

Revision Date: 02/05/2005

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PRODUCT IDENTIFICATION  
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PRODUCT NAME: ISOPROPYL ALCOHOL / ISOPROPANOL

MSDS NUMBER: HB-1902

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: Isopropanol

Distributed by:  
H&B Industries, Inc.  
9758 Abernathy Ave.  
Dallas, TX 75220

Chemical Name	2-propanol
Synonym(s)	900212
Molecular Formula	C3H8O
Molecular Weight	60.09
Product Use	solvent
OSHA Status	hazardous

For information, call 800-535-5053

2. COMPOSITION INFORMATION ON INGREDIENTS

Weight %	Component	CAS Registry No.
100%	isopropyl alcohol	67-63-0

3. HAZARDS IDENTIFICATION

WARNING!  
FLAMMABLE LIQUID AND VAPOR  
CAUSES EYE IRRITATION  
HIGH VAPOR CONCENTRATIONS MAY CAUSE DROWSINESS AND IRRITATION OF THE EYES  
OR RESPIRATORY TRACT  
PROLONGED OR REPEATED SKIN CONTACT MAY CAUSE DRYING, CRACKING, OR IRRITATION  
FORMS EXPLOSIVE PEROXIDES  
HMIS(R) Hazard Ratings: Health - 2, Flammability -3, Chemical Reactivity - 1  
NFPA Hazard Ratings: Health 1, Flammability 3, Reactivity - 0

HMIS rating involves data interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

#### 4. FIRST-AID MEASURES

**Inhalation:**

Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.

**Eyes:**

Immediately flush with plenty of water for at least 15 minutes. If easy to do, remove contact lenses. Get medical attention.

**Skin:**

Wash with soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing before reuse. Thoroughly clean shoes before reuse.

**Ingestion:**

Seek medical advice.

#### 5. FIRE FIGHTING MEASURES

**Extinguishing Media:**

water spray. dry chemical, carbon dioxide. alcohol foam

**Special Fire-Fighting Procedures:**

Wear self-contained breathing apparatus and protective clothing.

Use water spray to keep fire-exposed containers cool. Water may be ineffective in fighting the fire. Fight fire from a protected position.

**Hazardous Combustion Products:**

carbon dioxide, carbon monoxide

**Unusual Fire and Explosion Hazards:**

Vapors may cause a flash fire or ignite explosively. Vapors may travel considerable distance to a source of ignition and flash back. Prevent buildup of vapors or gases to explosive concentrations. Forms explosive peroxides which may be shock sensitive.

**Sensitivity to Static Discharge:**

Material may accumulate a static charge which could act as an ignition source.

#### 6. ACCIDENTAL RELEASE MEASURES

Use personal protective equipment. Eliminate all ignition sources. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

**For Large Spills:**

Use water spray to disperse vapors and dilute spill to a nonflammable mixture.

Prevent runoff from entering drains, sewers, or streams.

## 7. HANDLING AND STORAGE

### Personal Precautionary Measures:

Avoid contact with eyes and prolonged or repeated contact with skin. Avoid breathing high vapor concentrations. Use only with adequate ventilation.

Wash thoroughly after handling.

### Prevention of Fire and Explosion:

Keep material from heat, light, sparks and flame. Keep from contact with oxidizing materials. Use only with adequate ventilation. Comply with all national, state, and local codes pertaining to the storage, handling, dispensing, and disposal of flammable liquids. Do not expose to air. After opening, purge container with nitrogen before reclosing. Periodically test for peroxide formation on long-term storage. If peroxide formation is suspected, do not open or move container. Do not allow to evaporate to near dryness. Distill with caution. Addition of water or appropriate reducing materials will lessen peroxide formation.

### Storage:

Keep container tightly closed and in a well-ventilated place.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Country specific exposure limits have not been established or are not applicable unless listed below.

### ISOPROPYL ALCOHOL US.

NIOSH: Pocket Guide to Chemical Hazards

Recommended exposure limit (REL): 400 ppm, 980 mg/m<sup>3</sup> US.

NIOSH: Pocket Guide to Chemical Hazards

Short Term Exposure Limit (STEL): 500 ppm, 1,225 mg/m<sup>3</sup> US.

OSHA Table Z-1 Limits for Air Contaminants ( 29 CFR 1910.1000)

PEL: 400 ppm, 980 mg/m<sup>3</sup> US. ACGIH Notice of Intended Changes (NIC) to Threshold Limit Values Time Weighted Average (TWA): 200 ppm, US.

ACGIH Notice of Intended Changes (NIC) to Threshold Limit Values

Short Term Exposure Limit (STEL): 400 ppm, ISOPROPANOL (ISOPROPYL ALCOHOL)US.

ACGIH Notice of Intended Changes (NIC) to Threshold Limit Values Time Weighted Average (TWA): 200 ppm,US.

