

CARBON CONDUCTIVE ASSEMBLY PASTE

847

Material Safety Data Sheet

Section 1: Product and Company Identification

Product Name: Carbon Conductive Assembly Paste

MSDS Code: 847

Related Part #: 847

Use: Improves connections between electrical contact without oil bleeding.

Emergency Contact: CANUTECH ☎: 1-613-996-6666, Collect 24/7

Manufacturer: MG Chemicals (Head Office), 9347-193 Street, Surrey, B.C., V4N 4E7

Technical Contacts: ☎ 1-800-201-8822 FAX 1-800-708-9888

E-MAIL: support@mgchemicals.com **WEB** www.mgchemicals.com

Section 2: Hazards Identification

WHMIS Classification



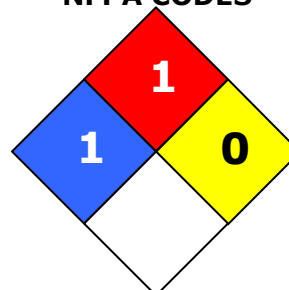
D2A – Very Toxic (Carcinogenicity IARC: 2B)

Note: The carcinogenic warning applies mainly with respect to dust inhalation. It is not an expected route of entry during processing for this product.

HMIS RATING

HEALTH:	1
FLAMMABILITY:	1
PHYSICAL HAZARD:	0
PERSONAL PROTECTION:	

NFPA CODES



Approximate HMIS and NFPA Risk Ratings Legend:

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

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Physical Hazards

GHS Code: Hazard Statement
 No physical hazard known.

Health Hazards

GHS Code: Hazard Statement
 H320: Causes eye irritation
 H351: Suspected of causing cancer
 H315: May cause skin irritation
 H303: May be harmful if swallowed

Eyes	Causes mild to moderate eye irritation. The carbon black powder and 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> Dust may be irritating to the respiratory track.
Ingestion	<i>Not a likely route of exposure.</i> Harmful if swallowed. It may cause gastrointestinal discomfort.
Chronic	Repeated skin exposure may cause skin dryness and cracking. Long term exposure to carbon black dust or mist may cause cancer.

Note: The grease prevents the carbon black from posing a respiration hazard under normal processing conditions.

Section 3: Hazardous Ingredients

CAS #	Chemical Name	Wt%	ACGIH TWA	OSHA PEL	STEL
118685-24-8, 118685-22-6 ^{a)}	synthetic oil	80-90%	5 mg/m ³	N/E	N/E
1333-86-4	carbon black	15-25%	3.5 mg/m ³	N/E	N/E
112945-52-5	Amorphous fumed silica	0.1-1%	10 mg/m ³	6 mg/m ³	N/E

Note: Limits from by RTECS database of the Canadian Centre for Occupational Health and Safety (CCOHS). Data from suppliers' MSDS were also consulted.

a) Mixture of pentaerythritol ester and dipenterythritol ester of linear and branched fatty acids.

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Section 4: First Aid Measures

<i>Exposure Condition</i>	<i>GHS Code: Precautionary Statement</i>
IF IN EYES	P305
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	P313: Get medical attention.
IF ON SKIN (or hair)	P302
Response	P353: Wash with plenty of water and soap. P362+P364: Take off contaminated clothing and wash it before reuse.
If skin irritation or rash persists	P313: Get medical attention.
If exposed or concerned	P313: Get medical advice.
IF SWALLOWED	P301 (<i>Not a likely route of exposure under normal use</i>)
Response	P312: Call a POISON CENTRE or physician. P330: Rinse mouth. P331: Do NOT induce vomiting.
If you feel unwell	P313: Get medical attention.
IF INHALED	P304 (<i>Not a likely route of exposure under normal use</i>)
Response	P340: Remove person to fresh air and keep comfortable for breathing.
If experiencing respiratory symptoms	P301: Immediately call a poison centre or physician. P332: Get medical attention.
If exposed or concerned	P332: Get medical advice.

Note: GHS codes and corresponding precaution statements are used when available.

