

CONFORMAL COATING STRIPPER

8310-LIQUID

Safety Data Sheet

Section 1: Identification

Product Identifier and Other Means of Identification

Product Name: Conformal Coating Stripper

SDS Code: 8310-Liquid

Related Part # 8310-55ML, 8310-100ML, 8310-4L

Recommended Use and Restriction on Use

Use: Conformal coating stripper

Uses Advised Against: Not available

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
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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 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: Hazard(s) Identification

Classification of the Hazardous Material

GHS Categories

| Criteria | | Category | Signal Word | Pictograms |
|--------------------------------|--------------------|----------|-------------|-------------|
| Reproductive Toxicity | | 1B | Danger | Health |
| Sensitization | Skin | 1 | Warning | Exclamation |
| Irritation | Eye | 2 | Warning | Exclamation |
| Irritation | Skin | 2 | Warning | Exclamation |
| Specific Target Organ Toxicity | Single Exposure | 3 | Warning | Exclamation |
| Flammable Liquids | | 4 | Warning | <i>none</i> |
| Environmental Hazard | Chronic Aqua. Tox. | 3 | <i>none</i> | <i>none</i> |

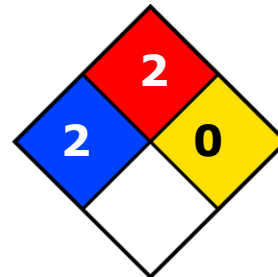
Note: The degree of severity is ranked within each hazard class from 1 (Highest Severity) to up to 5 (Lowest Severity), which is opposite to HMIS and NFPA conventions. Severity category rankings do not allow comparisons between classes.

Other Classifications

HMIS® RATING

| | |
|-----------------------------|------------|
| HEALTH: | * 2 |
| FLAMMABILITY: | 2 |
| 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 |
|  | H360: May damage fertility or unborn child |
|  | H317: May cause an allergic skin reaction H319: Causes serious eye irritation H315: Causes skin irritation H335: May cause respiratory irritation |
| <i>None mandated</i> | H227: Combustible Liquid H412: Harmful to aquatic life with long lasting effects |
| Prevention | Precautionary Statements |
| P102 | Keep out of reach of children. |
| P201 | Obtain special instructions before use. |
| P202 | Do not handle until all safety precautions have been read and understood. |
| P210 | Keep away from heat, hot surfaces, open flames and other ignition sources. No smoking. |
| P261 | Avoid breathing mist/vapors. |
| P271 | Use only outdoors or in a well-ventilated area. |
| P280 | Wear protective gloves/eye protection/face protection. |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |
| P264 | Wash hands thoroughly after handling. |
| P273 | Avoid release to the environment. |

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Continued...

| Response | Precautionary Statements |
|--------------------|--|
| P370 + P378 | In case of fire: Use dry chemical, carbon dioxide, chemical foam, or water spray to extinguish. |
| 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 attention. |
| P304 + P340, P312 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell. |
| P302 + P352 | IF ON SKIN: Wash with plenty of water. |
| P333 + P313 | If skin irritation or rash occurs: Get medical advice. |
| P362 + P364 | Take off contaminated clothing and wash it before reuse. |
| P308 + P313 | <i>FOR ALL ROUTES OF EXPOSURE</i> —IF exposed or concerned: Get medical advice/attention. |
| Storage | Precautionary Statements |
| P405 | Store locked up. |
| P403 + P233 | Store in well-ventilated area. Keep container tightly closed. |
| Disposal | Precautionary Statements |
| P501 | Dispose of contents/container in accordance to local/regional/international regulations. |

Hazards Not Otherwise Classified

Not applicable

Section 3: Composition/Information on Ingredients

| CAS # | Chemical Name | Wt% |
|--------------|--------------------------|------------|
| 872-50-4 | 1-methyl-2-pyrrolidinone | 30-60% |
| 1119-40-0 | dimethyl gluturate | 10-20% |
| 106-65-0 | dimethyl succinate | 3-7% |
| 627-93-0 | dimethyl adipate | 1-5% |
| 5989-27-5 | d-limonene | 1-5% |

