

ROSIN FLUX

835-LIQUID

Safety Data Sheet

Section 1: Product and Company Identification

Product Identifier and Other Means of Identification

Product Name: Rosin Flux**SDS Code:** 835-Liquid**Related Part #:** 835-P, 835-100ML, 835-1L, 835-4L

Recommended Use and Restriction on Use

Use: Activated rosin flux**Restriction on Use:** Not applicable

Details of Manufacturer or Importer

Manufacturer

MG Chemicals
1210 Corporate Drive
Burlington, Ontario L7L 5R6
CANADA

MG Chemicals (Head Office)
9347-193 Street
Surrey, British Columbia V4N 4E7
CANADA

☎ 1-800-340-0772

FAX 1-800-340-0773

E-MAIL: support@mgchemicals.comWEB www.mgchemicals.com

☎ 1-905-331-1396

FAX 1-905-331-2682

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

Emergency Phone Number

For hazardous material incidents ONLY—leaks, spills, fires, exposures or accidents
USA or CANADA: Call CHEMTREC ☎: **1-800-424-9300**

For emergencies involving dangerous goods: Collect 24/7
CANADA: Call CANUTEC ☎: **1-613-996-6666** or ***666** on cellular phones

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Section 2: Hazards Identification



Classification of Hazardous Chemical

WHMIS Classification



B2 – Flammable Liquid; D2B – Toxic Material (Eye Irritant; Skin sensitizer)

GHS Categories

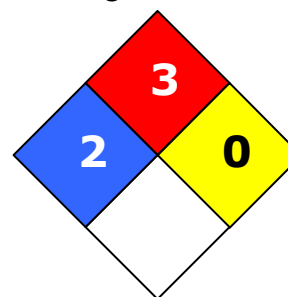
| Criteria | Category | Signal Word | Pictograms |
|--------------------------------|----------|-------------|--|
| Flammable liquid | 2 | Danger |  |
| Sensitization | 1 | Warning |  |
| Eye irritation | 2 | Warning | |
| Specific Target Organ Toxicity | 3 | Warning | |
| Skin irritation | 3 | Warning | |

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)

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Label Elements

| | |
|---|--|
| Signal Word | DANGER |
| Pictograms | Hazard Statements |
|  | H225: Highly flammable liquid and vapour |
|  | H319: Causes serious eye irritation H317: May cause allergic skin reaction H335: May cause respiratory irritation H336: May cause drowsiness and dizziness (narcotic effect by inhalation) |
| No Pictograms Mandated | H316: Causes mild skin irritation EUH066: Repeated exposure may cause skin dryness and cracking |
| | Precautionary Statements |
| Prevention | P102: Keep out of reach of children. P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking. P233: Keep container tightly closed. P242 + P241 + P243: Use only non-sparking tools. Use explosion-proof electrical/ventilating/lighting equipment. Take precautionary measures against static discharge. P261 + P271: Avoid breathing fumes/vapors. Use only outdoors or in well ventilated area. P264: Wash hands thoroughly after handling P272: Contaminated clothing should not be allowed out of the workplace. P280: Wear protective gloves/eye protection/face protection. |

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| Precautionary Statements (Continued) | |
|---|---|
| Response | <p>P370 + P378: In case of fire: Use dry chemical, carbon dioxide, chemical foam, or water spray to extinguish.</p> <p>P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P303 + P361+ P364 +P352: IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash it before reuse. Wash with plenty of water/shower.</p> <p>P332 + P337+ P313: If eye or skin irritation occurs or persists: Get medical advice/attention.</p> <p>P304+ P340 + P312: IF INHALED: Remove person to fresh air (out of the contaminated zone) and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell or concerned.</p> |
| Storage | <p>P403 + P235: Store in well ventilated place. Keep cool.</p> <p>P405: Store locked up.</p> |
| Disposal | <p>P501: Dispose of contents/container in accordance to local/regional/national/international regulations.</p> |

Other Hazards

When heated, rosin flux gives off fumes that can cause eye and respiratory irritation. Chronic exposure may lead to asthma or respiratory problems.

