

MSDS# 91551

Section 1 - Chemical Product and Company Identification

MSDS Name: Isopropanol, USP, 10%

Catalog Numbers: A460-1GAL

Synonyms: Isopropanol; Dimethylcarbinol; sec-Propyl alcohol; Rubbing alcohol; Petrohol; 1-Methylethanol; 1-Methylethyl alcohol; 2-Hydroxypropane; 2-Propyl alcohol; Isopropyl alcohol; Propan-2-ol.

Company Identification: Fisher Scientific
One Reagent Lane
Fair Lawn, NJ 07410

For information in the US, call: 201-796-7100

Emergency Number US: 201-796-7100

CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

Risk Phrases: 11 36 67

CAS#: 67-63-0
Chemical Name: Isopropyl alcohol
%: 10
EINECS#: 200-661-7
Hazard Symbols: F XI

Risk Phrases:

CAS#: 7732-18-5
Chemical Name: Water
%: 90
EINECS#: 231-791-2
Hazard Symbols:

Text for R-phrases: see Section 16

Hazard Symbols: XI



Risk Phrases: 10 36 67

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Warning! Flammable liquid and vapor. Causes respiratory tract irritation. This substance has caused adverse reproductive and fetal effects in animals. May cause central nervous system depression. Aspiration hazard if swallowed. Can enter lungs and cause damage. May cause kidney damage. May form explosive peroxides. May cause severe eye irritation and possible injury. Causes mild skin irritation. Target Organs: Kidneys, central nervous system, respiratory system, cardiovascular system, eyes, skin.

Potential Health Effects

Eye:	Produces irritation, characterized by a burning sensation, redness, tearing, inflammation, and possible corneal injury. May cause transient corneal injury.
Skin:	May cause irritation with pain and stinging, especially if the skin is abraded. Isopropanol has a low potential to cause allergic skin reactions; however, rare cases of allergic contact dermatitis have been reported. May be absorbed through intact skin.
Ingestion:	Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause kidney damage. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. Aspiration of material into the lungs may cause chemical pneumonitis, which may be fatal.
Inhalation:	Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. May cause narcotic effects in high concentration. Causes upper respiratory tract irritation. Inhalation of vapors may cause drowsiness and dizziness.
Chronic:	Prolonged or repeated skin contact may cause defatting and dermatitis. May cause reproductive and fetal effects. Laboratory experiments have resulted in mutagenic effects.

Section 4 - First Aid Measures

Eyes:	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.
Skin:	In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.
Ingestion:	Potential for aspiration if swallowed. Get medical aid immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have victim lean forward.
Inhalation:	If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.
Notes to Physician:	Urine acetone test may be helpful in diagnosis. Hemodialysis should be considered in severe intoxication. Treat symptomatically and supportively.

Section 5 - Fire Fighting Measures

General Information:	As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Flammable liquid and vapor. May form explosive peroxides. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.
Extinguishing Media:	Water may be ineffective. Do NOT use straight streams of water. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray. For small fires, use carbon dioxide, dry chemical, dry sand, or alcohol-resistant foam. Cool containers with flooding quantities of water until well after fire is out.

Autoignition Temperature: 399 deg C (750.20 deg F)

Flash Point: 41 deg C (105.80 deg F)

Explosion Limits: Lower: 2.0 vol %

Explosion Limits: Upper: 12.7 @ 93.3°C

NFPA Rating: health: 1; flammability: 2; instability: 0;

Section 6 - Accidental Release Measures

General Information:	Use proper personal protective equipment as indicated in Section 8.
Spills/Leaks:	Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

Section 7 - Handling and Storage

Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Loosen closure cautiously before opening. Contents may develop pressure upon prolonged storage. Avoid contact with eyes,

Handling: skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Take precautionary measures against static discharges. Keep container tightly closed. Do not ingest or inhale. Use only in a chemical fume hood. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation. Avoid breathing vapor or mist.

Keep away from heat, sparks, and flame. Keep away from sources of ignition. Do not store in direct sunlight. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated

Storage: area away from incompatible substances. Flammables-area. After opening, purge container with nitrogen before reclosing. Periodically test for peroxide formation on long-term storage. Addition of water or appropriate reducing materials will lessen peroxide formation. Store protected from moisture.

Section 8 - Exposure Controls, Personal Protection

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Isopropyl alcohol	200 ppm; 400 ppm STEL	400 ppm TWA; 980 mg/m3 TWA 2000 ppm IDLH (10% LEL)	400 ppm TWA; 980 mg/m3 TWA
Water	none listed	none listed	none listed

OSHA Vacated PELs: Isopropyl alcohol: 400 ppm TWA; 980 mg/m3 TWA Water: None listed

Engineering Controls:

Use explosion-proof ventilation equipment. Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use only under a chemical fume hood.

