

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

# Safety Data Sheet

**Section 1: Product and Company Identification****Product Identifier and Other Means of Identification****Product Name:** Carbon Conductive Assembly Paste**SDS Code:** 847**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  
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.com](mailto:support@mgchemicals.com)**WEB** [www.mgchemicals.com](http://www.mgchemicals.com)**☎** 1-905-331-1396**FAX** 1-905-331-2682**E-MAIL:** [info@mgchemicals.com](mailto:info@mgchemicals.com)**E-MAIL** (Competent Person): [sds@mgchemicals.com](mailto:sds@mgchemicals.com)**Emergency Phone Number****For hazardous material incidents ONLY**—leaks, spills, fires, exposures or accidentsUSA or CANADA: Call CHEMTREC ☎: **1-800-424-9300****For emergencies involving dangerous goods;** Collect 24/7CANADA: Call CANUTEC ☎: **1-613-996-6666** or **\*666** on cellular phones

# CARBON CONDUCTIVE ASSEMBLY PASTE

**847**

## Section 2: Hazards Identification

### WHMIS Classification



D2A – Very Toxic (Carcinogenicity IARC: 2B); D2B – Toxic (Mutagenicity, Chronic Toxicity)

**Note:** The carcinogenic warning applies with respect to dust inhalation. Because the carbon black is inextricably bound in the grease matrix, it is not an expected route of entry during usages and processing of this product.

### GHS Categories

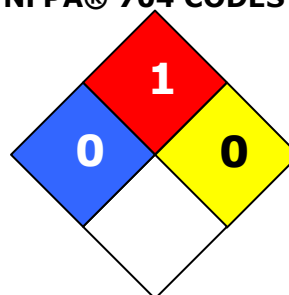
Criteria	Category	Signal Word	Pictograms
Aquatic environmental hazard      Chronic	4	none	No Symbol Mandated

### Other Classifications

#### HMIS® RATING

<b>HEALTH:</b>	<b>0</b>
<b>FLAMMABILITY:</b>	<b>1</b>
<b>PHYSICAL HAZARD:</b>	<b>0</b>
<b>PERSONAL PROTECTION:</b>	

#### NFPA® 704 CODES



*Approximate HMIS and NFPA Risk Ratings Legend:*

0 (Low or none); 1 (Slight); 2 (Moderate); 3 (Serious); 4 (Severe)

**CARBON CONDUCTIVE ASSEMBLY PASTE****847****Label Elements**

<b>Signal Word</b>	<i>Not applicable</i>
<b>Pictograms</b>	<b>Hazard Statements</b>
No Symbol Mandated	H413: May cause long lasting harmful effects to aquatic life
	<b>Precautionary Statements</b>
<b>Prevention</b>	P273: Avoid release to the environment.
<b>Disposal</b>	P501: Dispose of contents/container in accordance to local/regional/national/international regulations.

**Other Hazards**

Not applicable

**Section 3: Hazardous Ingredients**

<b>CAS #</b>	<b>Chemical Name</b>	<b>Wt%</b>
Non-hazardous <sup>a)</sup>	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)

**CARBON CONDUCTIVE ASSEMBLY PASTE****847****Section 4: First Aid Measures**

<i>Exposure Condition</i>	<i>GHS Code: Precautionary Statement</i>
<b>IF IN EYES</b>	P305
<b>Symptoms</b>	Immediate: <i>irritation, redness, pain</i>
<b>Response</b>	P351: Rinse cautiously with water for several minutes. P338: Remove contact lenses, if present and easy to do. Continue rinsing.
<b>If eye irritation persists</b>	P313: Get medical attention.
<b>IF ON SKIN (or hair)</b>	P302
<b>Symptoms</b>	Immediate: <i>mild irritation</i>
<b>Response</b>	P353: Wash with plenty of water and soap.  P362+P364: Take off contaminated clothing and wash it before reuse.
<b>If exposed or concerned</b>	P313: Get medical advice.
<b>IF SWALLOWED</b>	P301 ( <i>Not a likely route of exposure under normal use</i> )
<b>Symptoms</b>	Immediate: <i>none known</i>
<b>Response</b>	P330: Rinse mouth. P331: Do NOT induce vomiting.
<b>If you feel unwell</b>	P313: Get medical attention.
<b>IF INHALED</b>	P304 ( <i>Not a likely route of exposure under normal use</i> )
<b>Symptoms</b>	Immediate: <i>none known</i>
<b>Response</b>	P340: Remove person to fresh air and keep comfortable for breathing.
<b>If exposed or concerned</b>	P332: Get medical advice.

