837LFWS

Safety Data Sheet

Section 1: Product and Company Identification

Product Identifier and Other Means of Identification

Product Identifier: 837LFWS

Other Means of Identification: Liquid Flux: Lead Free, Water Soluble / Flux Liquide : Sans Plomb et Soluble dans l'Eau

Related Part # 837LFWS-1L, 837LFWS-4L

Recommended Use and Restriction on Use

Use: Water soluble flux

Uses Advised Against: Not applicable

Details of Manufacturer or Importer

Manufacturer
MG Chemicals
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CANADA

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FAX +1-800-340-0773
E-MAIL support@mgchemicals.com
WEB www.mgchemicals.com

MG Chemicals (Head Office)
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Surrey, British Columbia V4N 4E7
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FAX +1-905-331-2682
E-MAIL info@mgchemicals.com

E-MAIL (Competent Person): sds@mgchemicals.com

Emergency Phone Number

For hazardous material incidents ONLY (leaks, spills, fires, exposures or accidents)
USA or CANADA—Call Verisk 3E at ***+1-866-519-4752*** or ***+1-760-476-3962***
(Service access code: 335388)

For emergencies involving the transport of dangerous goods; 24/7 service
CANADA—Call CANUTEC collect at ***+1-613-996-6666*** or ****666*** on cellular phones

Section 2: Hazards Identification

Classification of Hazardous Chemical

GHS Categories

Criteria	Category	Signal Word	Pictograms
Flammable Liquid	2	Danger	Flame
Eye irritation	2A	Warning	Exclamation
Specific Target Organ Toxicity Single Exposure	3	Warning	Exclamation

Note: The degree of severity is ranked within each hazard class from 1 (Highest Severity) to up to 5 (Lowest Severity). Severity categories rankings do not allow comparisons between classes.

Label Elements

Signal Word	**DANGER**
Pictograms	**Hazard Statements**
	H225: Highly flammable liquid and vapor
	H319: Causes serious eye irritation H336: May cause drowsiness and dizziness

Section continued on the next page

Prevention	Precautionary Statements
P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical, ventilating, and lighting equipment.
P243	Take precautionary measures against static discharge.
P261	Avoid breathing vapors or mist.
P271	Use only outdoors or in well-ventilated area.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves and eye protection.
Response	**Precautionary Statements**
P370 + P378	In case of fire: Use dry chemical, carbon dioxide, chemical foam, or water spray to extinguish.
P303 + P361+ P352	IF ON SKIN (or hair): Take off immediately all contaminated. Rinse skin with water or shower.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice or attention.
P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTRE or doctor if you feel unwell.
Storage	**Precautionary Statements**
P403 + P235	Store in well ventilated place. Keep cool.
P405	Store locked up.
Disposal	**Precautionary Statements**
P501	Dispose of contents in accordance to local, regional, national, and international regulations.

Other Hazards

Other Criteria	Hazard Statements/Precautionary Statement	Signal Word	Pictograms
Defats skin	Repeated exposure may cause skin dryness or cracking.	None	None

Section 3: Hazardous Ingredients

CAS #	Chemical Name	%(weight)
67-63-0	propan-2-ol [a)]	75%
56-81-5	glycerol	2%

a) Commonly known as isopropyl alcohol (IPA)

Section 4: First-Aid Measures

Exposure Condition	*GHS Code: Precautionary Statement*
IF ON SKIN (or hair)	P303 +P361 + P352
Immediate Symptoms	*redness, dry skin, mild irritation*
Response	Take off immediately all contaminated clothing. Rinse skin with water or shower.
IF IN EYES	P305 + P351 + P338, P337 + P313
Immediate Symptoms	*irritation, tearing, redness, pain*
Response	Rinse cautiously with water for 15 minutes or more. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.
IF INHALED	P304 + P340, P312
Immediate Symptoms	*cough, dizziness, drowsiness, headaches, weakness*
Response	Remove person to fresh air and keep comfortable for breathing. If feeling unwell: Call a POISON CENTRE or doctor.
IF SWALLOWED	P301 + P330 + P331
Immediate Symptoms	*nausea, headaches, dizziness, weakness, unconsciousness*
Response	Rinse mouth. Do NOT induce vomiting.

