **Hazard statement(s):**
H225: Highly flammable liquid and vapour.
H319: Causes serious eye irritation.
H336: May cause drowsiness or dizziness.

**Precautionary statement(s):**
P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.
P233: Keep container tightly closed.
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/vapours/spray.
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.
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.
P312: Call a POISON CENTER or doctor if you feel unwell.
P305+P351+P338: IF IN EYES: Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+P313: If eye irritation persists: Get medical attention.
P370+P378: In case of fire: Use dry chemical, $CO_2$, water spray or alcohol-resistant foam to extinguish.
P403+P235: Store in a well-ventilated place. Keep cool.
P405: Store locked up.
P501: Dispose of contents/container to a licensed chemical disposal agency in accordance with local/regional/national regulations.

**Hazards not otherwise classified:**
Health hazards not otherwise classified (HHNOC) - Not Known
Physical hazards not otherwise classified (PHNOC) - Not Known

## Section 3 Composition / information on ingredients

| Chemical Name | CAS # | % | EINECS |
|---|---|---|---|
| Isopropyl alcohol | 67-63-0 | 100% | 200-661-7 |

## Section 4 First aid measures

**INGESTION:** MAY BE HARMFUL IF SWALLOWED. Call physician or Poison Control Center immediately. Induce vomiting only if advised by appropriate medical personnel. Never give anything by mouth to an unconscious person.

**INHALATION:** MAY BE HARMFUL IF INHALED. CAUSES RESPIRATORY TRACT IRRITATION. Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

**EYE CONTACT:** CAUSES SERIOUS EYE IRRITATION. Check for and remove contact lenses. Flush thoroughly with water for at least 15 minutes, lifting upper and lower eyelids occasionally. Get immediate medical attention.

**SKIN ABSORPTION:** MAY BE HARMFUL IF ABSORBED THROUGH SKIN. MAY CAUSE SKIN IRRITATION. Remove contaminated clothing. Flush thoroughly with mild soap and water. If irritation occurs, get medical attention.

## Section 5 Fire fighting measures

**Suitable Extinguishing Media:** Dry chemical, $CO_2$, water spray or alcohol-resistant foam.

**Protective Actions for Fire-fighters:** In fire conditions, wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective gear. Use water spray to keep fire-exposed containers cool.

**Specific Hazards:** During a fire, irritating and highly toxic gases may be generated by thermal decomposition or combustion. Vapors formed from this product are heavier than air and may travel along the ground to a distant source of ignition and flash back instantly. Flame may not be visible in daylight.

## Section 6 Accidental release measures

**Personal Precautions:** Evacuate personnel to safe area. Use proper personal protective equipment as indicated in Section 8. Provide adequate ventilation.

**Environmental Precautions:** Avoid runoff into storm sewers and ditches which lead to waterways.

**Containment and Cleanup:** Remove all sources of ignition. Absorb with inert dry material, sweep or vacuum up and place in a suitable container for proper disposal. Wash spill area with soap and water.

## Section 7 Handling and storage

**Precautions for Safe Handling:** Read label on container before using. Do not wear contact lenses when working with chemicals. Keep out of reach of children. Avoid contact with eyes, skin and clothing. Do not inhale vapors, spray or mist. Use with adequate ventilation. Avoid ingestion. Wash thoroughly after handling. Remove and wash clothing before reuse.

**Conditions for Safe Storage:** Store in a cool, well-ventilated area away from incompatible substances. Keep away from ignition sources.

## Section 8 Exposure controls / personal protection

**Exposure Limits:**

| Chemical Name | ACGIH (TLV) | OSHA (PEL) | NIOSH (REL) |
|---|---|---|---|
| Isopropanol | TWA: 200 ppm / STEL: 400 ppm | TWA: 400 ppm / 980 mg/m$^3$ | TWA: 400 ppm / STEL: 500 ppm |

**Engineering controls:** Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower and fire extinguishing material. Personnel should wear safety glasses, goggles, or faceshield, lab coat or apron, appropriate protective gloves. Use adequate ventilation to keep airborne concentrations low.

**Respiratory protection:** None should be needed in normal laboratory handling at room temperatures. If misty conditions prevail, work in fume hood or wear a NIOSH/MSHA-approved respirator.

## Section 9 Physical and chemical properties

**Appearance:** Clear, colorless liquid.
**Odor:** Aromatic odor.
**Odor threshold:** Data not available.
**pH:** Data not available.
**Melting / Freezing point:** -90°C (-130°F)
**Boiling point:** 82°C (179.6°F)
**Flash point:** 12°C (53°F) CC

**Evaporation rate (** Butyl acetate **= 1):** 2.3
**Flammability (solid/gas):** Data not available.
**Explosion limits: Lower / Upper:** 2% / 12%
**Vapor pressure (mm Hg):** 33 mm @20°C
**Vapor density (Air = 1):** 2.1
**Relative density (Specific gravity):** 0.786-0.79 @ 20°C
**Solubility(ies):** Complete in water.

