

WARD'S 530 - Chemist's

MATERIAL SAFETY DATA SHEET

Natural Science Establishment Inc.
 O. Box 12017, 14692 9012
 World's Natural Science Establishment, Ltd.
 1840 Matthews Avenue
 Massachusetts, Ontario L4X 1K1
 (716) 359-2502

MSDS No. IX 235
 Effective Date July 1, 1986

SECTION I NAME

24 HOUR EMERGENCY ASSISTANCE

Product	ISOPROPYL ALCOHOL	CHEMTREC 800-424-9300	Health	1
Chemical Synonyms	Isopropanol; 2-Propanol	Day 716-226-6177 Night 716-334-4222	Fire	3
Formula	CH ₃ CHOHCH ₃	NEPA	Reactivity	1
Unit(s) Size	30, 100, 500 mL; 4, 20 Liters	HAZARD RATING	LEAST	0
C.A.S. No.	67-63-0		SLIGHT	1
			MODERATE	2
			HIGH	3
			EXTREME	4

SECTION II HAZARDOUS INGREDIENTS OF MIXTURES

Principal Hazardous Component(s)	%	TLV Units
[Isopropyl Alcohol]	>99%	400ppm (SKIN)*
WARNING: FLAMMABLE		*See Section V
Keep away from heat, sparks, and flame.		

SECTION III PHYSICAL DATA

Melting Point (°F)	-90°C (-130°F)	Specific Gravity (H ₂ O = 1)	0.786 @ 20/20°C
Boiling Point (°F)	82°C (180°F)	Percent Volatile by Volume (%)	100%
Vapor Pressure (mm Hg)	33mm @ 20°C	Evaporation Rate (n-Butyl Acetate = 1)	1.5
Vapor Density (Air = 1)	2.1		
Solubility in Water	Complete		
Appearance and Odor	Clear, colorless liquid; mild alcohol odor.		

SECTION IV FIRE AND EXPLOSION HAZARD DATA

Flash Point (Method Used)	53°F (11.7°C) (TCC)	Flammable Limits in Air	Lower 2.5 @ 26°C Upper 12.1 @ 66°C
Extinguisher	"Alcohol foam"; Carbon dioxide (CO ₂); Dry chemical (ABC); Water spray.		
SPECIAL FIREFIGHTING PROCEDURES	Autoignition Temperature; 432°C (810°F) (ASTM-E659-78) Cool Flame; 360°F (680°F) (ASTM-E659-78) Wear an NIOSH-approved self-contained breathing apparatus.		

UNUSUAL FIRE AND EXPLOSION HAZARDS

Vapors are heavier than air and may travel along the ground or may be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors, or other ignition sources at locations distant from material handling point.
CAUTION! Flame may not be visible in daylight. Fire or excessive heat may produce hazardous decomposition products; can react vigorously with oxidizing materials.

D.O.T. FLAMMABLE LIQUID

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20

SECTION V HEALTH HAZARD DATA

Threshold Limited Value
 TLV: 400ppm; 980mg/m³ (AIR); STEL: 500ppm, 1, 225mg/m³ (ACGIH 1983-84) (AIR).
 Human, oral LD50 2371mg/kg. Rabbit, skin LD50 15mg/kg.

Effects of Overexposure
 (drowsiness, sleepiness). EYES: Liquid may cause irritation. SKIN: Prolonged or repeated skin contact may cause skin irritation and drying, cracking and defatting of the skin.
 INGESTION: 100 mL can be fatal.

Emergency and First Aid Procedures

Remove to fresh air; observe for 30 minutes for intoxication signs. Get medical assistance for serious exposure. SKIN CONTACT: Flush with water. EYES: Flush with water for 15 minutes. Get medical attention. INGESTION: If swallowed, if conscious, give one or two glasses of water to drink. Induce vomiting and call physician.

SECTION VI REACTIVITY DATA

Stability	Unstable	Conditions to Avoid	Excessive temperatures or heat.
	Stable		
Incompatibility (Materials to avoid)	Strong oxidizing materials can react vigorously with this alcohol.		

Hazardous Decomposition Products

Thermal decomposition or burning will produce carbon dioxide and/or carbon monoxide.

SECTION VII SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled
 Remove all ignition sources. Provide adequate ventilation. This material is handled and disposed of as a flammable liquid. Absorb small spills on paper; evaporate [isopropyl alcohol] in an exhaust hood; burn paper after evaporation or flush down sewer with copious amounts of water.

Waste Disposal Method

Dispose of in an approved incinerator or contract with licensed waste disposal service.

SECTION VIII SPECIAL PROTECTION INFORMATION

Respiration Protection (Specify Type)	None should be needed in normal laboratory use at room temperature. Work in fume hood.
Ventilation	Local Exhaust Recommended Mechanical (General) Recommended Other No
Protective Gloves	Rubber Other Protective Equipment Goggles, lab coat, eye wash station, proper gloves, ventilation hood, fire extinguisher.
Eye Protection	Chemical safety glasses.

SECTION IX SPECIAL PRECAUTIONS

Precautions to be Taken in Handling and Storing
 Store in a cool, dry place away from strong oxidizing materials and fire hazards. Wash thoroughly after handling.
 Keep container tightly closed when not in use.

Other Precautions

Read label on container before using.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

Rev. No. 1 Date 1/19/87 Approved *William W. Swartz* Chemical Safety Coordinator