

8463A

# Safety Data Sheet

## Section 1: Identification

### Product Identifier and Other Means of Identification

**Product Identifier:** 8463A**Other Means of Identification:** Silver Grease**Related Part #** 8463A-3ML

### Recommended Use and Restriction on Use

**Use:** Conductive lubricant for switches**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](mailto:support@mgchemicals.com)**WEB** [www.mgchemicals.com](http://www.mgchemicals.com)**☎** +1-905-331-1396**FAX** +1-905-331-2682**E-MAIL** (Competent Person): [sds@mgchemicals.com](mailto:sds@mgchemicals.com)

### Emergency Phone Number

**For hazardous material incidents ONLY** (leaks, spills, fires, exposures or accidents)  
USA or CANADA—Call Verisk 3E at **+1-866-519-4752** or **+1-760-476-3962**  
(Service access code: 335388)

**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: Hazards Identification


#### Classification of Hazardous Chemical

##### GHS Categories

Criteria	Category	Signal Word	Pictograms
Hazardous to the Aquatic Environment Chronic	1	Warning	Environment

*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

<b>Signal Word</b>	<b>WARNING</b>
<b>Pictograms</b>	<b>Hazard Statements</b>
	H410: Very toxic to aquatic life with long lasting effects
<b>Prevention</b>	<b>Precautionary Statements</b>
P273	Avoid release to the environment.
<b>Response</b>	<b>Precautionary Statements</b>
P391	Collect Spillage.
<b>Disposal</b>	<b>Precautionary Statements</b>
P501	Dispose of contents in accordance to local, regional, national, and international regulations.

#### Hazards Not Otherwise Specified

Other Criteria	Hazard Statements/Precautionary Statement	Signal Word	Pictograms
Argyria	Long term exposure to silver powder or compounds can lead to an irreversible blue-grey discoloration of the skin.	None	None

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### Section 3: Composition/Information on Ingredients

CAS #	Chemical Name	%(weight)
7429-90-5	aluminum powder	30-60% *
7440-22-4	silver	10-30% *

\*The exact percentage (concentration) of composition has been withheld as a trade secret.

### Section 4: First-Aid Measures

<i>Exposure Condition</i>	<i>GHS Code/Symptoms/Precautionary Statements</i>
<b>IF INHALED</b>	P304 + P340
<b>Immediate Symptoms</b>	<i>low toxicity—no symptoms known or expected</i>
<b>Response</b>	Remove person to fresh air and keep comfortable for breathing.
<b>IF IN EYES</b>	P305 + P351+ P338
<b>Immediate Symptoms</b>	<i>low toxicity— mild irritation, redness</i>
<b>Response</b>	Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
<b>IF ON SKIN</b>	P302 + P352
<b>Immediate Symptoms</b>	<i>low toxicity—no symptoms known or expected</i>
<b>Response</b>	Wash with plenty of water and soap.
<b>IF SWALLOWED</b>	P301 + P330 + P331, P314
<b>Immediate Symptoms</b>	<i>low toxicity—no symptoms known or expected</i>
<b>Response</b>	Rinse mouth. Do NOT induce vomiting. Get medical advice or attention if feeling unwell.

**8463A****Section 5: Fire Fighting Measures**

<b>Extinguishing Media</b>	In case of fire: Use extinguish media suitable for surrounding.
<b>Specific Hazards</b>	At temperatures above 150 °C [302 °F], formaldehyde can be generated in presence of oxygen. Formaldehyde is classified as a human carcinogen, a skin and respiratory sensitizer; and an irritant to the eyes and throat.  Prevent fire-fighting wash from entering waterway or sewer system.
<b>Combustion Products</b>	Produces carbon oxides (CO,CO <sub>2</sub> ), silicone oxides, aluminum oxids and silver oxides.
<b>Fire-Fighter</b>	Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

**Section 6: Accidental Release Measures**

<b>Personal Protection</b>	Use personal protection recommended in Section 8.
<b>Precautions for Response</b>	This product makes surfaces slippery and must be cleaned thoroughly.
<b>Environmental Precautions</b>	Avoid releasing to the environment. Do not flush to sewer.
<b>Containment Methods</b>	Not applicable—not readily flowable
<b>Cleaning Methods</b>	Collect waste in a waste container. Wipe off residues with paper towels and place the used towels in the waste container. Use soap and water to remove the last traces of residue.
<b>Disposal Methods</b>	Dispose of spill waste according to Section 13.

**Section 7: Handling and Storage**

<b>Prevention</b>	Avoid release to the environment.
<b>Handling</b>	Collect spillage.
<b>Storage</b>	<b>RECOMMENDATION:</b> Keep in a dry and clean area, away from incompatible substances.