Frequent or prolonged skin contact may cause a skin rash (dermatitis)

Section 3: Hazardous Ingredients

| CAS # | Chemical Name | Wt% |
|--------------|----------------------|------------|
| 8050-09-7 | Rosin ^{a)} | 45%–51% |
| 78-92-2 | butan-2-ol | 25%–28% |
| 67-17-5 | ethanol | 23%–26% |

a) Also called colophony, gum rosin

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Section 4: First Aid Measures

| <i>Exposure Condition</i> | <i>GHS Code: Precautionary Statement</i> |
|--|--|
| IF IN EYES | P305 |
| Symptoms | Immediate: <i>irritation, redness, watering, eye prickling, swelling</i> |
| Response | P351: Rinse cautiously with water for several minutes. P338: Remove contact lenses, if present and easy to do. Continue rinsing. |
| If eye irritation persists | P310: Get medical advice/attention |
| IF ON SKIN (or hair) | P303 |
| Symptoms | Immediate: <i>irritation, dry or itchy skin, skin rash (dermatitis), skin cracking</i> |
| Response | P361 + P364: Take off immediately all contaminated clothing and wash it before reuse. P352: Wash with plenty of water/shower. |
| If skin irritation or rash occurs | P310: Get medical advice/attention |
| IF INHALED | P304 |
| Symptoms | Immediate: <i>irritation, runny or blocked nose, sore throat, drowsiness, dizziness, cough</i> |
| Response | P340: Remove person to fresh air (out of the contaminated zone) and keep comfortable for breathing. |
| If feeling unwell | P312: Call a POISON CENTRE/doctor |
| IF SWALLOWED | P301 (Not a likely route of exposure) |
| Symptoms | Immediate: <i>Irritation, burning sensation, nausea (also see inhalation symptoms)</i> |
| Response | P330: Rinse mouth. P331: Do NOT induce vomiting. |
| If feeling unwell | P312: Call a POISON CENTRE/doctor |

ROSIN FLUX**835-LIQUID****Section 5: Fire Fighting Measures**

| | | | | | |
|----------------------------------|---------------|----------------------------------|------------------|-------------------------------|-----------|
| Auto-ignition Temperature | Not available | Flash Point ^{a)} | 12 °C [54 °F] | LFL [LEL]^{b)} | 2.0% (v) |
| | | | | UFL [UEL] | 12.7% (v) |

In case of fire P370**Response** P378: Use dry chemical, carbon dioxide, chemical foam, or water spray to extinguish. Use water spray to cool containers.**Combustion Products** Produces CO and CO₂.**Fire-Fighter** Wear self-contained breathing apparatus for fire fighting**General Information** Vapors may accumulate in low-lying areas. They can cause flash fire or ignite explosively. Material may float and ignite on surface of water.

a) Closed cup value

b) LF[E]L = Lower Flammability [or Explosion] Limit (in volume %);
UF[E]L = Upper Flammability [or Explosion] Limit (in volume %)**Section 6: Accidental Release Measures****Personal Precautions, Equipment and Emergency Procedures****Personal Protection** Avoid breathing the fumes/vapors.**Protective Equipment** See Section 8.**Emergency Actions** Remove all sources of ignition.**Environmental Precautions****Emergency Action** Avoid release to the environment.**Methods and Material for Containment and Cleanup****Cleaning** Collect liquid in a sealable, solvent-resistant container. Sprinkle inert absorbent compound onto spill, then sweep into the container. Wash spill area with water to remove the last traces of residue.**Disposal** Dispose of spill waste according to Section 13.

ROSIN FLUX**835-LIQUID****Section 7: Handling and Storage**

Prevention P102: Keep out of reach of children.

