CUMBERLAND SWAN.

Material Safety Data Sheet

SECTION 1:Chemical Product and Company Identification

Manufacturer: Cumberland Swan
One Swan Drive
Smyrna, TN 37167

Date: March 2000

Product: Isopropyl Alcohol (IPA)

50%, 70%, 91% and 99% IPA

Telephone: (615) 459-8900
24hr Emergency: (615) 459-8900 ext. 5270

SECTION 2: Composition/Information on Ingredients

Name: Isopropanol, IPA, 2-Propanol, Dimethyl Carbinol CAS#: 67-63-0

SECTION 3: Hazards Identification

Colorless, volatile liquid with the odor of rubbing alcohol. Isopropyl Alcohol is a dangerous fire risk. Prolonged exposure to elevated concentrations of vapors may result in irritation of the eyes, nose, and throat and central nervous system (CNS) depression. Prolonged dermal exposure can result in dry, cracking skin.

Potential Routes of Exposure: Ingestion, inhalation, dermal contact, eye contact

Target Organs: Eyes, skin, respiratory system

Symptoms of Overexposure:

Inhalation:	Mild irritation of eyes, nose and throat.
Ingestion:	Drowsiness, headache
Dermal Contact:	Dry, cracking skin
Acute Effects:	Irritation of skin and/or upper respiratory tract as noted above. Acute CNS depression may be manifested as giddiness, headache, dizziness and/or nausea.
Chronic Effects:	Chronic exposure can result in skin irritation and contact dermititus Pre-existing disorders of the skin, eyes, and respiratory tract may be exacerbated by exposure to isopropyl alcohol.

HMIS: H=1, F=3, R=0 See Section 8 for PPE information

SECTION 4: First Aid Measures

Eye:	Flush eyes with copious amount of water for at least 15 minutes
Skin:	Flush with water. If irritation persists, seek medical attention.
Ingestion:	Do not induce vomiting if victim is unconscious or drowsy. Seek medical attention or contact the poison control center.
Inhalation:	Remove victim to fresh air and provided oxygen if breathing is difficult. Seek Medical attention if breathing continues to be difficult.

SECTION 5: Fire Fighting Measures

Extinguishing Media:	Use water fog, alcohol foam, dry chemical or CO2
Unusual Fire or Explosion Hazards:	Containers exposed to intense heat from fires should be cooled with large amounts of water to prevent buildup of internal pressure due to vapor generation which could result in container rupture.
Recommendations:	Clear area of unprotected personnel. Wear complete turnout gear. Cool containers exposed to fire with water.

SECTION 6: Accidental Release Measures

Large Spills:	Eliminate all ignition sources. Equipment must be grounded to prevent sparking. Evacuate the area of unprotected personnel. Contain source of spill. Dike or otherwise confine spilled product. Uncontrolled releases to air, land, or water may be reportable to the National Response Center (1-800-424-8802).
Small Spills:	Take up with absorbent material and place in non-leaking container; seal tightly. Dispose of absorbent (see section 13)

SECTION 7: Handling and Storage

Storage Requirements:	Store in tightly closed containers in a cool, dry area away from heat and other possible ignition sources.
Handling precautions:	Use non-sparking tools to open containers. Maintain appropriate class of fire extinguishers nearby in case of fire.

SECTION 8: Exposure Controls / Personal Protection

OSHA PEL=400ppm OSHA STEL=500ppm IDLH=12,000ppm

Recommended Engineering Controls: Use explosion-proof ventilation equipment as necessary to maintain airborne concentrations below the PEL. Ground all containers to prevent static sparks during fluid transfers.

Recommended Admin Controls: Train employees on the hazards of Isopropyl Alcohol

PPE: Goggles, gloves, NIOSH approved respiratory protection required when above PEL/TWA

Recommended Hygiene Practices: Clean PPE and work clothing contaminated prior to reuse. After working with this product, be sure to wash before eating, smoking, drinking, or applying cosmetics.

SECTION 9: Physical and Chemical Properties

Appearance: Colorless Liquid UEL: 12% LEL: 2%

Odor: Mild Rubbing Alcohol Odor Threshold: 43ppm Water solubility: Miscible

	50% IPA	70%IPA	91%IPA	99%IPA
Vapor Pressure (@ 68^0F) approx.	29mm	23mm	33mm	33mm
Specific Gravity	.929	.878	.790	.790
Boiling Point	176 ^{0} F	176 ^{0} F	180 ^{0} F	181 ^{0} F
Flash Point (TAG Open Cup)	74.5 ^{0} F	70.5 ^{0} F	54 ^{0} F	53 ^{0} F
Freezing Point	-32-50 ^{0} C	-32-50 ^{0} C	-32-50 ^{0} C	-127 ^{0} F
Molecular Weight	47.5	47.5	47.5	60.1
Auto Ignition Temperature	No Data	No Data	No Data	750 ^{0} F

SECTION 10: Stability and Reactivity

Stability:	Stable
Polymerization:	Will not occur
Incompatible Chem:	Strong oxidizers, acetaldehyde, chlorine, ethylene oxide, acids, isocyanates
Conditions to avoid:	Heat, sparks, and open flame. Do Not store in aluminum > 120 ^{0} F
Hazardous Products:	CO and unidentified organic compounds may be formed of Decomposition

SECTION 11: Toxicological Information

LD50: 5,840 mg/kg (acute oral - rat); 13,000 mg/kg (acute dermal - rabbit)
LD50: 16,000 ppm/8hr (inhalation - rat) **Mutagenicity:** Not Indicated
LD_{lo} : 5,000 mg/kg (oral - rabbit) **Reproductive Effects**: Not Indicated
Carcinogenicity: Not identified as a carcinogen by OSHO, IARC, or NTP

SECTION 12: Ecological Information

Ecotoxicity: N/A **Environmental Fate:** N/A
Soil Absorption/Mobility: Highly Mobile
Environmental Degradation: Should be removed readily from soils and water by volatilization and biodegradation.

SECTION 13: Disposal Considerations

Disposal: Contact your supplier or a licensed contractor for detailed recommendations.
Disposal regulatory Requirements: Follow applicable Federal, state, and local regulations. Consider fuels blending as an alternative to incineration.

SECTION 14: Transport Information

DOT Shipping Name: Isopropanol DOT Packing Group: II
DOT Hazard Class: 3 DOT Label: Flammable Liquid
UN ID#: UN 1219

SECTION 15: Regulatory Information

RCRA Hazardous Waste Number/ Classification:D001 CERCLA Substance: N/A
HAZARDOUS AIR POLUTANT (CAA): No SARA 311/312 Codes: N/A
SARA Toxic Chemical: Yes, (Strong manufacturing only)
CERCLA Reportable Quantity: 10,000 lbs (Default)

SECTION 16: Other Information

Prepared by: Cumberland Swan
Sources of Information: 29 CFR1910.1000; NIOSH Pocket Guide to Chemical Hazards (1993); Occupational Health Guidelines for Chemical Hazards; NFPA Guide to Hazardous Materials - 10th Edition.
Disclaimer: While reasonable care has been taken to ensure the accuracy and completeness of the information regarding the material described herein, it is the purchaser's responsibility to ensure the suitability of such information as it applies to the purchaser's intended use of the material.