ACGIH Notice of Intended Changes (NIC) to Threshold Limit Values Short Term Exposure Limit (STEL): 400 ppm,ISOPROPYL ALCOHOL US.

California Code of Regulations, Title 8, Section 5155.

Airborne Contaminants Time Weighted Average (TWA) Permissible Exposure Limit (PEL): 400 ppm, 980 mg/m<sup>3</sup> US.

California Code of Regulations, Title 8, Section 5155.

Airborne Contaminants

Short Term Exposure Limit (STEL): 500 ppm, 1,225 mg/m<sup>3</sup>

ISOPROPANOL US. ACGIH Threshold Limit Values

Time Weighted Average (TWA): 200 ppm,US.

ACGIH Threshold Limit Values

Short Term Exposure Limit (STEL): 400 ppm,

Ventilation:

Good general ventilation (typically 10 air changes per hour) should be used.

Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

Respiratory Protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn. In the United States of America, if respirators are used, a program should be instituted to assure compliance with OSHA Standard 63 FR 1152, January 8, 1998. Respirator type: Air-purifying respirator with an appropriate, government approved (where applicable), air-purifying filter, cartridge or canister. Contact health and safety professional or manufacturer for specific information.

Eye Protection:

Wear safety glasses with side shields (or goggles). Wear a full-face respirator, if needed.

Skin Protection:

For operations where prolonged or repeated skin contact may occur, chemical-resistant gloves should be worn. Contact health and safety professional or manufacturer for specific information.

Recommended Decontamination Facilities: eye bath, washing facilities

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical Form:	liquid
Color:	colorless
Odor:	alcohol
Odor Threshold:	22 ppm
Specific Gravity:	0.786 (20 <sup>0</sup> C)
Vapor Pressure:	20C; 43.3 mbar
Vapor Density:	2.1
Melting Point:	-90 <sup>0</sup> C
Boiling Point:	82 <sup>0</sup> C
Evaporation Rate:	1.7 (n-butyl acetate = 1 )
Viscosity:	2.38 mPa.s (20 <sup>0</sup> C) ,
Solubility in Water:	complete
Octanol/Water Partition Coefficient:	P: 1.4; log P: 0.14
Flash Point:	13 <sup>0</sup> C (Tag closed cup)
Autoignition Temperature:	432 <sup>0</sup> C (ASTM) D2155)
Thermal Decomposition Temperature:	(HPDTA) No exotherm to boiling (at 150 psig)

## 10. STABILITY AND REACTIVITY

### Stability:

Stable. Forms explosive peroxides on concentration.

### Incompatibility:

Material reacts violently with strong oxidizing agents

### Hazardous Polymerization:

Will not occur.

## 11. TOXICOLOGICAL INFORMATION

### Skin:

This material has a low potential to cause allergic skin reactions; however, cases of human skin sensitization have been reported.

Acute toxicity data, if available, are listed below. Additional toxicity data may be available on request.

Oral LD-50:(rat) 5,800 mg/kg  
Oral LD-50:(rabbit) 7,900 mg/kg  
Oral LD-50:(dog) 6,200 mg/kg  
Inhalation LC-50: (rat) 8 h: 12000 ppm  
Dermal LD-50: ( rabbit) 16.4 ml/kg  
Skin Irritation (rabbit) slight  
Eye Irritation (rabbit) moderate

## 12. ECOLOGICAL INFORMATION

Acute toxicity data, if available, are listed below. Additional toxicity data may be available on request.

### Oxygen Demand Data:

BOD-5: 1,190 - 1,720 mg/g  
BOD-20: 1,680 mg/g  
COD: 2,230 mg/g  
ThBOD: 2,400 mg/g

### Acute Aquatic Effects Data:

96 h LC-50 (fathead minnow): > 1000 ul/l  
48 h LC-50 (golden orfe): 8970 - 9280 mg/l  
96 h LC-50 (daphnid): > 1000 ul/l

## 13. DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal may be subject to national, state, or local laws. Mix with compatible chemical which is less flammable and incinerate. Since emptied containers retain product residue, follow label warnings even after container is emptied. Residual vapors may explode on ignition; do not cut, drill, grind, or weld on or near this container.

14. TRANSPORT INFORMATION

Marine pollutant components: none unless listed below

DOT (USA): Class 3 Packing group II

ICAO Status: Class 3 Packing group II

IMDG Status: Class 3 Packing group II

15. REGULATORY INFORMATION

WHMIS (Canada) Status: controlled

WHMIS (Canada) Hazard Classification: B/2, D/2/B

SARA 311-312 Hazard Classification(s):

immediate (acute) health hazard fire hazard

SARA 313: none, unless listed below

Carcinogenicity Classification (components present at 0.1% or more):

none, unless listed below

TSCA (US Toxic Substances Control Act): This product is listed on the TSCA inventory. Any impurities present in this product are exempt from listing.