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P242 + P241 + P243: Use only non-sparking tools. Use explosion-proof electrical/ventilating/lighting equipment. Take precautionary measures against static discharge.

P261 + P271: Avoid breathing fumes/vapors. Use only outdoors or in well ventilated area.

P270: Do not eat, drink, or smoke when using this product.

P272: Contaminated clothing should not be allowed out of the workplace.

Handling P280: Wear protective gloves/clothing/eye protection.

RECOMMENDATION: Wear neoprene, butyl rubber, nitrile or other impervious gloves with breakthrough time greater than intended use period.

P264: Wash hands thoroughly after handling.

Storage P233 + P403 + P235: Keep container tightly closed. Store in a well-ventilated area. Keep cool.

RECOMMENDATION: Keep in a dry and clean area, away from incompatible substances.

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Section 8: Exposure Controls/Personal Protection

Routes of Entry

Inhalation, eyes, and skin

Substances with Occupational Exposure Limit Values

| Chemical Name | Country | Long Term Exposure Limits (PEL) | Short Term Exposure Limits (STEL) | Notation |
|-------------------|--|--|--|---|
| | | ppm | ppm | |
| rosin (colophony) | ACGIH Canada BC Canada ON Canada QC | Not established Not established Not established 0.1 mg/m ³ | Not established Not established Not established Not established | Sensitizer, L ^{a)} Sensitizer, L ^{a)} L ^{a)} |
| butan-2-ol | ACGIH U.S.A. OSHA PEL Canada AB Canada BC Canada ON Canada QC | 100 (TWA) 150 100 100 100 100 | Not established — Not established Not established 150 Not established | Irr ^{a)} , CNS ^{b)} |
| ethanol | ACGIH U.S.A. OSHA PEL Canada AB Canada BC Canada ON Canada QC | 1 000 1 000 1 000 Not established Not established 1 000 | Not established Not established Not established 1 000 1 000 500 | |

Note: Ingredients are listed in descending weight contribution order (from greatest to least). The ACGIH¹, OSHA, and Canadian provinces exposure limits were consulted. Limits from by RTECS database² of the Canadian Centre for Occupational Health and Safety (CCOHS) **a data from suppliers' SDS were also consulted**. Short term exposure limits (STEL) are for 15 min and long term permissible exposure limits (PEL) for 8 h.

a) Exposure by all routes should be carefully controlled to levels as low as possible.

b) Eye and upper respiratory system irritant (Eye & URT irr); Central nervous system impairment (CNS impair)

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ROSIN FLUX**835-LIQUID****Engineering Controls****Ventilation**

Keep airborne concentrations below exposure limits.

RECOMMENDATION: For frequent or prolonged soldering processes, we recommend the use of a local exhaust system. For example, use a hood on a flexible arm, fume cabinet, or tip-mounted fume extraction system on the soldering iron.

Personal Protective Equipment**Eye protection**

Wear appropriate protective eyeglasses or chemical safety goggles.

RECOMMENDATION: Use safety glasses with lateral protection (side shields).

Skin Protection

Wear appropriate protective clothing to prevent skin contact.

RECOMMENDATION: Use of protective gloves in neoprene, butyl rubber, nitrile or other chemically resistant gloves.

Respiratory Protection

If exposed to high levels of mist/vapors/fumes, wear respirator such as a half-mask respirator.

RECOMMENDATION: Consult your local safety supply store to ensure your respirator has filter cartridges appropriate for the ingredients listed in section 3 of this MSDS, and that the respirator is 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.