Section 5: Fire-Fighting Measures

Response	In case of fire: Use dry chemical, carbon dioxide, water fog, or chemical foam to extinguish. Use water spray to cool containers.
Specific Hazards	Vapors may accumulate in low-lying areas. Vapors may travel long distances and ignite at an ignition source, which can cause a flashback or an explosion.
Combustion Products	Combustion produces carbon oxides (CO, CO_2).
Fire-Fighter	Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

Section 6: Accidental Release Measures

Personal Protection	See personal protection equipment in Section 8.
Precautions for Response	Remove or keep away all sources of ignition or extreme heat. Avoid breathing vapors. Prevent spill from entering drains.
Environmental Precautions	Not applicable
Containment Methods	Contain with inert and non-flammable absorbent (such as soil, sand, vermiculite).
Cleaning Methods	Collect liquid in a sealable, solvent-resistant container. Sprinkle inert absorbent compound onto spill, then sweep into the container. Use water to remove the last traces of residue.
Disposal Methods	Dispose of spill waste according to Section 13.

Section 7: Handling and Storage

Prevention

Keep out of reach of children.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

For metal containers, ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment. Take precautionary measures against static discharge.

Avoid breathing vapors or mist. Use only outdoors or in a well-ventilated area. Keep container tightly closed.

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Handling Wear protective gloves and eye protection.
Wash hands thoroughly after handling.

Storage Store in a well-ventilated area. Keep cool.
Store locked up.

Section 8: Exposure Controls/Personal Protection

Substances with Occupational Exposure Limit Values

Chemical Name	Country	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
propan-2-ol	ACGIH U.S.A. OSHA PEL Canada AB Canada BC Canada ON Canada QC	200 ppm (TWA) 400 ppm 200 ppm 200 ppm 200 ppm 400 ppm	400 ppm Not established 400 ppm 400 ppm 400 ppm 500 ppm
glycerol (mist) *respirable fraction*	ACGIH U.S.A. OSHA PEL Canada AB Canada BC Canada ON Canada QC	*Withdrawn 2013* 5 mg/m^3 10 mg/m^3 10 mg/m^3 10 mg/m^3 10 mg/m^3	Not established Not established Not established Not established Not established Not established

Note: Ingredients are listed in descending weight contribution order (from greatest to least). The ACGIH[1], OSHA (Table Z-1), and Canadian provinces exposure limits were consulted. Limits from by RTECS database[2] and from suppliers' SDS were also consulted. Short term exposure limits (STEL) are usually for 15 min and long term permissible exposure limits (PEL) for 8 h.

Engineering Controls

Ventilation Keep airborne concentrations below exposure limits.

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Personal Protective Equipment

Eye protection	Wear appropriate protective eyeglasses or chemical safety goggles. **RECOMMENDATION:** Use safety glasses with lateral protection (side shields).
Skin Protection	For likely contacts, use of protective butyl rubber, nitrile, neoprene, polyethylene gloves or other chemically resistant gloves. For incidental contacts, use disposable nitrile or neoprene gloves, or other chemically resistant gloves. Do NOT use latex rubber, polyvinyl alcohol (PVA) or PVC gloves
Respiratory Protection	For over-exposures up to 10 x OEL of mist, vapors or spray, wear respirator such as a half-mask respirator with organic vapor cartridges. Above 10 x OEL, use a positive-pressure, air-supplied respirator or a self-contained breathing apparatus. **RECOMMENDATION:** Consult your local safety supply store to ensure that your respirator has a NIOSH (U.S.) approved filter cartridges appropriate for the ingredients listed in Section 3. The respirator should be fitted to the employee by a professional. Ensure vapor cartridges are stored in sealed plastic bags when not being used.

General Hygiene Considerations

Wash hands thoroughly with water and soap after handling.

