



SAFETY DATA SHEET

Section 1 – Product and Company Identification

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Trade Name: Flo-Dri
Product Type: Glass Cleanser

Product Code: 41626

Revision Date: Nov-14

Section 2 – Hazards Identification

Appearance: Clear Liquid **Odor:** Alcohol-like

Emergency Overview: **WARNING Irritant**



Warning! Flammable liquid and vapor. Causes respiratory tract irritation. This substance has caused adverse reproductive and fetal effects in animals. May cause central nervous system depression. Aspiration hazard if swallowed. Can enter lungs and cause damage. May cause kidney damage. May form explosive peroxides. May cause severe eye irritation and possible injury. Causes mild skin irritation. Target Organs: Kidneys, central nervous system, respiratory system, cardiovascular system, eyes, skin.

Potential Health Effects: [See section 11 for additional information]

Eye: Produces irritation, characterized by a burning sensation, redness, tearing, inflammation, and possible corneal injury. May cause transient corneal injury.

Skin: May cause irritation with pain and stinging, especially if the skin is abraded. Isopropanol has a low potential to cause allergic skin reactions; however, rare cases of allergic contact dermatitis have been reported. May be absorbed through intact skin.

Ingestion: Causes gastrointestinal irritation with nausea, vomiting and diarrhea. May cause kidney damage. May cause central nervous system depression, characterized by excitement, followed by headache, dizziness, drowsiness, and nausea. Advanced stages may cause collapse, unconsciousness, coma and possible death due to respiratory failure. Aspiration of material into the lungs may cause chemical pneumonitis, which may be fatal.

Inhalation: Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. May cause narcotic effects in high concentration. Causes upper respiratory tract irritation. Inhalation of vapors may cause drowsiness and dizziness.

Chronic: Prolonged or repeated skin contact may cause defatting and dermatitis. May cause reproductive and fetal effects. Laboratory experiments have resulted in mutagenic effects.

Section 3 – Composition/Information on Ingredients

<u>Ingredient Name:</u>	<u>CAS number</u>	<u>WT %</u>
Isopropanol	67-63-0	6.5
Ethylene Glycol	107-21-1	12.4

Section 4 – First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid.

Skin: In case of contact, flush skin with plenty of water. Remove contaminated clothing and shoes. Get medical aid if irritation develops and persists. Wash clothing before reuse.

Section 4 – First Aid Measures (continued)

Ingestion: Potential for aspiration if swallowed. Get medical aid immediately. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If vomiting occurs naturally, have victim lean forward.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Urine acetone test may be helpful in diagnosis. Hemodialysis should be considered in severe intoxication. Treat symptomatically and supportively.

Section 5 – Fire-fighting measures

General Information As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Flammable liquid and vapor. May form explosive peroxides. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

Extinguishing Media: Water may be ineffective. Do NOT use straight streams of water. For large fires, use dry chemical, carbon dioxide, alcohol-resistant foam, or water spray. For small fires, use carbon dioxide, dry chemical, dry sand, or alcohol-resistant foam. Cool containers with flooding quantities of water until well after fire is out.

Autoignition Temperature: 399 deg C (750.20 deg F)

Flash Point: 46.1 deg C (115.0 deg F)

Explosion Limits: Lower: 2.0 vol %

Explosion Limits: Upper: 12.7 @ 93.3f C

NFPA Rating: health: 1; flammability: 2; instability: 0;

Section 6 – Accidental Release Measures

General Information Use proper personal protective equipment as indicated in section 8

Spill/Leaks Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

Section 7 – Handling & Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Loosen closure cautiously before opening. Contents may develop pressure upon prolonged storage. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Take precautionary measures against static discharges. Keep container tightly closed. Do not ingest or inhale. Use only in a chemical fume hood. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Use only with adequate ventilation. Avoid breathing vapor or mist.

Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Do not store in direct sunlight. Store in a tightly closed container. Keep from contact with oxidizing materials. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. After opening, purge container with nitrogen before reclosing. Periodically test for peroxide formation on long-term storage. Addition of water or appropriate reducing materials will lessen peroxide formation. Store protected from moisture

Section 8 – Exposure Control/Personal Protection

Ingredient Name: Occupational exposure limits

	AGCIH	NIOSH	OSHA
Isopropyl Alcohol	200 ppm; 400 ppm STEL	400 ppm TWA; 980 mg/m ³ TWA 2000 ppm IDLH (10% LEL)	400 ppm TWA; 980 mg/m ³ TWA
Water	None listed	None listed	None listed
Ethylene Glycol	100 mg/m ³	None listed	400 ppm; TWA 500 ppm
Polyglycol	None listed	None listed	None listed

Engineering Use adequate general or local exhaust to keep airborne concentrations below the permissible exposure levels

Personal Protective Equipment

Eyes Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin Wear appropriate protective gloves to prevent skin exposure.