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Section 9: Physical and Chemical Properties

| | | | |
|---|---------------------|---|----------------------|
| Physical State | Liquid | Appearance | Light amber |
| Odor | Mild alcohol | Odor Threshold | Not available |
| pH | Not available | Specific Gravity | 0.93 |
| Solubility in Water | Partially miscible | Freezing/Melting Point | 12 °C [53 °F] |
| Flash Point ^{a)} | 12 °C [53 °F] | Vapor Pressure ^{b)} @ 20 °C | 5.3 kPa [40 mmHg] |
| Boiling Point | ≥78 °C [≥174 °F] | Evaporation Rate | 1.9 (ButAc = 1) |
| Lower Flammability Limit ^{b)} | 3% | Upper Flammability Limit ^{b)} | 19% |
| Auto-ignition Temperature | Not available | Decomposition Temperature | Not available |
| Viscosity @40 °C | Not available | Vapor Density | >1.6 (Air = 1) |
| Partition Coefficient | Not available | VOC | 50% [456 g/L] |

a) Closed cup

b) Calculated from components using Raoult's Law and Le Chatelier's principle

Section 10: Stability and Reactivity

| | |
|----------------------------|---|
| Chemical Stability | Chemically stable at normal temperatures and pressures |
| Conditions to Avoid | Ignition sources, excessive heat, and incompatible substances. Vapors may form explosive mixture with air. |
| Incompatibilities | Strong oxidizing agents, strong acids |
| Polymerization | Will not occur |
| Decomposition | Will not decompose under normal conditions. For thermal decomposition, see combustion products in Section 5 |

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Section 11: Toxicological Information

Routes of Entry

Eyes, ingestion, inhalation, and skin

Symptoms Summary

- Eyes** Causes severe eye irritation. Also cause eye redness or pain.
- Skin** May cause dry skin.
- Inhalation** Inhalation of vapors or mist may cause irritation to the nose, throat and lung (upper respiratory tract).
The vapors may cause effects on the central nervous system leading to dizziness or drowsiness.
- Ingestion** Irritation, burning sensation, nausea (*also see inhalation symptoms*)
- Chronic** Repeated or prolonged inhalation exposure may cause asthma.
Repeated or prolonged skin contact may cause allergic skin reaction.

Acute Toxicity (Lethal Exposure Concentrations)

| Chemical Name | LD50 oral | LD50 dermal | LC50 inhalation | TCLo inhalation |
|---------------|--------------------|------------------------|------------------------|----------------------------|
| rosin | 7 600 mg/kg Rat | Not established | 20 000 ppm 10 h Rat | Not established |
| butan-2-ol | 2 193 mg/kg Rat | >2,000 mg/kg Rabbit | 8,000 ppm 4h Rat | 11,800 ppm 10 mo. Mouse |
| ethanol | 7 060 mg/kg Rat | 48 500 mg/kg Rabbit | >2 g/kg Rat | 5 000 ppm 7h Rat |

Note: Representative toxicity data from by RTECS database of the Canadian Centre for Occupational Health and Safety (CCOHS)² data from supplier MSDS were also consulted.

- Skin corrosion/irritation** Causes mild skin irritation based on Draize tests on rabbits. Prolonged or repeated skin contact may cause dermatitis
- Serious eye damage/irritation** Causes moderate to severe eye irritation based on Draize tests on rabbits
- Sensitization**
(allergic reactions) Rosin may cause skin sensitization. If inhalation causes asthma, further contact with the substance should be avoided.

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| | |
|--|---|
| Carcinogenicity (risk of cancer) | Not classified or listed as a carcinogen by IARC, ACGIH, CA Prop 65, or NTP |
| Mutagenicity (risk of heritable genetic effects) | No data available |
| Reproductive Toxicity (risk to sex functions) | No data available |
| Teratogenicity (risk of fetus malformation) | No data available |
| STOT-single exposure | Butan-2-ol can affect the central nervous system by inhalation causing drowsiness or dizziness. Inhalation also cause respiratory irritation. |
| STOT-repeated exposure | Not applicable |
| Aspiration hazard | None of the ingredient are classified as a aspiration hazard |

Section 12: Ecological Information

The IMDG Code criteria and the raw-material MSDS along with supporting data for the classification of registered substances from the European Chemical Agency database (<http://echa.europa.eu>) were used.