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**Section 8: Exposure Controls/Personal Protection**
**Substances with Occupational Exposure Limit Values**

Chemical Name	Country or Vendor	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
aluminum metal and insoluble compounds <sup>a)</sup>	ACGIH	1 mg/m <sup>3</sup>	Not established
	U.S.A. OSHA PEL	15 mg/m <sup>3</sup>	Not established
	Canada AB	10 mg/m <sup>3</sup>	Not established
	Canada BC	1 mg/m <sup>3</sup>	Not established
	Canada ON	1 mg/m <sup>3</sup>	Not established
	Canada QC	10 mg/m <sup>3</sup>	Not established
silver (metal dust, mist) (metal) (Ag and its compounds) (metal, dust, fumes)	ACGIH	0.1 mg/m <sup>3</sup>	Not established
	U.S.A. OSHA PEL	0.01 mg/m <sup>3</sup>	Not established
	Canada AB	0.1 mg/m <sup>3</sup>	Not established
	Canada BC	0.01 mg/m <sup>3</sup>	0.03 mg/m <sup>3</sup>
	Canada ON	0.1 mg/m <sup>3</sup>	Not established
	Canada QC	0.1 mg/m <sup>3</sup>	Not established

*Note:* Ingredients are listed in descending weight contribution order (from greatest to least). The ACGIH<sup>1</sup>, OSHA (Table Z-1), and Canadian provinces exposure limits were consulted. Limits 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 occupational exposure limits (OEL).

Because the aluminum and silver powders are bound to the grease matrix, they do not present an airborne hazard under normal use.

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

Wear appropriate protective eyeglasses or chemical safety goggles.

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

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### Skin Protection

For likely contacts, use of protective butyl rubber or other chemically resistant gloves.

For incidental contacts, use nitrile or other chemically resistant gloves.

### Respiratory Protection

For over-exposures up to 10 x OEL of mist, vapors, or spray, 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.

### General Hygiene Considerations

Wash hands thoroughly with water and soap after handling.

### Section 9: Physical and Chemical Properties

<b>Physical State</b>	Solid, paste	<b>Lower Flammability Limit</b>	Not available
<b>Appearance</b>	Light brown/silver	<b>Upper Flammability Limit</b>	Not available
<b>Odor</b>	Mild	<b>Vapor Pressure @20 °C</b>	Not available
<b>Odor Threshold</b>	Not available	<b>Vapor Density</b>	>1 (Air = 1)
<b>pH</b>	Not available	<b>Relative Density @25 °C</b>	1.84
<b>Freezing/Melting Point</b>	Not available	<b>Solubility in Water</b>	Insoluble
<b>Initial Boiling Point</b>	Not available	<b>Partition Coefficient n-octanol/water</b>	Not available
<b>Flash Point</b>	Not available	<b>Auto-ignition Temperature</b>	Not available
<b>Evaporation Rate</b>	<1 (ButAc = 1)	<b>Decomposition Temperature</b>	Not available
<b>Flammability</b>	Non flammable	<b>Viscosity @40 °C</b>	Not available

**8463A****Section 10: Stability and Reactivity**

<b>Reactivity</b>	Reacts with acids to form flammable hydrogen gas. Reacts violently with hydrogen peroxides to form oxygen gas. Reaction with ammonia may form explosive compounds when dry. Reacts with acetylene to form shock-sensitive compounds.
<b>Chemical Stability</b>	Chemically stable at normal temperatures and pressures
<b>Conditions to Avoid</b>	Avoid flames, excessive temperatures, and incompatible substances.
<b>Incompatibilities</b>	Strong oxidizing agents, strong acids, strong bases, ammonia, fluorine, chlorine
<b>Polymerization</b>	Will not occur
<b>Decomposition</b>	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**

<b>Eyes</b>	Low toxicity—May cause mild eye irritation and redness.
<b>Skin</b>	Low toxicity—no symptoms known or expected
<b>Inhalation</b>	Low toxicity—no symptoms known or expected
<b>Ingestion</b>	Low toxicity—no symptoms known or expected
<b>Chronic</b>	Prolonged or repeated exposure to silver or silver compounds by ingestion or inhalation can cause an irreversible blue-grey skin discoloration.

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### Acute Toxicity (Lethal Exposure Concentrations)

Chemical Name	LD50 oral	LD50 dermal	LC50 inhalation
aluminum powder	Not available	Not available	Not available
silver	>5 g/kg Guinea Pig	≥2 000 mg/kg Rabbit	5.16 mg/L Rat 4 h (dust)

*Note:* Toxicity data from the RTECS<sup>2</sup> and ECHA databases were consulted.

The data from supplier SDSs were also consulted.