Section 9: Physical and Chemical Properties

Physical State	Liquid	**Lower Flammability Limit**	2%
Appearance	Light amber	**Upper Flammability Limit**	12%
Odor	Alcohol like, ethereal	**Vapor Pressure @20 °C**	4.2 kPa [32 mmHg]
Odor Threshold	Not available	**Vapor Density**	>1 (Air =1)
pH	6.8–7.8	**Relative Density @25 °C**	0.85
Freezing/Melting Point	Not available	**Solubility in Water**	Partially soluble
Initial Boiling Point	≥81.8 °C [≥179 °F]	**Partition Coefficient n-octanol/water**	Not available
Flash Point a)	12 °C [54 °F]	**Auto-ignition Temperature**	456 °C [853 °F]
Evaporation Rate	<1.5 (ButAc = 1)	**Decomposition Temperature**	Not available
Flammability	Flammable	**Viscosity @40 °C**	<14 mm^2/s

a) Tag closed cup value

Section 10: Stability and Reactivity

Reactivity	At elevated temperatures, may react with aluminum and generate hydrogen gas.
Chemical Stability	Chemically stable at normal temperatures and pressures
Conditions to Avoid	Avoid flames, sparks, other ignition sources and incompatible substances.
Incompatibilities	Strong oxidizing agents, strong acids, strong bases, halogenated compounds, aluminum at temperatures ≥49 °C [≥120 °F]
Polymerization	Will not occur
Decomposition	Will not decompose under normal conditions. For thermal decomposition, see combustion products in Section 5.

Section 11: Toxicological Information

Summary of Effects and Symptoms by Routes of Exposure

Eyes	Causes serious eye irritation, tearing, redness, or pain.
Skin	Causes dry skin, redness, or mild irritation.
Inhalation	May cause drowsiness or dizziness. Excessive exposure may cause narcotic effects, weakness, headaches, and unconsciousness.
Ingestion	See inhalation symptoms.
Chronic	Prolonged or repeated exposure may defat skin and cause skin dryness and cracking, and local redness and discomfort.

Acute Toxicity (Lethal Exposure Concentrations)

Chemical Name	LD50 oral	LD50 dermal	LC50 inhalation
propan-2-ol	3 600 mg/kg Rat	12 800 mg/kg Rabbit	16 000 ppm 8 h Rat
glycerol	12 600 mg/kg Rat	10 000 mg/kg Rabbit	Not available

Note: Toxicity data from the RTECS[2] and ECHA databases were consulted. The data from supplier SDS were also consulted.

Other Toxicological Effects

Skin corrosion/irritation	Based on available data, the classification criteria are not met. Propan-2-ol causes mild skin irritation based on Draize tests on rabbits.
Serious eye damage/irritation	Causes severe eye irritation: propan-2-ol is a severe irritant based on Draize tests on rabbits.
Sensitization (allergic reactions)	Based on available data, the classification criteria are not met.
Carcinogenicity (risk of cancer)	None of the ingredients are classified or listed as a carcinogen by IARC, ACGIH, CA Prop 65, or NTP.
Mutagenicity (risk of heritable genetic effects)	Based on available data, the classification criteria are not met.

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Reproductive Toxicity (risk to sex functions)	Based on available data, the classification criteria are not met.
Teratogenicity (risk of fetus malformation)	Based on available data, the classification criteria are not met.
STOT-single exposure	Propan-2-ol can affect the central nervous system by inhalation causing drowsiness or dizziness.
STOT-repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Based on available data, the classification criteria are not met.

Section 12: Ecological Information

Ecological classifications are based on the IMDG/GHS criteria in conjunction with ecotoxicological data from our suppliers, the European Chemical Agency database (http://echa.europa.eu), and other reliable sources.

Based on available data, the mixture does not meet the environmental toxicant classification criteria.

- Propan-2-ol has a minimal LC50 96 h of 9 640 mg/L for Pimephales promelas (fathead minnow); an EC50 24 h of 5 102 mg/L Daphnia magna (water flea); and an EC50 72 h of 2 000 mg/L Desmodesmus subspicatus (green algae).

Acute Ecotoxicity

Available toxicity data for the mixture do not meet classification thresholds.

Chronic Ecotoxicity

Available toxicity data for the mixture do not meet classification thresholds.

Biodegradability

Not available

Other Effects

Not available

Section 13: Disposal Information

Dispose of contents in accordance with all local, regional, national, and international regulations.

Section 14: Transport Information

Ground

Refer to TDG (Canadian Transportation of Dangerous Goods regulations) and **USA DOT 49 CFR** (Parts 100 to 185) **Regulations.**

Sizes 1 L and under	Sizes greater than 1 L
837LFWS-1L **Limited Quantity** 	*837LFWS-4L* **UN number**: UN1219 **Shipping Name:** ISOPROPANOL **Class:** 3 **Packing Group**: II **Marine Pollutant:** No 

Air

Refer to ICAO-IATA Dangerous Goods Regulations.

