Safety Data Sheet

Section 1: Identification

Product Identifier and Other Means of Identification

Product Name: 8341

Other Means of Identification: No Clean Flux Paste

Related Part # 8341-10ML, 8341B-10ML

Recommended Use and Restriction on Use

Use: No clean flux paste

Uses Advised Against: Not available

Details of Manufacturer or Importer

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

☎ +1-800-340-0772
FAX +1-800-340-0773
E-MAIL support@mgchemicals.com
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MG Chemicals (Head Office)
9347-193 Street
Surrey, British Columbia V4N 4E7
CANADA

☎ +1-905-331-1396
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 CHEMTREC at ***+1-800-424-9300***

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: Hazard(s) Identification

Classification of the Hazardous Material

GHS Categories

Criteria		Category	Signal Word	Pictograms
Sensitization	Respiratory	1	Danger	Health
Sensitization Eye Irritation	Skin	1 2A	Warning Warning	Exclamation Exclamation

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.

Label Elements

Signal Word	**DANGER**
Pictograms	**Hazard Statements**
	H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled H317: May cause an allergic skin reaction H319: Causes serious eye irritation
Prevention	**Precautionary Statements**
P102	Keep out of reach of children.
P261	Avoid breathing vapors/fumes.
P284	In case of inadequate ventilation, wear respiratory protection.
P280	Wear protective gloves/eye protection.
P264	Wash hands thoroughly after handling.
P272	Contaminated work clothing should not be allowed of the workplace.

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Response	Precautionary Statements
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P342 + P311	If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P333 + P313	If skin irritation or rash occurs: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
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/attention.
Disposal	**Precautionary Statements**
P501	Dispose of contents/container in accordance to local/regional/international regulations.

Hazards Not Otherwise Classified

Other Criteria	Hazard Statements/Precautionary Statement	Signal Word	Pictograms
Rosin Solder Fumes	Rosin-based solder fumes are capable of causing occupational asthma.	Warning	None

Section 3: Composition/Information on Ingredients

CAS #	Chemical Name	%(weight)
8050-09-7	rosin	42%
124-04-9	adipic acid	9%
95-14-7	benzotriazole	1%

Section 4: First-Aid Measures

Exposure Condition	*GHS Code: Precautionary Statement*
IF INHALED	P304 + P340, P342 + P311
Immediate Symptoms	*IF exposed to solder fumes: coughing, sore throat, wheezing, difficulty breathing*
Response	Remove person to fresh air and keep comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER/doctor.
IF ON SKIN	P302 + P352, P333 + P313, P362 + P364
Immediate Symptoms	*redness, mild irritation, rash, allergic dermatitis*
Response	Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.
IF IN EYES	P305 + P351 + P338, P337 + P313
Immediate Symptoms	*serious irritation*
Response	Rinse cautiously with water for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
IF SWALLOWED	P301 + P330, P331
Immediate Symptoms	*low toxicity: no symptoms known or expected*
Response	Rinse mouth. Do not induce vomiting.

Section 5: Fire-Fighting Measures

Extinguishing Media	In case of fire: Use extinguishing media suitable for surrounding materials.
Specific Hazards	Not flammable or combustible, but burns if involved in a fire.
Combustion Products	Produces carbon oxides (CO, CO_2), rosin solder pyrolysis products and nitrogen oxides (NO_x).
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	Avoid breathing vapors/fumes.
Environmental Precautions	Avoid releasing to the environment.
Containment Methods	Not applicable—not readily flowable
Cleaning Methods	Collect paste in a sealable, solvent-resistant container. Sprinkle inert absorbent compound onto spill, then sweep into the container Wipe up further residue with paper towel and place dirty towels in container. Wash spill area with soap and water to remove the last traces of residue.
Disposal Methods	Dispose spill waste according to Section 13.

Section 7: Handling and Storage

Prevention	Keep out of reach of children.
	Avoid breathing fumes/vapors.
	Contaminated work clothing should not be allowed of the workplace.
Handling	In case of inadequate ventilation, wear respiratory protection.
	Take off contaminated clothing and wash it before reuse.
	Wear protective gloves/eye protection.
	Wash hands thoroughly after handling.
Storage	Keep in a dry and clean area, away from incompatible substances.

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)
rosin, colophony *(thermal decomposition)*	ACGIH U.S.A. OSHA PEL Canada AB Canada BC Canada ON Canada QC	(L) Not established Not established (L) (L) Not established	Not established Not established Not established Not established Not established Not established
adipic acid	ACGIH [a)] U.S.A. OSHA PEL Canada AB Canada BC Canada ON Canada QC	5 mg/m^3 Not established 5 mg/m^3 5 mg/m^3 5 mg/m^3 Not established	Not established Not established Not established Not established Not established Not established

Note: The ACGIH[1], OSHA (Table Z-1), and Canadian provinces exposure limits were consulted. Limits from the RTECS[2] database and 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.