Clothing Wear appropriate protective clothing to prevent skin exposure.

Respirators Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN149. Always use a NIOSH or European EN149 approved respirator when necessary.

Section 9 – Physical & Chemical Properties

Appearance (physical state, color, etc.)	Liquid
Odor	Alcohol-like
pH	no data
Melting point/freezing point	no data
Boiling point	99.44 deg C @ 760 mmHg (211 deg F)
Flash point	46.1 deg C (115.0 deg F)
Evaporation Rate	<1 (n-butyl acetate=1)
Famability (solid/gas)	Flammable Liquid
Lower flammable limit	2.0 vol %
Upper flammable limit	12.7 @ 93.3f C
Vapor pressure	68 mm Hg @ 20 deg C
Vapor density	>1 (Air=1)
Relative density	1.028 (water=1)
Water solubility	Miscible
Partition coefficient: n-octanol/water	No Data
Auto ignition temperature	No Data
Decomposition temperature	No Data
Viscosity	No data

Section 10 – Stability & Reactivity

Stability Stable under normal temperatures and pressures.

Conditions to avoid High temperatures, sources of ignition, incompatible materials.

Materials to avoid Oxidizing agents, reducing agents,

Hazardous Decomposition Products Thermal decomposition may produce carbon monoxide.

Section 11- Toxicological Information

Acute toxicity

Ingredient Name: Isopropyl Alcohol

Section 11- Toxicological Information (continued)

Draize test, rabbit, eye: 100 mg Severe;
Draize test, rabbit, eye: 10 mg Moderate;
Draize test, rabbit, eye: 100 mg/24H Moderate;
Draize test, rabbit, skin: 500 mg Mild;
Inhalation, mouse: LC50 = 53000 mg/m³;
Inhalation, rat: LC50 = 16000 ppm/8H;
Inhalation, rat: LC50 = 72600 mg/m³;
Oral, mouse: LD50 = 3600 mg/kg;
Oral, mouse: LD50 = 3600 mg/kg;
Oral, rabbit: LD50 = 6410 mg/kg;
Oral, rat: LD50 = 5045 mg/kg;
Oral, rat: LD50 = 5000 mg/kg;
Skin, rabbit: LD50 = 12800 mg/kg;

Other Toxicological Information

Carcinogenicity: Isopropyl alcohol - IARC: Group 3 (not classifiable) Water - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.

Section 12 – Ecological Information

Environmental effects No known significant effects or critical hazards. Ethylene Glycol and Methanol are expected to biodegrade in soil and water very rapidly.

Aquatic Eco toxicity Fish: Goldfish: > 5000 mg/L; 24 Hr; Modified ASTM D 1345 bioassay
Fish: Fathead Minnow: 11,830 mg/L; 1 Hr; Static bioassay

Other adverse effects Dangerous to aquatic life in high concentrations.

Section 13 – Disposal Considerations

Waste disposal Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.

RCRA P-Series: None listed

RCRA U-Series:

Section 14 – Transportation Information

The data in this section is for information only and may not be specific to your package size or mode of transport. You will need to apply the appropriate regulation to properly classify your shipment.

US DOT

Shipping Name: Please contact The Embalmers' Supply Company for shipping information

Hazard Class:

UN Number:

Packing Group:

Canada TDG

Shipping Name: Not available

Hazard Class:

UN Number:

Packing Group:

Section 15 – Regulatory Information

US regulations

TSCA

CAS# 67-63-0 is listed on the TSCA Inventory.

Section 15 – Regulatory Information (continued)

CAS# 7732-18-5 is listed on the TSCA Inventory.

Canada

CAS# 67-63-0 is listed on Canada's DSL List

CAS# 7732-18-5 is listed on Canada's DSL List

Canadian WHMIS Classifications: D2B, B3

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations

Section 15 – Regulatory Information (continued)

and the MSDS contains all of the information required by those regulations.

CAS# 67-63-0 is listed on Canada's Ingredient Disclosure List

CAS# 7732-18-5 is not listed on Canada's Ingredient Disclosure List.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: Xi

Risk Phrases:

R 10 Flammable.

R 36 Irritating to eyes.

R 67 Vapours may cause drowsiness and dizziness.

Safety Phrases:

S 7 Keep container tightly closed.

S 16 Keep away from sources of ignition - No smoking.

S 24/25 Avoid contact with skin and eyes.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

Section 16 – Other Information

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