The mixture is not classifiable as a environmental toxicants.

Acute Ecotoxicity

Available toxicity data does not meet classification thresholds

Chronic Ecotoxicity

Not data available

Biodegradability

Not data available

Other Effects

VOC (Regulated Volatile Organic Content) = 50% [456 g/L]

Section 13: Disposal Information

P501: Dispose of contents in accordance with all local, regional, national, and international regulations.

ROSIN FLUX**835-LIQUID****Section 14: Transport Information****Ground**

Refer to TDG regulations (Canadian Transportation of Dangerous Goods regulations);
USA CFR 49 Regulations (Parts 100 to 185). **ADR** (European Agreement Concerning the International Carriage of Dangerous Goods by Road, and **ADN** (Agreement Concerning the International Carriage of Dangerous Goods by Inland Waterways).

Sizes 1 liter and under

Limited Quantity

Sizes greater than 1 liter

UN number: UN1987

Shipping Name: ALCOHOLS, N.O.S. (Ethanol, Butan-2-ol)

Class: 3

Packing Group: II

Marine Pollutant: No

**Air**

Refer to ICAO-IATA Dangerous Goods Regulations.

All sizes

UN number: UN1987

Shipping Name: ALCOHOLS, N.O.S. (Ethanol, Butan-2-ol)

Class: 3

Packing Group: II

Marine Pollutant: No



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ROSIN FLUX**835-LIQUID****Sea**

Refer to IMDG regulations.

Sizes 1 liter and under

Limited Quantity

Sizes greater than 1 liter

UN number: UN1987

Shipping Name: ALCOHOLS, N.O.S. (Ethanol,
Butan-2-ol)

Class: 3

Packing Group: II

Marine Pollutant: No



Note: Component supplier SDS transportation sections and labeling were consulted.

All Transportation Modes

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Codes

Not applicable

Other Information

All involved staff of shipper must be appropriately trained before involvement with the transport of this product, or work under direct supervision of a trained person.

Section 15: Regulatory Information**Canada****Domestic Substance List (DSL) / Non-Domestic Substance Lists (NDSL)**

All hazardous ingredients are listed on the DSL/NDSL.

Industry and Science Canada

MG Labels products intended for the workplace to conform to WHMIS labeling regulations. Product identification, net quantity declaration, minimum printing type size heights, and packaging of this product are in compliance.

Health Canada

Products produced by MG Chemicals intended for retail display conform to the Canadian Consumer Labeling Regulations.

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ROSIN FLUX**835-LIQUID****USA****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 28% butan-2-ol (CAS # 78-92-1) which is subject to the reporting requirements of section 313 Title III of the SARA of 1986 and 40 CFR part 372.

TSCA (Toxic Substances Control Act of 1976, USA)

All substances are TSCA listed.

California Proposition 65 (Chemicals known to cause cancer or reproductive toxicity, Sept 2, 2011 revision, USA).

This product contains ethanol, which is listed as reproductively toxic. It is also listed as a carcinogen when in an alcoholic beverage.

Europe**RoHS**

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

WEEE

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

Section 16: Other Information

| | |
|----------------------------|----------------------|
| MSDS Prepared by | Michel Hachey |
| Date of Issue | 19 August 2013 |
| Supersedes | 30 October 2012 |
| Reason for Changes: | Change to GHS format |

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ROSIN FLUX**835-LIQUID****Reference**

- 1) ACGIH 2011 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 (2011).
- 2) All toxicological data were checked against the RTECS (Registry of Toxic Effects of Chemical Substances®)

Abbreviations

ACGIH American Conference of Governmental Industrial Hygienists
GHS: Globally Harmonized System of Classification of Labeling of Chemicals
LC50 Lethal Concentration 50%
LCLo Lowest published lethal concentration
LD50 Lethal Dose 50%
PEL Permissible Exposure Limit
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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