Exposure Limits

Personal Protective Equipment

Eyes: Wear chemical splash goggles.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: A respiratory protection program that meets OSHA's 29 CFR 1910.134 and ANSI Z88.2 requirements or European Standard EN 149 must be followed whenever workplace conditions warrant respirator use.

Section 9 - Physical and Chemical Properties

Physical State: Liquid

Color: colorless

Odor: alcohol-like

pH: Not available

Vapor Pressure: 33 mm Hg @ 20 deg C

Vapor Density: 2.1 (Air=1)

Evaporation Rate: 2.3 (n-butyl acetate=1)

Viscosity: 2.27 mPas @ 20C

Boiling Point: 82 deg C @ 760 mmHg (179.60°F)

Freezing/Melting Point: -88 deg C (-126.40°F)

Decomposition Temperature: Not available

Solubility in water: Miscible

Specific Gravity/Density: 0.7850 (water=1)

Molecular Formula: C3H8O

Molecular Weight: 60.09

Section 10 - Stability and Reactivity

Chemical Stability: Stable at room temperature in closed containers under normal storage and handling conditions. Distillation may lead to the formation of peroxides. This material may be sensitive to peroxide formation.

Conditions to Avoid: Ignition sources, excess heat.

Incompatibilities with

Other Materials Strong oxidizing agents, acids.
Hazardous Decomposition Products Carbon monoxide, carbon monoxide, carbon dioxide.
Hazardous Polymerization Will not occur.

Section 11 - Toxicological Information

RTECS#: CAS# 67-63-0: NT8050000
CAS# 7732-18-5: ZC0110000
RTECS:
CAS# 67-63-0: Draize test, rabbit, eye: 100 mg Severe;
Draize test, rabbit, eye: 10 mg Moderate;
Draize test, rabbit, eye: 100 mg/24H Moderate;
Draize test, rabbit, skin: 500 mg Mild;
Inhalation, mouse: LC50 = 53000 mg/m³;
Inhalation, rat: LC50 = 16000 ppm/8H;
Inhalation, rat: LC50 = 72600 mg/m³;
LD50/LC50: Oral, mouse: LD50 = 3600 mg/kg;
Oral, mouse: LD50 = 3600 mg/kg;
Oral, rabbit: LD50 = 6410 mg/kg;
Oral, rat: LD50 = 5045 mg/kg;
Oral, rat: LD50 = 5000 mg/kg;
Skin, rabbit: LD50 = 12800 mg/kg;
. RTECS:
CAS# 7732-18-5: Oral, rat: LD50 = >90 mL/kg;
. Carcinogenicity: Isopropyl alcohol - IARC: Group 3 (not classifiable)
Water - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.
Other: See actual entry in RTECS for complete information.

Section 12 - Ecological Information

Ecotoxicity: Fish: Goldfish: > 5000 mg/L; 24 Hr; Modified ASTM D 1345 bioassay
Fish: Fathead Minnow: 11,830 mg/L; 1 Hr; Static bioassay
Other: Dangerous to aquatic life in high concentrations.

Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

Section 14 - Transport Information

US DOT
Shipping Name: Please contact Fisher Scientific for shipping information
Hazard Class:
UN Number:
Packing Group:
Canada TDG
Shipping Name: Not available
Hazard Class:
UN Number:
Packing Group:

Section 15 - Regulatory Information

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: XI

Risk Phrases:

R 10 Flammable.

R 36 Irritating to eyes.

R 67 Vapours may cause drowsiness and dizziness.

Safety Phrases:

S 7 Keep container tightly closed.

S 16 Keep away from sources of ignition - No smoking.

S 24/25 Avoid contact with skin and eyes.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

WGK (Water Danger/Protection)

CAS# 67-63-0: 1

CAS# 7732-18-5: Not available

Canada

CAS# 67-63-0 is listed on Canada's DSL List

CAS# 7732-18-5 is listed on Canada's DSL List

Canadian WHMIS Classifications: D2B, B3

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

CAS# 67-63-0 is listed on Canada's Ingredient Disclosure List

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

US Federal

TSCA

CAS# 67-63-0 is listed on the TSCA Inventory.

CAS# 7732-18-5 is listed on the TSCA Inventory.

Section 16 - Other Information

MSDS Creation Date: 5/17/2000

Revision #12 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.
