Safety Data Sheet · OSHA HCS 2024

Isopropyl Alcohol 50% Technical Grade

Technical · 50% v/v

Standard	Revised	Emergency
OSHA HCS 2024 · GHS Rev. 7	2026-11-23	Chemtel 1-800-255-3924 (24/7)

1 Identification

Product Identifier	Isopropyl Alcohol 50% Technical Grade
Grade	Technical
Concentration	50% v/v
CAS Number	67-63-0
Chemical Formula	C3H8O
Molecular Weight	60.10 g/mol
Manufacturer	Alliance Chemical 204 South Edmond Street, Taylor, TX 76574
Emergency Phone	Chemtel 1-800-255-3924 (24/7)
Synonyms	2-Propanol solution; isopropanol 50%; IPA 50%
Recommended Use	Cleaning and degreasing solution; surface and equipment wipe-down; general solvent blend.
Restrictions on Use	Technical grade: not for drug, food or cosmetic use. Do not drink. Highly flammable.

2 Hazard Identification



Flammable



Irritant / harmful

Classification

Flammable liquids, Category 2

Serious eye damage/eye irritation, Category 2A

Specific target organ toxicity, single exposure, Category 3 (narcotic effects)

Signal Word

Danger

Hazard Statements

H225 Highly flammable liquid and vapor

H319 Causes serious eye irritation

H336 May cause drowsiness or dizziness

Precautionary Statements

P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P233 Keep container tightly closed.

P240 Ground and bond container and receiving equipment.

P241 Use explosion-proof electrical, ventilating, and lighting equipment.

P242 Use non-sparking tools.

P243 Take precautionary measures against static discharge.

P261 Avoid breathing dust, fume, gas, mist, vapors or spray.

P264 Wash hands and face thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P280 Wear protective gloves, protective clothing, and eye/face protection.

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

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

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P312 Call a POISON CENTER or doctor if you feel unwell.

P337+P313 If eye irritation persists: Get medical advice or attention.

P370+P378 In case of fire: Use alcohol-resistant foam, CO2 or dry chemical powder to extinguish.

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

P403+P235 Store in a well-ventilated place. Keep cool.

P405 Store locked up.

P501 Dispose of contents and container in accordance with local, regional, national, and international regulations.

Classification, hazard (H) and precautionary (P) statements and pictograms per OSHA HCS 2024 (29 CFR 1910.1200, Appendices A–C), aligned with GHS Rev. 7.

3 Composition / Information on Ingredients

Component	CAS No.	Formula	Concentration
Isopropyl alcohol	67-63-0	C3H8O	48-52% (v/v)
Water	7732-18-5	H2O	Balance (v/v)

Concentrations are nominal; lot-specific values appear on the Certificate of Analysis. Components not contributing to classification are omitted.

4 First-Aid Measures

Eyes

Rinse with plenty of water for at least 15 minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek medical attention immediately.

Skin

Immediately flush with plenty of water for at least 15 minutes while removing contaminated clothing. Wash with soap. Get medical attention immediately.

Inhalation

Move person to fresh air and keep comfortable for breathing. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Get medical attention immediately.

Ingestion

Do Not Induce Vomiting! Never give anything by mouth to an unconscious person. If conscious, wash out mouth with water. Get medical attention immediately.

Most Important Symptoms and Effects

Eye contact causes irritation: redness, pain and tearing.

Inhalation of vapors may cause drowsiness, dizziness, headache and nausea.

Immediate Medical Attention and Special Treatment

Treat symptomatically. Get medical attention if symptoms develop or persist.

5 Fire-Fighting Measures

Suitable Extinguishing Media	Alcohol-resistant foam, CO2, dry chemical powder. Water spray may be used to cool fire-exposed containers.
Unsuitable Extinguishing Media	Do not use a solid water stream — may scatter and spread fire.
Specific Hazards Arising from the Chemical	Vapors are heavier than air and may form explosive mixtures with air; they can travel to a source of ignition and flash back. Containers may rupture when heated.
Protective Equipment	Wear self-contained breathing apparatus and full protective clothing.
Hazardous Combustion Products	Carbon monoxide and carbon dioxide on combustion.

6 Accidental Release Measures

Personal Precautions	Use PPE as described in Section 8. Ensure adequate ventilation. Evacuate personnel to safe areas.
Hazard-Specific Precautions	Eliminate all ignition sources. Use non-sparking tools and explosion-proof equipment; ground and bond containers during cleanup.
Environmental Precautions	Prevent leakage or spillage from entering drains, sewers, or waterways.
Containment & Cleanup	Absorb with inert material. Collect in appropriate waste container. Dispose per applicable regulations.

7 Handling and Storage

Safe Handling	Use with adequate ventilation. Avoid contact with skin, eyes, and clothing. Wash thoroughly after handling. Keep container closed when not in use.
Safe Storage	Store in a cool, dry, well-ventilated area away from heat, sparks, and open flame. Keep away from incompatible materials (see Section 10). Keep containers tightly closed. Ground and bond containers when transferring material.
Specific Storage Precautions	Keep tightly closed in a cool, well-ventilated flammables area away from ignition sources and oxidizers. Ground and bond containers.

8 Exposure Controls / Personal Protection

Occupational Exposure Limits

Limit	Value
OSHA PEL	400 ppm TWA
ACGIH TLV	200 ppm TWA / 400 ppm STEL
NIOSH REL	400 ppm TWA / 500 ppm STEL
IDLH	2000 ppm

Engineering Controls	Use adequate ventilation. Provide eyewash stations and quick-drench showers accessible to areas of use.
Eye/Face Protection	Wear chemical safety goggles or face shield.
Skin Protection	Wear chemical-resistant gloves and protective clothing.