**CARBON CONDUCTIVE ASSEMBLY PASTE****847****Section 5: Fire Fighting Measures**

<b>Auto-ignition Temperature</b>	Not established	<b>Flash Point</b> <sup>a)</sup>	>285 °C [>545 °F]	<b>LFL [LEL]</b> <sup>b)</sup> <b>UFL [UEL]</b>	Not applicable
----------------------------------	-----------------	----------------------------------	----------------------	--	----------------

<b>In case of fire</b>	P370
------------------------	------

<b>Response</b>	P378: Use dry chemical, carbon dioxide, chemical foam, or water spray to extinguish. Do not use water jet.
-----------------	--

<b>Combustion Products</b>	Produces carbon oxides (CO, CO <sub>2</sub> ), oxide of sulfur, and smoke.
----------------------------	--

<b>General Information</b>	Will burn if involved in a fire.
----------------------------	----------------------------------

a) Cleveland Open Cup

b) LFL = Lower Flammability [or Explosion] Limit (in volume %);

UFL = Upper Flammability [or Explosion] Limit (in volume %)

**Section 6: Accidental Release Measures****Personal Protection:** See Section 8.**Containment** Not applicable.

<b>Cleaning</b>	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.
-----------------	--

<b>Disposal</b>	Dispose of spill waste according to Section 13.
-----------------	---

**Section 7: Handling and Storage**

<b>Prevention</b>	P270: Do not eat, drink, or smoke when using this product.
-------------------	--

<b>Handling</b>	P280 + P264: Wear protective gloves/clothing/eye protection. Wash thoroughly after handling.
-----------------	--

<b>Storage</b>	No special storage instructions needed.
----------------	---

**RECOMMENDATION:** Store in clean and dry area away from incompatible substances.

**CARBON CONDUCTIVE ASSEMBLY PASTE****847****Section 8: Exposure Controls/Personal Protection****Routes of Entry**

Eyes, ingestion, inhalation, and skin

**Substances with Occupational Exposure Limit Values**

Chemical Name	Country	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
Carbon black <sup>a)</sup>	ACGIH	3.5 mg/m <sup>3</sup>	—
	U.S.A. OSHA PEL	3.5 mg/m <sup>3</sup>	—
	Canada AB	3.5 mg/m <sup>3</sup>	—
	Canada BC	3 mg/m <sup>3</sup>	—
	Canada ON	3.5 mg/m <sup>3</sup>	—
	Canada QC	3.5 mg/m <sup>3</sup>	—

*Note:* Ingredients are listed in descending weight contribution order (from greatest to least). The ACGIH<sup>2</sup>, OSHA, and Canadian provinces exposure limits were consulted. Limits from by RTECS database<sup>1</sup> of the Canadian Centre for Occupational Health and Safety (CCOHS) a data 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.

a) Respirable airborne particles

**Engineering Controls****Ventilation**

Keep airborne concentrations below exposure limits.

**RECOMMENDATION:** For normal conditions, no special ventilation is required. Under extraordinary conditions generating dust or mist, respect the TWA limits.

**Personal Protective Equipment****Eye protection**

Even when not mandated, it is good practice to wear appropriate protective eyeglasses or chemical safety goggles.

