

MATERIAL SAFETY DATA SHEET

AUG 0-8 1994

EFFECTIVE DATE: November 1, 1983

Pure Pac Alcohol

10-0651

7/84

Union Carbide Corporation urges the customer receiving this Material Safety Data Sheet to study it carefully to become aware of hazards, if any, of the product involved. In the interest of safety you should (1) notify your employees, agents, and contractors of the information on this sheet, (2) furnish a copy to each of your customers for the product, and (3) request your customers to inform their employees and customers as well.

I. IDENTIFICATION

PRODUCT NAME: ISOPROPANOL, 91%-PM437

70% (PM-3997)

CHEMICAL NAME:

CHEMICAL FAMILY: Alcohols

FORMULA: $(CH_3)_2CHOH$

MOLECULAR WEIGHT: 60.10

SYNONYMS: Isopropyl Alcohol, 91%

(+ 70%)

DEPARTMENT OF TRANSPORTATION

Hazard Classification
Shipping Name

Flammable Liquid
Isopropanol

CAS # 67-63-0

CAS NAME

2-Propanol

II. PHYSICAL DATA

BOILING POINT,
760 mm Hg

101.325 kPa
80.4°C (176.7°F)

FREEZING POINT

-50°C (~ -27°C)
(-58°F) (~ -17°F)

SPECIFIC GRAVITY
(H₂O = 1)

(~ 0.87)
0.8159 at 20/20°C

VAPOR PRESSURE
at 20°C.

(4.5 kPa)
34 mmHg (~ 30 mm)

VAPOR DENSITY
(air = 1)

2.1

SOLUBILITY IN
WATER, % by wt.

at 20°C
100

PERCENT VOLATILES
BY VOLUME

100

EVAPORATION RATE
(Butyl Acetate = 1)

~3

APPEARANCE AND ODOR

Clear liquid; alcohol odor.

III. INGREDIENTS

MATERIAL	%	TLV	HAZARD
Isopropanol	~91 (70)	400 PPM	Eye irritant.
Water	~9 (30)	--	--

IV. FIRE AND EXPLOSION HAZARD DATA

FLASH POINT

65°F, Tag Closed Cup
71°F, Tag Open Cup

(71°F. TCC
78°F. TOC)

FLAMMABLE LIMITS
IN AIR, % by volume

LOWER 2.0

UPPER 12.7 at 200°F

EXTINGUISHING
MEDIA

Alcohol-type or universal-type foams applied by manufacturers recommended techniques for large fires. Carbon dioxide or dry-chemical for small fires.

SPECIAL FIRE FIGHTING
PROCEDURES

Use water spray to cool fire-exposed containers and structures. Use self-contained breathing apparatus and protective clothing when fighting fire in enclosed area.

UNUSUAL FIRE AND
EXPLOSION HAZARDS

Isopropanol vapors are heavier than air and may travel a long distance to an ignition source and flash back.

EMERGENCY PHONE NUMBER • 304/744-3487 • This number is available days, nights, weekends, and holidays.

V. HEALTH HAZARD DATA

TLV AND SOURCE:

400 PPM: ACGIH 1983 and OSHA 29 CFR, para. 1910.1000.

EFFECTS OF ACUTE OVEREXPOSURE

SWALLOWING	Slightly toxic, ingestion of a large quantity may cause drowsiness and loss of consciousness. Stomach cramps, pain, nausea, vomiting, and diarrhea may also occur.
SKIN ABSORPTION	None currently known.
INHALATION	Low concentrations may cause mild irritation of eyes, nose, and throat. Concentrations above the TLV may result in headache and drowsiness.
SKIN CONTACT	Prolonged contact may cause drying and cracking of skin.
EYE CONTACT	Causes slight to moderate irritation, with possible corneal injury.

EFFECTS OF REPEATED OVEREXPOSURE

None currently known.

OTHER HEALTH HAZARDS

None currently known.

EMERGENCY AND FIRST AID PROCEDURES:

SWALLOWING	Give two glasses of water and induce vomiting. If a significant quantity has been swallowed, get medical attention promptly.
SKIN	Remove contaminated clothing and flush skin with water.
INHALATION	Remove to fresh air. If breathing stops, give artificial respiration and get medical attention as soon as possible.
EYES	Flush eyes immediately with large quantities of water. Get medical attention.

NOTES TO PHYSICIAN

There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition.

VI. REACTIVITY DATA

STABILITY		CONDITIONS TO AVOID	Heat, fire, ignition sources.
UNSTABLE	STABLE		
	X		
INCOMPATIBILITY (materials to avoid)		Avoid concentrated nitric and sulfuric acids, strong oxidizers, aldehydes, halogens, and halogen compounds.	
HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS		Burning can produce carbon monoxide and/or carbon dioxide.	
HAZARDOUS POLYMERIZATION		CONDITIONS TO AVOID	None
May Occur	Will Not Occur		
	X		

VII. SPILL OR LEAK PROCEDURES

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED	Eliminate all sources of ignition. Wear suitable protective equipment. Small spills should be flushed with large quantities of water. Larger spills should be collected for disposal.
WASTE DISPOSAL METHOD	Incinerate in a furnace where permitted under appropriate Federal, State and local regulations; see Section IX.

VIII. SPECIAL PROTECTION INFORMATION

RESPIRATORY PROTECTION	Self-contained breathing apparatus in high concentrations.		
VENTILATION	This product should be confined within closed equipment, in which case general (mechanical) room ventilation should be satisfactory. Special, local ventilation is needed at points where vapors can be expected to escape to the workplace air.		
PROTECTIVE GLOVES	Butyl	EYE PROTECTION	Monogoggles
OTHER PROTECTIVE EQUIPMENT	Eye bath, safety shower.		

IX. SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING

Keep away from heat, sparks, and flame.
 Avoid contact with eyes.
 Avoid breathing vapors.
 Keep container closed.
 Use with adequate ventilation.
 Wash thoroughly after handling.

FOR INDUSTRY USE ONLY

OTHER PRECAUTIONS

Disposal - At very low concentrations in water (~10 ppm), isopropanol is readily biodegradable in a biological wastewater treatment plant.

The opinions expressed herein are those of qualified experts within Union Carbide Corporation. We believe that the information contained herein is current as of the date of this Material Safety Data Sheet. Since the use of this information and these opinions and the conditions of use of the product are not within the control of Union Carbide Corporation, it is the user's obligation to determine the conditions of safe use of the product.