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Autoignition Temperature	Not established	Flash Point*	280 °C [535 °F]	LFL [LEL]**	Not applicable
				UFL [UEL]	applicable

In case of fire	P370
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Response	P378: Use dry chemical, carbon dioxide, chemical foam, or water spray to extinguish.
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Combustion Products	Produces CO, CO ₂ , sulfur oxides, and smoke.
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General Information	Will burn if involved in a fire.
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Note: The GHS codes and the GHS precaution statements are used. The format is *GHS Codes: Statements.*

* *Cleveland Open Cup*

***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.

Cleaning Collect liquid 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 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.

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Section 7: Handling and Storage

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

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

Storage No special storage instructions needed.

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

Note: The GHS codes and the GHS precaution statements are used. The format is *GHS Codes: Statements.*

Section 8: Exposure Controls/Personal Protection

Routes of Entry

Eyes, ingestion, inhalation, and skin

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 Wear appropriate protective eyeglasses or chemical safety goggles.

RECOMMENDATION: Use protective glasses with 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, 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 with water and soap after use.

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Section 9: Physical and Chemical Properties

Physical State	Liquid	Odor	Odorless	Odor Threshold	Not applicable
Appearance	Black	Specific Gravity	1.38	Freezing Point	Not available
Boiling Point	Not available	Vapor Pressure @ 20 °C	Not established	Evaporation Rate	Not applicable
Autoignition Temperature	Not established	Flash Point	280 °C [536 °F]	Vapor Density	Not applicable
Lower Flammability Limit	Not applicable	Upper Flammability Limit	Not applicable	Decomposition Temperature	Non established
Viscosity	Not available	Partition Coefficient	Not established	Solubility in Water	Slightly soluble
pH	Not established				

Section 10: Stability and Reactivity

Stabilities	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

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Section 11: Toxicological Information

Skin corrosion/irritation	Slight to moderate irritation possible.
Serious eye damage/irritation	Causes light to moderate eye irritation. Contains abrasive particles.
Sensitization (allergic reactions)	Not known or expected
Carcinogenicity (risk of cancer)	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 NTP: Not listed
Reproductive Toxicity (risk to sex functions)	Not known or expected
Teratogenicity (risk of fetus malformation)	Not known or expected
Mutagenicity (risk of heritable genetic effects)	Not known or expected
STOT-single exposure	Not known or expected
STOT-repeated exposure	Not known or expected
Aspiration hazard	Not applicable

Acute Toxicity (Lethal Exposure Concentrations)

Chemical Name	LD50 oral	LD50 dermal	LC50 inhalation	TCLo inhalation ^{a)}
synthetic oil	N/E	N/E	N/E	N/E
carbon black	>15 g/kg Rat	>3 g/kg Rabbit	N/E	1.6 mg/m ³ 7 h Rat
Amorphous fumed silica	3160 mg/kg Rat	≥2000 mg/kg Rabbit ^{b)}	N/E	154 mg/m ³ 6 h 4 w Rat

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

a) Lowest published lethal concentration (TCLo)

b) Value from supplier MSDS

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Section 12: Ecological Information

Acute Ecotoxicity

Category 2

GHS Code: Hazard Statement

H402: Harmful to aquatic life.

P273: Avoid release to the environment.

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 the oil effective loading effect for algae 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

Unknown

Biodegradability

Not readily biodegradable

Section 13: Disposal Information

GHS Code: Precaution Statement

P501: Dispose of contents in accordance with all local, provincial, state, and federal regulations.

Section 14: Transport Information

Ground

Not regulated

Air

Not regulated

Sea

Not regulated

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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 which is listed as a carcinogen, but it is not in an airborne, unbound particles of respirable size form.

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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.

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

MSDS Prepared by	Michel Hachey
Date of Preparation	03 November 2011
Revision Date	12 March 2012
Reference	All toxicological data were checked against the RTECS (Registry of Toxic Effects of Chemical Substances®)

Abbreviations

GHS:	Globally Harmonized System of Classification of Labeling of Chemicals
LC50	Lethal Concentration 50%
LD50	Lethal Dose 50%
N/A	Not Applicable
N/E	Not Estimated
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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