



MATERIAL SAFETY DATA SHEET

AUG 02 1993

EXXON CHEMICAL AMERICAS, P.O. BOX 3272, HOUSTON, TEXAS 77001
A Division of EXXON CHEMICAL COMPANY, A Division of EXXON CORPORATION

IPA - ANHYDROUS

PAGE: 1
DATE PREPARED: MAY 3, 1993
MSDS NO.: 90275000

SECTION 1 PRODUCT IDENTIFICATION & EMERGENCY INFORMATION

PRODUCT NAME: IPA - anhydrous

CHEMICAL NAME:

2-Propanol

CAS 67-63-0

CHEMICAL FAMILY:

Aliphatic Alcohol

PRODUCT DESCRIPTION:

Clear colorless liquid.

EMERGENCY TELEPHONE NUMBERS: EXXON CHEMICAL AMERICAS 800-726-2015
CHEMTREC 800-424-9300

SECTION 2 HAZARDOUS INGREDIENT INFORMATION

This product is hazardous as defined in 29 CFR 1910.1200.

OSHA HAZARD

Flammable

PEL; TLV

Eye irritant

For additional information see Section 3.

SECTION 3 HEALTH INFORMATION & PROTECTION

NATURE OF HAZARD

EYE CONTACT:

Irritating, and will injure eye tissue if not removed promptly.

SKIN CONTACT:

Frequent or prolonged contact may irritate and cause dermatitis.
Low order of toxicity.

INHALATION:

High vapor concentrations are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anesthetic and may have other central nervous system effects.

Negligible hazard at ambient temperature (-18 to 38 Deg C; 0 to 100 Deg F)

INGESTION:

Minimal toxicity.

Small amounts of the liquid aspirated into the respiratory system during ingestion, or from vomiting, may cause bronchiopneumonia or pulmonary edema.

FIRST AID

EYE CONTACT:

Immediately flush eyes with large amounts of water for at least 15 minutes. Get prompt medical attention.

SKIN CONTACT:

Immediately flush with large amounts of water; use soap if available.
Remove contaminated clothing, including shoes, after flushing has begun.

IPA - ANHYDROUSPAGE: 2
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Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing is stopped. Keep at rest. Call for prompt medical attention.

INGESTION:

If swallowed, DO NOT induce vomiting. Keep at rest. Get prompt medical attention.

ACUTE TOXICITY DATA IS AVAILABLE UPON REQUEST.**WORKPLACE EXPOSURE LIMITS****OSHA REGULATION 29CFR1910.1000 REQUIRES THE FOLLOWING PERMISSIBLE EXPOSURE LIMITS:**

A TWA of 400 ppm (980 mg/m³) and a STEL of 500 ppm (1225 mg/m³) for Isopropyl Alcohol.

The recommended permissible exposure levels indicated above reflect the levels revised by OSHA in 1989 or in subsequent regulatory activity. Although the 1989 levels have since been vacated by the 11th Circuit Court of Appeals, Exxon Chemical recommends that the lower exposure levels be observed as reasonable worker protection.

THE ACGIH RECOMMENDS THE FOLLOWING THRESHOLD LIMIT VALUES:

a TWA of 400 ppm (983 mg/m³), and a STEL of 500 ppm (1230 mg/m³) for Isopropyl Alcohol.

PRECAUTIONS**PERSONAL PROTECTION:**

For open systems where contact is likely, wear long sleeves, chemical resistant gloves, and chemical goggles.

Where contact may occur, wear safety glasses with side shields.

Where concentrations in air may exceed the limits given in this Section and engineering, work practice or other means of exposure reduction are not adequate, NIOSH/MSHA approved respirators may be necessary to prevent overexposure by inhalation.

VENTILATION:

The use of mechanical dilution ventilation is recommended whenever this product is used in a confined space, is heated above ambient temperatures, or is agitated.

Use explosion-proof ventilation equipment.

CHRONIC EFFECTS:

In developmental toxicity studies conducted by the Chemical Manufacturers Association, unexpected acute toxicity was found when Isopropanol was administered to pregnant rabbits by gavage. There were no unexpected toxic effects in pregnant rats exposed in the same study. In rats there were some relatively mild developmental effects at maternally toxic levels. There was no evidence of developmental toxicity in the rats at levels which did not also produce maternal toxicity. There were no indications of developmental toxicity in the rabbits at any exposure level. Findings from a multigeneration reproduction study indicate that infant and immature rats are more sensitive than their parents to the acute oral toxicity induced by high (1000 mg/kg/day) doses of Isopropanol. The effect levels for rats and rabbits were at several times the maximum exposure that would occur at the TLV. This information has been reported to the U.S. EPA under the provisions of Section 8(e) of TSCA.

CHRONIC TOXICITY DATA IS AVAILABLE UPON REQUEST



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SECTION 4 FIRE & EXPLOSION HAZARD

FLASHPOINT: 54 Deg F. **METHOD:** TCC
FLAMMABLE LIMITS: LEL: 2.0 UEL: 12.7 @ 77 Deg F.
AUTOIGNITION TEMPERATURE: > 662 Deg F.