**Skin Protection**

Not required, but wearing appropriate protective gloves/clothing to prevent carbon black soiling.

**RECOMMENDATION:** Use butyl rubber, Latex, neoprene, or other chemically resistant gloves. While the product is of low toxicity, it is hard to clean.

**Respiratory Protection**

In the unlikely event of exposure to mist, wear oil resistant or oil proof particulate respirators or filter masks.

**RECOMMENDATION:** Consult your local safety supply store to ensure your respirator or mask.

*Continued on the next page*

**CARBON CONDUCTIVE ASSEMBLY PASTE****847****General Hygiene Considerations**

Wash hands with water and soap after use.

**Section 9: Physical and Chemical Properties**

<b>Physical State</b>	Liquid	<b>Appearance</b>	Black, paste
<b>Odor</b>	Odorless	<b>Odor Threshold</b>	Not applicable
<b>pH</b>	Not available	<b>Specific Gravity</b>	1.38
<b>Solubility in Water</b>	Slightly soluble	<b>Melting/Freezing Point</b>	Not available
<b>Boiling Point</b>	Not available	<b>Evaporation Rate</b>	Not available
<b>Flash Point</b> <sup>a)</sup>	>285 °C [>545 °F]	<b>Vapor Pressure @ 20 °C</b>	Not available
<b>Lower Flammability Limit</b>	Not available	<b>Upper Flammability Limit</b>	Not available
<b>Auto-ignition Temperature</b>	Not available	<b>Decomposition Temperature</b>	Not available
<b>Viscosity</b>	Not available	<b>Vapor Density</b>	Not available
<b>Partition Coefficient</b>	Not available		

a) Cleveland Open Cup

**Section 10: Stability and Reactivity**

<b>Stabilities</b>	Chemically stable at normal temperatures and pressures
<b>Conditions to Avoid</b>	Ignition sources, and incompatible substances
<b>Incompatibilities</b>	Strong oxidizing agents
<b>Polymerization</b>	Will not occur
<b>Decomposition</b>	Will not decompose under normal conditions. For thermal decomposition, see combustion products in Section 5

**CARBON CONDUCTIVE ASSEMBLY PASTE****847****Section 11: Toxicological Information****Routes of Entry**

Eyes, ingestion, inhalation, and skin

<b>Eyes</b>	May causes mild eye irritation. The carbon black powder and silica are mechanically abrasive, but will not permanently injure the eye.
<b>Skin</b>	May cause mild skin irritation.
<b>Inhalation</b>	<i>Not a likely route of exposure.</i> If dust or mist are present, they may be irritating to the respiratory track.
<b>Ingestion</b>	<i>Not a likely route of exposure.</i> It may cause gastrointestinal discomfort.
<b>Chronic</b>	Long term exposure to carbon black dust or mist may cause cancer.

**Acute Toxicity (Lethal Exposure Concentrations)**

<b>Chemical Name</b>	<b>LD50 oral</b>	<b>LD50 dermal</b>	<b>LC50 inhalation</b>	<b>TCLo inhalation</b>
carbon black	>15 g/kg Rat	>3 g/kg Rabbit	Not available	1.6 mg/m <sup>3</sup> 7 h Rat
Amorphous fumed silica	3 160 mg/kg Rat	≥2 000 mg/kg Rabbit <sup>b)</sup>	Not available	154 mg/m <sup>3</sup> 6 h 4 w Rat

*Note:* Representative toxicity data from by RTECS database of the Canadian Centre for Occupational Health and Safety (CCOHS)<sup>1</sup> data from supplier MSDS were also consulted.