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Section 4: First-Aid Measures

| <i>Exposure Condition</i> | <i>GHS Code: Precautionary Statement</i> |
|---------------------------|--|
| IF IN EYES | P305 + P351 + P338, P337 + P313 |
| Immediate Symptoms | <i>redness, tearing, severe irritation, pain</i> |
| Response | Rinse cautiously with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical attention. |
| IF INHALED | P304 + P340, P312, P308 + P313 |
| Immediate Symptoms | <i>cough, irritation of the respiratory track, headache</i> |
| Response | Remove person to fresh air and keep comfortable for breathing. If feeling unwell: Call a POISON CENTER/doctor. If exposed or concerned: Get medical advice/attention |
| IF ON SKIN | P302 + P352, P362 + P364, P333 + P313, P308 + P313 |
| Immediate Symptoms | <i>redness, severe irritation, dry skin, rash</i> |
| Response | Wash with plenty of water. Take off contaminated clothing and wash it before reuse. If skin irritation or rash occurs: Get medical advice/attention If exposed or concerned: Get medical advice/attention |
| IF SWALLOWED | P301 + P330 + P331, P314, P308 + P313 |
| Immediate Symptoms | <i>irritation, headache, dizziness, drowsiness, nausea</i> |
| Response | Rinse mouth. Do NOT induce vomiting. Get medical attention if you feel unwell. If exposed or concerned: Get medical advice/attention |

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Section 5: Fire-Fighting Measures

| | |
|----------------------------|--|
| In case of fire | P370 + P378 |
| Extinguishing Media | Use water spray, dry chemical, carbon dioxide, or chemical foam to extinguish. Use water spray to cool containers. |
| Specific Hazards | This product is a combustible liquid. The vapors are heavier than air and 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 | Produces carbon oxides (CO, CO ₂), nitrous oxides (NO _x), and smoke. |
| Fire-Fighter | Wear self-contained breathing apparatus and full fire-fighting turn-out gear. |

Section 6: Accidental Release Measures

| | |
|----------------------------------|---|
| Personal Protection | Use personal protection recommended in Section 8. |
| Precautions for Response | Remove or keep away all sources of ignition or extreme heat. Avoid breathing the vapors/mist/fumes. |
| Environmental Precautions | Avoid releasing to the environment. |
| Containment Methods | Contain with inert 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. Wash spill area with soap and water to remove the last traces of residue. |
| Disposal Methods | Dispose spill waste according to Section 13. |

CONFORMAL COATING STRIPPER**8310-LIQUID****Section 7: Handling and Storage****Prevention**

Keep out of reach of children.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

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

Avoid breathing mist/vapors. Use only outdoors or in well-ventilated area. In cases of inadequate ventilation wear respiratory protection.

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

Contaminated work clothing should not be allowed out of the workplace. Take off contaminated clothing and wash it before reuse.

Handling

Wear protective gloves/eye protection.

Wash hands thoroughly after handling.

Collect spillage.

Storage

Store in a well-ventilated area. Keep cool.

Store locked up.

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Section 8: Exposure Controls/Personal Protection

Routes of Entry

Eye contact, Inhalation, and Skin contact

Substances with Occupational Exposure Limit Values

| Chemical Name | Country | Long Term Exposure Limits (PEL) | Short Term Exposure Limits (STEL) |
|--------------------------|-----------------|---------------------------------|-----------------------------------|
| 1-methyl-2-pyrrolidinone | ACGIH | Not established | Not established |
| | U.S.A. OSHA PEL | Not established | Not established |
| | Canada AB | Not established | Not established |
| | Canada BC | Not established | Not established |
| | Canada ON | 400 mg/m ³ | Not established |
| | Canada QC | Not established | Not established |

Note: The ACGIH¹, OSHA (Table Z-1), 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.

Engineering Controls

Ventilation Keep airborne concentrations below exposure limits.