GENERAL HAZARD:

Flammable Liquid, can release vapors that form flammable mixtures at temperatures at or above the flashpoint.
"Empty" containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, properly bunged and promptly returned to a drum reconitioner, or properly disposed of.

FIRE FIGHTING:

Use water spray to cool fire exposed surfaces and to protect personnel. Shut off "fuel" to fire. If a leak or spill has not ignited, use water spray to disperse the vapors.
Either allow fire to burn under controlled conditions or extinguish with alcohol type foam and dry chemical. Try to cover liquid spills with foam.

HAZARDOUS COMBUSTION PRODUCTS:

No unusual

SECTION 5 SPILL CONTROL PROCEDURE

LAND SPILL:

Eliminate sources of ignition. Prevent additional discharge of material, if possible to do so without hazard. For small spills implement cleanup procedures; for large spills implement cleanup procedures and, if in public area, keep public away and advise authorities. Also, if this product is subject to CERCLA reporting (see Section 7) notify the National Response Center.
Prevent liquid from entering sewers, watercourses, or low areas. Contain spilled liquid with sand or earth. Do not use combustible materials such as sawdust.
Recover by pumping (use an explosion proof or hand pump) or with a suitable absorbent.
Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

WATER SPILL:

Eliminate sources of ignition. Warn occupants and shipping in surrounding and downwind areas of fire and explosion hazard and request all to stay clear.
Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.



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SECTION 6 NOTES

HAZARD RATING SYSTEMS:

This information is for people trained in:
National Paint & Coatings Association's (NPCA)
Hazardous Materials Identification System (HMIS)
National Fire Protection Association (NFPA 704)
Identification of the Fire Hazards of Materials

	NPCA-HMIS	NFPA 704	KEY
HEALTH	2	1	4 = Severe
FLAMMABILITY	3	3	3 = Serious
REACTIVITY	0	0	2 = Moderate
			1 = Slight
			0 = Minimal

SECTION 7 REGULATORY INFORMATION

DEPARTMENT OF TRANSPORTATION (DOT):

DOT PROPER SHIPPING NAME:

ISOPROPANOL, Flammable Liquid UN1219

DOT HAZARD CLASS: Flammable liquid

DOT IDENTIFICATION NUMBER: UN 1219

NAME: Isopropanol (Isopropyl Alcohol)

FLASHPOINT: 54 Deg F. METHOD: TCC

TSCA:

This product is listed on the TSCA Inventory at CAS Registry Number 67-63-0

CERCLA:

If this product is accidentally spilled, it is not subject to any special reporting under the requirements of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). We recommend you contact local authorities to determine if there may be other local reporting requirements.

SARA TITLE III:

Under the provisions of Title III, Sections 311/312 of the Superfund Amendments and Reauthorization Act, this product is classified into the following hazard categories: Immediate health, Delayed Health, Fire.

This information may be subject to the provisions of the Community Right-to-Know Reporting Requirements (40 CFR 370) if threshold quantity criteria are met.

SECTION 8 TYPICAL PHYSICAL & CHEMICAL PROPERTIES

SPECIFIC GRAVITY:

0.79 at 68

VAPOR PRESSURE, mmHg at °F:

96 at 100

230 at 131

SOLUBILITY IN WATER, WT. % AT °F:

100.00 at 68

VISCOSITY OF LIQUID, CST AT °F:

3 at 68



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SP. GRAV. OF VAPOR, at 1 atm (Air=1): FREEZING/MELTING POINT, °F:
Greater than 1.00 -128
EVAPORATION RATE, n-Bu Acetate=1: BOILING POINT, °F:
2.3 180 to 181

SECTION 9 REACTIVITY DATA

STABILITY:

Stable

CONDITIONS TO AVOID INSTABILITY:

Not Applicable

HAZARDOUS POLYMERIZATION:

Will not occur

MATERIALS AND CONDITIONS TO AVOID INCOMPATIBILITY:

Caustics, amines, alkanolamines, aldehydes, strong oxidizing agents, and chlorinated compounds.

HAZARDOUS DECOMPOSITION PRODUCTS:

None

SECTION 10 STORAGE AND HANDLING

ELECTROSTATIC ACCUMULATION HAZARD:

No, but use proper grounding procedure

STORAGE TEMPERATURE, °F:

Ambient

STORAGE/TRANSPORT PRESSURE, mmHg:

Atmospheric

LOADING/UNLOADING TEMPERATURE, °F:

Ambient

VISC. AT LOADING/UNLOADING TEMP., cST:

3

REVISION SUMMARY:

Since SEPTEMBER 15, 1992 this MSDS has been revised in Section(s):

5

REFERENCE NUMBER:

HDHA-C-00021

DATE PREPARED:

May 3, 1993

SUPERSEDES ISSUE DATE:

September 15, 1992

FOR ADDITIONAL PRODUCT INFORMATION, CONTACT YOUR TECHNICAL SALES REPRESENTATIVE
FOR ADDITIONAL HEALTH/SAFETY INFORMATION, CALL 713-870-6884

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