b) Value from supplier MSDS

*Continued on the next page*



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

<b>Skin corrosion/irritation</b>	Does not meet classification criteria. Slight irritation possible.
<b>Serious eye damage/irritation</b>	Does not meet classification criteria. May cause light eye irritation. Contains abrasive particles.
<b>Sensitization</b> (allergic reactions)	Not known or expected
<b>Carcinogenicity</b> (risk of cancer)	<p>The carbon black [1333-86-4] is possibly carcinogenic by airborne routes of exposures. Because the carbon black is bound in the epoxy liquid mixture, it is not expected to be available as an airborne hazard (dust, mist, or spray) under normal use.</p> <p><b>Carbon Black [1333-86-4]</b></p> <p>IARC Group 2B: Possibly carcinogenic to humans</p> <p>ACGIH A4: Not classified as a human carcinogen</p> <p>CA Prop 65: Listed as a carcinogen</p> <p>NTP: Not listed</p>
<b>Reproductive Toxicity</b> (risk to sex functions)	Not available
<b>Teratogenicity</b> (risk of fetus malformation)	Not available
<b>Mutagenicity</b> (risk of heritable genetic effects)	Not available
<b>STOT-single exposure</b>	Not available
<b>STOT-repeated exposure</b>	Not available
<b>Aspiration hazard</b>	Not applicable. There is no evidence of aspiration hazard toxicity, and the material doesn't contain any known class 1 aspiration hazard components.

**CARBON CONDUCTIVE ASSEMBLY PASTE****847****Section 12: Ecological Information****Acute Ecotoxicity**

Does not meet classification criteria.

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 a EL50 > 100 mg/L. Other components have higher threshold values from 1,000 mg/L to 10,000 mg/L.

**Chronic Ecotoxicity**

Does not meet classification criteria

**Biodegradability**

Not readily biodegradable

**Section 13: Disposal Information**

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

**Section 14: Transport Information****Ground**

Not regulated by Canadian TDG or U.S. DOT

**Air**

Not regulated by ICAO-IATA

**Sea**

Not regulated by IMDG

**CARBON CONDUCTIVE ASSEMBLY PASTE****847****Section 15: Regulatory Information****Canada****Domestic Substance List (DSL) / Non-Domestic Substance Lists (NDSL)**

All hazardous ingredients are listed on the DSL/NDSL.

**Health Canada**

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

**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.

**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 hazardous air pollutants.

**SARA** (Superfund Amendments and Reauthorization Act of 1986, USA, 40 CFR 372.4)

None of the chemicals in this product have a reportable quantity.

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

This product does not contain substances 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 carbon black (airborne, unbound particles of respirable size), which is listed as a carcinogen.

Because the carbon black is inextricably bound in the grease matrix, it is not an expected route of entry during usages and processing of this product.

*Continued on the next page*

**CARBON CONDUCTIVE ASSEMBLY PASTE****847****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 Preparation** 27 July 2013  
**Revision Date** 03 November 2011

**Reason for Changes:** Reclassification due to new data and format modifications to ensure compliance with with OSHA's HazCom 2012 final rules.

**Reference**

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

**Abbreviations**

ACGIH American Conference of Governmental Industrial Hygienists  
GHS: Globally Harmonized System of Classification of Labeling of Chemicals  
LC50 Lethal Concentration 50%  
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](http://www.mgchemicals.com).

Email: [support@mgchemicals.com](mailto:support@mgchemicals.com)

Phone: 1-905-331-1396

*Continued on the next page*



Quality System Certified to ISO 9001:2008

SAI Global File #004008

Burlington, Ontario, Canada

## CARBON CONDUCTIVE ASSEMBLY PASTE

**847**

**Mailing Addresses** *Manufacturing & Support*  
1210 Corporate Drive  
Burlington, Ontario, Canada  
L7L 5R6

*Head Office*  
9347-193rd Street  
Surrey, British Columbia, Canada  
V4N 4E7

**Disclaimer** This material safety data sheet is provided as an information resource only. *M.G. Chemicals, Ltd.* believes the information contained herein is accurate and compiled from reliable sources. It is the responsibility of the user to query and verify any information seeming suspect where doubt on the validity may exist. The buyer assumes all responsibility of using and handling the product in accordance with local, regional, national, and international regulations.