Personal Protective Equipment

Eye protection Wear appropriate protective eyeglasses or chemical safety goggles.

RECOMMENDATION: Ensure that glasses have side shields for lateral protection.

Skin Protection Wear appropriate protective clothing to prevent skin contact.

RECOMMENDATION: Use butyl rubber, Latex, neoprene, or other chemically resistant gloves.

Respiratory Protection If exposed to mist/vapors, wear respirator such as a half-mask respirator with organic vapor cartridges.

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.

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General Hygiene Considerations

Wash hands with water and soap after use.

Section 9: Physical and Chemical Properties

| | | | |
|------------------------------------|----------------------|---|-------------------|
| Physical State | Liquid | Lower Flammability Limit ^{c)} | 1% |
| Appearance | Clear amber | Upper Flammability Limit ^{c)} | 10% |
| Odor | Amine like | Vapor Pressure @27 °C | Not available |
| Odor Threshold | Not available | Vapor Density | >2 (Air =1) |
| pH | 6-7 | Specific Gravity @25 °C | 1.02 |
| Freezing/Melting Point | Not available | Solubility in Water | Partially soluble |
| Boiling Point ^{a)} | > 93 °C [>199 °F] | Partition Coefficient, n-octanol/water | >1 |
| Flash Point ^{b)} | 67 °C [152 °F] | Auto-ignition Temperature | Not available |
| Evaporation Rate | Not available | Decomposition Temperature | Not available |
| Flammability (solid, gas) | Not available | Viscosity @40 °C | Not available |

a) Values base on the lowest literature for the product components

b) Pensky-Marten closed cup

c) Calculated using Raoult's Law and Le Chatelier principle.

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Section 10: Stability and Reactivity

| | |
|----------------------------|---|
| Reactivity | Not available |
| Chemical Stability | Chemically stable at normal temperatures and pressures |
| Conditions to Avoid | Flames, excessive temperatures, and incompatible substances |
| Incompatibilities | Strong oxidizing agents, strong acids, strong bases |
| Polymerization | Will not occur |
| Decomposition | Will not decompose under normal conditions. For thermal decomposition, see combustion products in Section 5 |

Section 11: Toxicological Information

Routes of Exposure

Eye contact, Inhalation, and Skin contact

Symptoms Summary

| | |
|-------------------|---|
| Eyes | Causes severe eye irritation if splashed in eyes or exposed to vapors. |
| Skin | May cause mild to moderate skin irritation or allergic reactions. |
| Inhalation | May cause irritation of the respiratory system and headaches. |
| Ingestion | No toxic effect known. (Also see inhalation symptoms.) |
| Chronic | Prolonged and repeated exposure may cause an allergic contact dermatitis. |

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Lethal Exposure Concentrations

| Chemical Name | LD50 oral | LD50 dermal | LC50 inhalation |
|--------------------------|----------------------|------------------------|------------------------------|
| 1-methyl-2-pyrrolidinone | 3 914 mg/kg Rat | 8 000 mg/kg Rabbit | >5 000 ppm Rat 4h |
| dimethyl gluturate | 8 900 mg/kg mouse | >5 000 mg/kg Rabbit | 11 mg/L Rat ^{a)} |
| dimethyl succinate | >5 000 mg/kg Rat | >5 000 mg/kg Rabbit | 11 mg/L Rat ^{a)} |
| dimethyl adipate | 11 300 mg/kg Rat | >5 000 mg/kg Rat | 11 mg/L Rat ^{a)} |
| d-limonene | >4 400 mg/kg Rat | >5 000 mg/kg Rabbit | Not available |

Note: Representative toxicity from RTECS database of the Canadian Centre for Occupational Health and Safety (CCOHS)² data from supplier (M)SDS were consulted. Because data from these sources were inconclusive, the toxicity data from the ECHA database was used instead.

a) Limit suggested by the supplier for the mixture of dimethyl gluturate, succinate, and adipate.