Respiratory Protection	Use a NIOSH-approved respirator with organic vapor cartridges. For confined spaces or exposures above the OEL, use supplied-air respiratory protection.

Exposure limits sourced from NIOSH Pocket Guide, OSHA 29 CFR 1910.1000 and ACGIH TLVs.

9 Physical & Chemical Properties

Appearance	Clear, colorless liquid with mild alcohol odor
Odor	Alcohol-like odor
Odor Threshold	No data available
pH	No data available
Melting Point / Freezing Point	-21 to -23 °C (-6 to -9 °F), freezing point of a 50% v/v isopropyl alcohol–water solution (published tables)
Boiling Point	About 82 °C (180 °F)
Flash Point	About 18–22 °C (64–72 °F), closed cup
Evaporation Rate	No data available
Flammability (solid, gas)	No data available
Upper/Lower Flammability or Explosive Limits	LEL 2% / UEL 12% (v/v in air, isopropyl alcohol vapor)
Vapor Pressure	No data available
Vapor Density	2.1 (air = 1)
Relative Density	0.923 at 20/20 °C (water = 1)
Solubility	Completely miscible with water
Partition Coefficient (n-octanol/water)	No data available
Auto-ignition Temperature	399–425 °C (750–797 °F) (isopropyl alcohol)
Decomposition Temperature	No data available
Viscosity	No data available
Particle Characteristics	Not applicable
Color	NMT 10
Density	0.9214 g/cm^3 at 20 °C

Values shown reflect product-specific canonical data. Lot-specific ranges may vary; see the Certificate of Analysis for the shipped lot.

10 Stability and Reactivity

Reactivity	Not reactive under normal conditions of use and storage.
Chemical Stability	Stable under recommended storage conditions.
Possibility of Hazardous Reactions	None under normal processing conditions.
Conditions to Avoid	Heat, sparks, open flame, static discharge and other ignition sources. Vapor is heavier than air and can travel to an ignition source.
Incompatible Materials	Strong oxidizing agents (peroxides, nitric acid, perchlorates, hypochlorites), strong acids, acid anhydrides, halogens, and alkali metals (release hydrogen).
Hazardous Decomposition Products	Carbon monoxide and carbon dioxide on combustion.

11 Toxicological Information

See below for route-specific acute toxicity data.

Likely Routes of Exposure	Inhalation, skin contact, eye contact, ingestion.
Symptoms	Eye contact causes irritation: redness, pain and tearing. Inhalation of vapors may cause drowsiness, dizziness, headache and nausea.
Delayed and Chronic Effects	No delayed or chronic effects identified beyond the classification in Section 2.

Route	Value
LD50 Oral (rat)	4,700–5,840 mg/kg (isopropyl alcohol)
LD50 Dermal (rabbit)	12,800–16,400 mg/kg (isopropyl alcohol)
LC50 Inhalation (rat, 4h)	72.6 mg/L (isopropyl alcohol vapor)

Carcinogen Classification

Agency	Status
IARC	Group 3 — not classifiable as to its carcinogenicity to humans (Isopropyl alcohol; IARC agent: Isopropyl alcohol, Vol. 15, Sup 7, 71).
NTP	Not listed as carcinogen.
OSHA	Not listed as carcinogen.

12 Ecological Information

Ecotoxicity	Daphnia EC50: > 10000 mg/L (24 h, Daphnia magna (24-h EC50)); Fish LC50: 9640 mg/L (96 h, Pimephales promelas); Algae NOEC (chronic): 1800 mg/L (168 h, Scenedesmus quadricauda (7-d NOEC))
Persistence & Degradability	Not persistent — Readily biodegradable (72–78%, 20 d)
Bioaccumulative Potential	log Kow 0.05 (25 °C), BCF 1 (calculated; not bioaccumulative)
Mobility in Soil	Very high mobility in soil (log Kow 0.05)

13 Disposal Considerations

Dispose of contents/container in accordance with applicable federal, state, and local regulations. Do not dispose of into drains or waterways.

EPA RCRA Waste Codes	D001 (ignitable). Isopropyl alcohol is not a P-, U- or F-listed waste.

If discarded, this material may be an ignitable hazardous waste (EPA RCRA D001, 40 CFR 261.21(a)(1): flash point below 60 °C; aqueous solutions with less than 24% alcohol by volume are excluded). The waste generator must make the final hazardous-waste determination.

14 Transport Information

US DOT (49 CFR)

UN Number	UN1219

Proper Shipping Name	Isopropanol or isopropyl alcohol
Hazard Class	3
Packing Group	II
Additional US DOT Requirements	Inner packagings of 1 L or less may ship as Limited Quantity (49 CFR 173.150(b)). Not a marine pollutant.

IMDG / IATA classifications may differ from US DOT. Verify current regulations before international shipment.

15 Regulatory Information

Inventory / List	Status
California Proposition 65	Not listed
US EPA TSCA Active Inventory	Listed
EPCRA SARA 313 (TRI)	Listed as isopropyl alcohol manufactured by the strong acid process only (no supplier notification)
CERCLA Reportable Quantity (RQ)	Not a CERCLA hazardous substance (no RQ).

SARA 311/312 hazard categories correspond to the GHS classification in Section 2. Data retrieved as of: California Proposition 65 2026-11-02; US EPA TSCA Active Inventory 2026-11-02; EPCRA SARA 313 (TRI) 2026-11-02.

16 Other Information

Revision Date	2026-11-23
Format	16-section format per OSHA HCS 2024 (29 CFR 1910.1200, Appendix D), aligned with GHS Rev. 7.

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