**Partition coefficient: (**n-octanol / water): Log Pow: 0.05
**Auto-ignition temperature:** 399°C (750°F) ASTM-E659-78
**Decomposition temperature:** Data not available.
**Viscosity:** Data not available.
**Molecular formula:** $(CH_3)_2CHOH$
**Molecular weight:** 60.10

## Section 10 Stability and reactivity

**Chemical stability:** Stable
**Hazardous polymerization:** Will not occur.
**Conditions to avoid:** Excessive temperatures, heat, sparks, open flame and other sources of ignition.

**Incompatible materials:** Strong oxidizing materials, caustics, aluminums, metals, nitroform, oleum, chlorinated compounds can react vigorously with this alcohol.

**Hazardous decomposition products:** Carbon oxides.

## Section 11 Toxicological information

**Acute toxicity:** Oral-rat LD50: 4396 mg/kg ; Inhalation-rat LC50: 72.6 mg/L/4 hours ; Dermal-rat LD50: 12,800 mg/kg
**Skin corrosion/irritation:** Skin-rabbit - Slight irritant.
**Serious eye damage/irritation:** Eyes-rabbit - Irritating.
**Respiratory or skin sensitization:** Not sensitizing
**Germ cell mutagenicity:** Data not available
**Carcinogenity:** Data not available
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
IARC classified: Group 3: Not classifiable as to its carcinogenicity to humans
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
Ca Prop 65: This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity.
**Reproductive toxicity:** Data not available
**STOT-single exposure:** The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with narcotic effects.
**STOT-repeated exposure:** Data not available
**Aspiration hazard:** Yes
**Potential health effects:**
Inhalation: Inhalation of high vapor concentrations may cause central nervous system depression resulting in dizziness, drowsiness, nausea, vomiting, inability to concentrate and irritation of the throat. Continued inhalation may result in unconsciousness and death.
Ingestion: Aspiration hazard. Liquid can directly enter the lungs (aspirated) when swallowed or vomited. Serious lung damage and possible fatal chemical pneumonia can develop if this occurs.
Skin: Prolonged or repeated contact may cause irritation and drying, cracking and defatting of the skin which can lead to dermatitis.
Eyes: Contact causes burning sensation, redness, swelling, and/or blurred vision.
**Signs and symptoms of exposure:** See Potential health effects above.
**Additional information: RTECS #:** NT8050000 [Isopropanol]

## Section 12 Ecological information

**Toxicity to fish:** Pimephales promelas (Fish, fresh water) LC50: 9640 mg/L/96 hours [Isopropanol]
**Toxicity to daphnia and other aquatic invertebrates:** Artemia salina (Crustacea), EC50 = >10,000 mg/L/24 hours [Isopropanol]
**Toxicity to algae:** Scenedesmus quadricauda (Algae), LOEC50 = 1,800 mg/L/7 days [Isopropanol]
**Persistence and degradability:** No data available
**Bioaccumulative potential:** No data available
**Mobility in soil:** No data available
**PBT and vPvB assessment:** No data available
**Other adverse effects:** An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

## Section 13 Disposal considerations

These disposal guidelines are intended for the disposal of catalog-size quantities only. Federal regulations may apply to empty container. State and/or local regulations may be different. Dispose of in accordance with all local, state and federal regulations or contract with a licensed chemical disposal agency.

## Section 14 Transport information

**UN/NA number:** UN1219
**Shipping name:** Isopropanol
**Hazard class:** 3
**Packing group:** II
**Reportable Quantity:** No
**Marine pollutant:** No
**Exceptions:** Limited quantity equal to or less than 1 L
**2020 ERG Guide #** 129

## Section 15 Regulatory information

A chemical is considered to be listed if the CAS number for the anhydrous form is on the Inventory list.

| Component | TSCA | CERLCA (RQ) | RCRA code | DSL | NDSL | CA Prop 65 |
|---|---|---|---|---|---|---|
| Isopropyl alcohol | Listed | Not listed | Not listed | Listed | Not listed | This product does not contain any chemicals known to the State of California to cause cancer or reproductive toxicity. |

## Section 16 Other information

The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. NTP: National Toxicology Program, IARC: International Agency for Research on Cancer, OSHA: Occupational Safety and Health Administration, STOT: Specific Target Organ Toxicity, SE: Single Exposure, RE: Repeated Exposure, ERG: Emergency Response Guidebook.



**Revision Date:** October 2, 2020 **Supercedes:** January 14, 2020