Other Toxicological Effects

Skin corrosion/irritation

The 1-methyl-2-pyrrolidinone (CAS# 872-50-4) and d-limonene (CAS# 5989-27-5) cause skin irritation.

Serious eye damage/irritation

The 1-methyl-2-pyrrolidinone (CAS# 872-50-4) component causes severe eye irritation

Sensitization
(allergic reactions)

The d-limonene component is a skin sensitizer based on animal studies

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)

Based on available data, classification criteria are not met.

Reproductive Toxicity
(risk to sex functions)

Based on available data, classification criteria are not met.

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CONFORMAL COATING STRIPPER**8310-LIQUID****Teratogenicity**
(risk of fetus malformation)

At large doses of >4000 mg/kg, 1-methyl-2-pyrrolidone shows reproductive effects based on studies in rats and mice.

N-methylpyrrolidone [CAS# 872-50-4]

CA Prop 65: Listed as a reproductive toxicant.

STOT-single exposure

The 1-methyl-2-pyrrolidinone component may cause irritation of the respiratory tract.

STOT-repeated exposure

Based on available data, classification criteria are not met.

Aspiration hazard

Based on available data, classification criteria are not met. The mixture contains less than 10% Cat 1 components.

Section 12: Ecological Information

The ecotoxicity of the mixture was estimated by the calculation method using the summation of classified ingredients. The IMDG Code criteria and the raw-material (M)SDS along with supporting data for the classification of registered substances from the European Chemical Agency database (<http://echa.europa.eu>) were used.

The 1-methyl-2-pyrrolidinone ingredient is not classified as an environmental hazard according to GHS criteria (with minimal LC50 96 h of >500 mg/L for *Pimephales promelas* (fathead minnow); EC50 24 h of ≥ 1000 mg/L *Daphnia pulex* (water flea)).

The d-limonene component is an acute category 1 environmental toxicant (with minimal LC50 96 h of 0.702 mg/L for *Pimephales promelas* (fathead minnow); EC50 48 h of 69.6 mg/L *Daphnia pulex* (water flea)).

The remaining ingredients are not classifiable due to lack of data, but they are likely to be of low toxicity.

Acute Ecotoxicity

Category 3

H402: Harmful to aquatic

Chronic Ecotoxicity

Category 3

H412: Harmful to aquatic life with long lasting effects

Avoid release to the environment.

Biodegradability

Not available

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Other Effects

Not available

Section 13: Disposal Information

Dispose of contents in accordance with all local, provincial, state, and federal regulations.

Section 14: Transport Information

Ground

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

Not Regulated

Air

Refer to ICAO-IATA Dangerous Goods Regulations.

Not Regulated

Sea

Refer to IMDG Dangerous Goods Regulations.

Not Regulated

Section 15: Regulatory Information

Canada

WHMIS 1988 Classification



B3 – Combustible Liquids;

D2B – Toxic Causing Other Toxic Effects (Skin/Eye Irritation; skin sensitization)

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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.

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 1-methyl-2-pyrrolidinone (CAS# 872-50-4), 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 1-methyl-2-pyrrolidinone (CAS# 872-50-4), which is listed as reproductively toxicity.

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.

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Section 16: Other Information

SDS Prepared by Michel Hachey
Date of Revision 10 March 2015
Supersedes 21 October 2014

Reason for Changes: Modification according to the criteria of HCS2012 and WHMIS 2015.

Reference

- 1) ACGIH 2013 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 (2013).
- 2) All toxicological data were checked against the RTECS (Registry of Toxic Effects of Chemical Substances®)

Abbreviations

| | |
|-------|---|
| ACGIH | American Conference of Governmental Industrial Hygienists (USA) |
| EC50 | Half maximal effective concentration |
| EL50 | Half maximal effective loading |
| NOELR | No observable effect loading ratio |
| 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.

Email: support@mgchemicals.com

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Registered Quality System **ISO 9001**
QMI File #004008
Burlington, Ontario, Canada

CONFORMAL COATING STRIPPER

8310-LIQUID

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