

847

CARBON CONDUCTIVE ASSEMBLY PASTE

Safety Data Sheet

Section 1: Identification

Product Identifier and Other Means of Identification

Product Name: 847

Other Means of Identification: Carbon Conductive Assembly Paste

Related Part # 847-3ML, 847-25ML, 847-40G, 847-1P, 847-1G

Recommended Use and Restriction on Use

Use: Improves connections between electrical contacts without oil bleeding.


Uses Advised Against: Do not process in a manner the material to form mist or dust


Details of Manufacturer or Importer

Manufacturer

MG Chemicals
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Burlington, Ontario L7L 5R6
CANADA

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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 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

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Section 2: Hazard(s) Identification
Classification of Hazardous Chemical
GHS Categories

Criteria	Category	Signal Word	Pictograms
Hazardous to the Aquatic Environment Chronic	4	None	None

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	<i>No signal word</i>
Pictograms	Hazard Statements
<i>No Symbol Mandated</i>	H413: May cause long lasting harmful effects to aquatic life
Prevention	Precautionary Statements
P273	Avoid release to the environment.
Disposal	Precautionary Statements
P501	Dispose of contents in accordance to local, regional, national, and international regulations.

Hazards Not Otherwise Classified

Other Criteria	Hazard Statements/Precautionary Statement	Signal Word	Pictograms
None	None	None	None

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CARBON CONDUCTIVE ASSEMBLY PASTE
Section 3: Composition/Information on Ingredients

CAS #	Chemical Name	%(weight)
non-hazardous ^{a)}	synthetic oil	80-90%
1333-86-4	carbon black	15-25%
112945-52-5	amorphous fumed silica	0.1-1%

a) Non-hazardous component under the U.S. OSHA HazCom 2012, the Canadian Controlled Product Regulations (SOR 88-66)

Section 4: First-Aid Measures

<i>Exposure Condition</i>	<i>GHS Code/Symptoms/Precautionary Statements</i>
IF IN EYES	P305 + P351 + P338, P337 + P313
Immediate Symptoms	<i>low toxicity: mild irritation, redness, pain</i>
Response	Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
IF ON SKIN	P302 + P352
Immediate Symptoms	<i>low toxicity: mild irritation</i>
Response	Wash with plenty of water and soap.
IF SWALLOWED	P301 + P330 + P331
Immediate Symptoms	<i>low toxicity—without known symptoms or adverse effects</i>
Response	Rinse mouth. Do NOT induce vomiting.
IF INHALED	P304 + P340
Immediate Symptoms	<i>low toxicity—without known symptoms or adverse effects</i>
Response	Remove person to fresh air and keep comfortable for breathing.

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CARBON CONDUCTIVE ASSEMBLY PASTE**Section 5: Fire-Fighting Measures**

Extinguishing Media	In case of fire: Use dry chemical, carbon dioxide, chemical foam, or water spray to extinguish. Do not use water jet. Will burn if involved in a fire.
Specific Hazards	None known
Combustion Products	Produces carbon oxides (CO, CO ₂), oxide of sulfur, and smoke.
Fire-Fighter	Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

Section 6: Accidental Release Measures

Personal Protection	See personal protection recommendations in Section 8.
Precautions for Response	Remove or keep away all sources of extreme heat or open flames.
Environmental Precautions	Avoid releasing to the environment. Prevent spill from entering drains and waterways.
Containment	Not applicable
Cleaning	Collect liquid in a sealable, oil-resistant container. Sprinkle inert absorbent compound onto spill, then sweep into the container. Wipe up further residue with paper towel and place in container. Wash spill area with soap and water to remove the last traces of residue.
Disposal	Dispose of spill waste according to Section 13.

Section 7: Handling and Storage

Prevention	Do not eat, drink, or smoke when using this product. Remove contaminated clothing and protective equipment before entering eating areas.
Handling	Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling. Avoid release to the environment.
Storage	No special storage instructions needed. RECOMMENDATION: Store in clean and dry area away from incompatible substances.

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CARBON CONDUCTIVE ASSEMBLY PASTE**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)
carbon black ^{a)}	ACGIH	3.5 mg/m ³	Not established
	U.S.A. OSHA PEL	3.5 mg/m ³	Not established
	Canada AB	3.5 mg/m ³	Not established
	Canada BC	3 mg/m ³	Not established
	Canada ON	3.5 mg/m ³	Not established
	Canada QC	3.5 mg/m ³	Not established

Note: The ACGIH¹, OSHA (Table Z-1), and Canadian provinces exposure limits were consulted. Limits from the RTECS database² and 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) Respirable airborne particles

Engineering Controls**Ventilation**

Keep airborne concentrations below the occupational exposure limits (OEL).

Because the carbon black is bound to the liquid mixture, it does not present an airborne hazard under normal use. Ensure adequate ventilation if the product is mechanically misted or aerosolized.

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, neoprene, or other chemically resistant gloves.