### Other Toxicological Effects

<b>Skin corrosion/irritation</b>	Based on available data, the classification criteria are not met.
<b>Serious eye damage/irritation</b>	May cause mild eye irritation. Contains mechanically abrasive particles.
<b>Sensitization</b> (allergic reactions)	Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b> (risk of cancer)	None of the ingredients are classified or listed as a carcinogen by IARC, ACGIH, CA Prop 65, or NTP.
<b>Mutagenicity</b> (risk of heritable genetic effects)	Based on available data, the classification criteria are not met.
<b>Reproductive Toxicity</b> (risk to sex functions)	Based on available data, the classification criteria are not met.
<b>Teratogenicity</b> (risk of fetus malformation)	Based on available data, the classification criteria are not met.
<b>STOT-single exposure</b>	Based on available data, the classification criteria are not met.
<b>STOT-repeated exposure</b>	Based on available data, the classification criteria are not met.
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met. There is no category 1 components, and the kinematic viscosity is >20.5 mm <sup>2</sup> /s at 40 °C.



**8463A****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.

Contains silver particles less than a 1 mm in size but >100 nm (larger than nanoparticles), which are very toxic to the environment in their ionic form. While both are insoluble in water, classification is being harmonized to EU classification.

Aluminum powder is not classifiable as ecotoxic hazards under GHS criteria.

**Acute Ecotoxicity**

Category 1

Very toxic to aquatic life

**Chronic Ecotoxicity**

Category 1

Very Toxic to aquatic life with long lasting effects

Avoid release to the environment. Collect spillage.

**Biodegradability**

Not readily biodegradable

**Other Effects**

Not applicable

**Section 13: Disposal Considerations**

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

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### Section 14: Transport Information

#### Ground

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

Sizes 5 kg and under

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**NOT REGULATED** in TDG  
per Special Provisions 99

Sizes over 5 kg

*FOR REFERENCE ONLY*

**UN number:** UN3077

**Shipping Name:** ENVIRONMENTALLY  
HAZARDOUS SUBSTANCE, SOLID, N.O.S.  
(silver particles <1 mm)

**Class:** 9

**Packing Group:** III

**Marine Pollutant:** Yes

Sizes 5 kg and under

8463A-3ML

**NOT REGULATED** in 49 CFR  
per exception 171.4 (c)(2)

**Special Provision 99 (2):** These Regulations, except for Part 1 (Coming into Force, Repeal, Interpretation, General Provisions and Special Cases) and Part 2 (Classification), do not apply to the handling, offering for transport or transporting of less than 450 kg of UN3077, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., or less than 450 L of UN3082, ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S., on a road vehicle or a railway vehicle. The dangerous goods must be contained in one or more small means of containment designed, constructed, filled, closed, secured and maintained so that under normal conditions of transport, including handling, there will be no accidental release of the dangerous goods that could endanger public safety.

**171.4 (c) Exceptions:**

(2) Single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass of 5 kg or less for solids, are not subject to any other requirements of this subchapter provided the packagings meet the general requirements in §§ 173.24 and 173.24a. This exception does not apply to marine pollutants that are a hazardous waste or a hazardous substance. In the case of marine pollutants also meeting the criteria for inclusion in another hazard class, all provisions of this subchapter relevant to any additional hazards continue to apply.

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### Air

**Refer to ICAO-IATA regulations.**

Sizes 5 kg and under  
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**NOT REGULATED**

On the air waybill, write:  
"Not Restricted, as per Special Provisions A197"

Sizes over 5 kg

*FOR REFERENCE ONLY*

**UN number:** UN3077

**Shipping Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (silver particles <1 mm)

**Class:** 9

**Packing Group:** III

**Marine Pollutant:** Yes

**Special Provision A197:** These substances when transported in single or combination packagings containing net quantity per single or inner packaging of less than 5 L or less for liquids or having a net mass of 5 kg or less for solids, are not subject to any other provisions of these Regulations provided the packagings meet the general provisions 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

### Sea

**Refer to IMDG regulations.**

Sizes 5 kg and under  
8463A-3ML

**NOT REGULATED**

per 2.10.2.7

**2.10.2.7:** Marine pollutants packaged in single or combination packagings containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids are not subject to any other provision of this Code relevant to marine pollutants provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. In the case of marine pollutants also meeting the criteria for inclusion in another hazard class, all provisions of this Code relevant to any additional hazards continue to apply.

**Note:** Shipper must be appropriately trained and certified before involvement with the transport of dangerous goods.

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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.

#### 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.

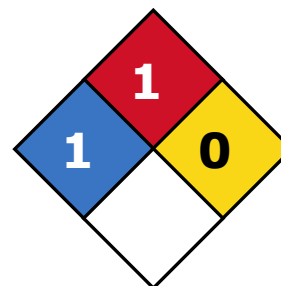
### USA

#### Other Classifications

##### HMIS® RATING

<b>HEALTH:</b>	* <b>1</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)

#### 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.

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**California Proposition 65** (Chemicals known to cause cancer or reproductive toxicity).

This product does not contain any substances on the California Proposition 65 list.

### 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** MG Chemical's Regulatory Department

**Date of Review** 21 April 2023

**Supersedes** 23 February 2022

**Reason for Changes:** General correction

#### Reference

1) ACGIH 2022 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 (2022).

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### 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](http://www.mgchemicals.com).

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

Phone: +1-905-331-1396

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

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