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

a) URT irr; ANS impair

Engineering Controls

Ventilation

Keep airborne concentrations below the occupational exposure limits (OEL). Keep overall exposure as low as possible.

Soft soldering temperatures (<450 °C) are generally too low to generate significant amounts of metal vapors; however, metal oxide fumes/dust or flux decomposition fumes can occur. The volatilization and degradation of the rosin flux during soldering may lead to respiratory sensitization.

RECOMMENDATION: For frequent or prolonged soldering processes, use of a local exhaust system to avoid exposure to thermal decomposition products.

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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	For likely contacts, use of protective nitrile gloves or other chemically resistant gloves. Thermal resistant gloves should be worn instead if contact with molten metal is expected.
Respiratory Protection	For over-exposures up to 10 x OEL of vapors/fumes, wear respirator such as a half-mask respirator with organic vapor cartridges and particulate filter. 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	Solid	**Lower Flammability Limit**	Not available
Appearance	Yellow paste	**Upper Flammability Limit**	Not available
Odor	Mild	**Vapor Pressure @20 °C**	Not available
Odor Threshold	Not available	**Vapor Density**	Not available
pH	Not available	**Specific Gravity @25 °C**	1.0
Freezing/Melting Point	Not available	**Solubility in Water**	Not available
Boiling Point	Not available	**Partition Coefficient**	Not available
Flash Point	Not available	**Auto-ignition Temperature**	Not available
Evaporation Rate	Not available	**Decomposition Temperature**	Not available
Flammability (solid, gas)	Not available	**Viscosity @40 °C**	Not available

Section 10: Stability and Reactivity

Reactivity	Rosin forms oxidized pyrolysis products in contact with air and soldering temperatures, which may lead to respiratory sensitization. Skin sensitization may occur following oxidation of the chemicals after prolonged storage.
Chemical Stability	Chemically stable at normal temperatures and pressures
Conditions to Avoid	Ignition sources, excessive heat, and incompatible substances
Incompatibilities	Strong oxidizing agents
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	May cause serious irritation.
Skin	May cause redness, rash, mild irritation and allergic dermatitis.
Inhalation	Exposure to the rosin flux fumes may cause coughing, sore throat and wheezing.
Ingestion	Low toxicity: no symptoms known or expected.
Chronic	Prolonged or repeated exposure to the oxidized rosin flux may lead to skin sensitization and provoke asthma.

Acute Toxicity (Lethal Exposure Concentrations)

Chemical Name	LD50 oral	LD50 dermal	LC50 inhalation
rosin	2 800 mg/kg Rat	≥2 000 mg/kg Rat	Not available
adipic acid	5 560 mg/kg Rat	7 940 mL/kg Rabbit	>7.7 mg/L 4 h Rat
benzotriazole	500 mg/kg Rat	Not available	Not available

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

Other Toxicological Effects

Skin corrosion/irritation	Based on available data, the classification criteria are not met.
Serious eye damage/irritation	Adipic acid and benzotriazole can cause serious and irritating effects to the eyes.
Respiratory and skin sensitization (allergic reactions)	The oxidized form of the rosin component causes skin and respiratory sensitization.
Carcinogenicity (risk of cancer)	Not classified or listed as a carcinogen by IARC, ACGIH, CA Prop 65, or NTP.

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Mutagenicity (risk of heritable genetic effects)	Based on available data, the classification criteria are not met.
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	Based on available data, the classification criteria are not met.
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.

Benzotriazole is classified as a category 2 aquatic chronic environmental hazard.

Based on available data for rosin and adipic acid, the GHS environmental toxicity classification criteria are not met.

Acute Ecotoxicity

Available toxicity data does not meet classification thresholds.

Chronic Ecotoxicity

Available toxicity data does not meet classification thresholds.

Biodegradability

Not available

Other Effects

Not available

Section 13: Disposal Considerations

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

Section 14: Transport Information

Ground

Refer to TDG regulations (Canadian Transportation of Dangerous Goods regulations); **USA DOT 49 CFR** (Parts 100 to 185) **Regulations.**
Not regulated

Air

Refer to ICAO-IATA Dangerous Goods Regulations.
Not regulated

Sea

Refer to IMDG Regulations.
Not regulated

Section 15: Regulatory Information

Canada

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

All hazardous ingredients are listed on the DSL/NDSL.

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.

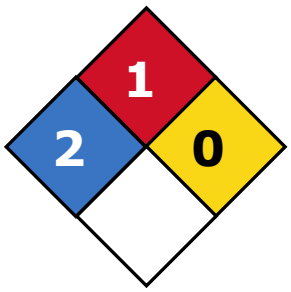
USA

Other Classifications

HMIS® RATING

HEALTH:	**2**
FLAMMABILITY:	**1**
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 does not contain ingredients that 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.

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

This product does not contain any substances known to be listed in California.

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 Michel Hachey

Date of Creation 25 April 2018

Supersedes 20 October 2017

Reason for Changes: Change to formulation of ingredients.

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®)

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

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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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