	Sizes up to 5 L (passenger), 60 L (cargo)
	837LFWS-1L, 837LFWS-4L **UN number**: UN1219 **Shipping Name**: ISOPROPANOL **Class**: 3 **Packing Group**: II **Marine Pollutant**: No 

Sea

Refer to IMDG regulations.

Sizes 1 L and under	Sizes greater than 1 L
837LFWS-1L **Limited Quantity** 	*837LFWS-4L* **UN number**: UN1219 **Shipping Name**: ISOPROPANOL **Class**: 3 **Packing Group**: II **Marine Pollutant**: No 

Note: **Shipper must be appropriately trained and certified before involvement with the transport of dangerous goods.**

Section 15: Regulatory Information

Canada

Domestic Substance List (DSL)/Non-Domestic Substance Lists (NDSL)

All hazardous ingredients are listed on the DSL.

Hazardous Products Act (R.S.C., 1985, c. H-3)

The safety data sheet and label comply with the Hazardous Product Act and WHMIS 2015.

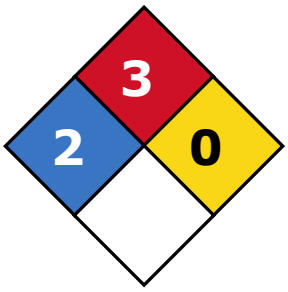
USA

Other Classifications

HMIS® RATING

HEALTH:	**2**
FLAMMABILITY:	**3**
PHYSICAL HAZARD:	**0**
PERSONAL PROTECTION:	

NFPA® 704 CODES



Approximate HMIS and NFPA Risk Ratings Legend:
0 (Low or none); 1 (Slight); 2 (Moderate); 3 (Serious); 4 (Severe)

CAA (Clean Air Act, USA)

This product does not contain any class 1 ozone depleting substances.

This product does not contain any class 2 ozone depleting substances.

This product does not contain substances that are listed as hazardous air pollutants.

EPCRA (Emergency Planning and Right to Know Act, USA, 40 CFR 372.45

This product contains up to 75% propan-2-ol (CAS# 67-63-0) which is subject to the reporting requirements of section 313 Title III of the SARA of 1986 and 40 CFR part 372.

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TSCA (Toxic Substances Control Act of 1976, USA)

All substances are TSCA listed.

California Proposition 65 (Chemicals known to cause cancer or reproductive toxicity, USA).

This product does not contain any of the listed substances.

Europe

RoHS (Restriction of Hazardous Substances Directive)

This product does not contain any lead, cadmium, mercury, hexavalent chromium, PBB's, PBDE's, DEHP, BBP, DBP, or DIBP and complies with European RoHS regulations.

WEEE (Waste Electrical and Electronic Equipment Directive)

This product is not a piece of electrical or electronics equipment, and is therefore not governed by this regulation.

Section 16: Other Information

SDS Prepared by	MG Chemicals' Regulatory Department
Date of Revision	03 March 2020
Supersedes	21 January 2016

Reason for Changes: Update to the emergency phone number information.

Reference

1) ACGIH 2017 TLVs and BEIs: Based on the documentation of the threshold limit values for chemical substances and physical agents & biological exposure indices, American Conference of Governmental of Industrial Hygienist Cincinnati, OH (2017).

2) All toxicological data were checked against the RTECS (Registry of Toxic Effects of Chemical Substances®)

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837LFWS

Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists (USA)
ECHA	European Chemicals Agency
EU	European Union
EC50	Half maximal effective concentration
EL50	Half maximal effective loading
IARC	International Agency for Research on Cancer
NOELR	No observable effect loading ratio
NTP	National Toxicology Program
GHS	Globally Harmonized System of Classification of Labeling of Chemicals
LC50	Lethal Concentration 50%
LCLo	Lowest published lethal concentration
LD50	Lethal Dose 50%
OEL	Occupational Exposure Limit
PEL	Permissible Exposure Limit
SDS	Safety Data Sheet
STEL	Short-Term Exposure Limit
TCLo	Lowest published toxic concentration
TWA	Time Weighted Average
VOC	Volatile Organic Content

Technical Queries Contact us regarding any questions, improvement suggestions, or problems with this product. Application notes, instructions, and FAQs are located at www.mgchemicals.com.

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