For incidental contacts, use nitrile, polyvinyl alcohol (PVA) or other chemically resistant gloves.

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Respiratory Protection For over-exposures up to 10 x OEL of vapors, 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	Not applicable
Appearance	Paste, black	Upper Flammability Limit	Not applicable
Odor	Odorless	Vapor Pressure @20 °C	Not applicable
Odor Threshold	Not applicable	Vapor Density	Not applicable
pH	Not available	Relative Density @25 °C	1.06
Freezing/Melting Point	Not available	Solubility in Water	Slightly soluble
Initial Boiling Point	Not applicable	Partition Coefficient n-octanol/water	Not available
Flash Point ^{a)}	285 °C [545 °F]	Auto-ignition Temperature	Not applicable
Evaporation Rate	Not applicable	Decomposition Temperature	Not available
Flammability	Non Flammable	Viscosity @25 °C	>20.5 mm ² /s

a) Cleveland Open Cup

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CARBON CONDUCTIVE ASSEMBLY PASTE**Section 10: Stability and Reactivity**

Reactivity	Not available
Chemical Stability	Chemically stable at normal temperatures and pressures.
Conditions to Avoid	Ignition sources 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 causes mild eye irritation. The amorphous fumed silica are mechanically abrasive, but will not permanently injure the eye.
Skin	May cause mild skin irritation.
Inhalation	<i>Not a likely route of exposure.</i> If dust or mist are present, they may be irritating to the respiratory track.
Ingestion	<i>Not a likely route of exposure.</i> It may cause gastrointestinal discomfort.
Chronic	Not applicable.

Acute Toxicity (Lethal Exposure Concentrations)

Chemical Name	LD50 oral	LD50 dermal	LC50 inhalation
carbon black	>15 g/kg Rat	>3 g/kg Rabbit	Not available
amorphous fumed silica	3 160 mg/kg Rat	≥2 000 mg/kg Rabbit	Not available

Note: Toxicity data from the RTECS² and ECHA were consulted. The data from supplier SDS were also consulted.

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847**CARBON CONDUCTIVE ASSEMBLY PASTE****Other Toxicological Effects****Skin corrosion/irritation**

Based on available data, the classification criteria are not met.

Serious eye damage/irritation

Based on available data, the classification criteria are not met.

Sensitization

(allergic reactions)

Based on available data, the classification criteria are not met.

Carcinogenicity

(risk of cancer)

The carbon black [1333-86-4] is possibly carcinogenic by airborne routes of exposures under WHMIS.

Because the carbon black is bound in the liquid mixture, it is not available as an airborne hazard (dust) under normal use.

Carbon Black [1333-86-4]

IARC Group 2B: Possibly carcinogenic to humans

ACGIH A4: Not classified as a human carcinogen

CA Prop 65: Listed as a carcinogen (airborne, as unbound particles of respirable size)

NTP: Not listed

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. There are no category 1 components and the kinematic viscosity of the mixture is $>20.5 \text{ mm}^2/\text{s}$ at 40°C .

847**CARBON CONDUCTIVE ASSEMBLY PASTE****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.

The synthetic oil used has highest environmental impact among listed components according to fish, daphnia magna, and algae data provided by oil suppliers. The acute fish toxicity has a LL50 (Lethal Loading Levels) >100 mg/L. Similarly, its daphnia magna acute toxicity is given as EL50 (Effective Load) >100 mg/L. And for the algae, it occurs at an EL50 >100 mg/L. Other components have higher threshold values from 1 000 mg/L to 10 000 mg/L.

Based on available data, carbon black is not classified as environmental hazard according to GHS criteria.

Acute Ecotoxicity

Available toxicity data does not meet classification thresholds.

Chronic Ecotoxicity

Available toxicity data does not meet classification thresholds.

Biodegradability

Not readily biodegradable.

Other Effects

Not available

Section 13: Disposal Information

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

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CARBON CONDUCTIVE ASSEMBLY PASTE**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

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/NDSL.

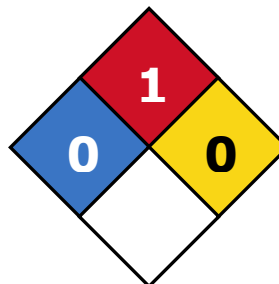
Hazardous Products Act (R.S.C., 1985, c. H-3)

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

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847**CARBON CONDUCTIVE ASSEMBLY PASTE****USA****Other Classifications****HMIS® RATING**

HEALTH:	* 0
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 are 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, USA).

This product contains carbon black, but it is bound and exposures during normal conditions of uses are below the Safe Harbor Threshold.

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.

847**CARBON CONDUCTIVE ASSEMBLY PASTE****Section 16: Other Information**

SDS Prepared by MG Chemicals' Regulatory Department
Date of Revision 22 October 2019
Supersedes 15 November 2016
Reason for Changes: Minor modifications throughout the SDS.

References

- 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®), MDL Information Systems, Inc.

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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