

Safety Data Sheet

according to WHMIS 2022 and HCS 2024

1 Identification

· Product identifier

· Trade name: 9410

- **Other Means of Identification:** One-Part Epoxy Electrically Conductive Adhesive
- **Related Part Number:** 9410, 9410-3ML, 9410-10ML, 9410-30ML, 9410-180ML

· **Application of the substance / the mixture** Electrically conductive adhesive

· **Uses advised against** Not available

· Details of the supplier of the safety data sheet

Manufacturer/Supplier:
MG Chemicals (Head Office)
1210 Corporate Drive
Burlington, Ontario L7L 5R6
CANADA
+(1) 800-340-0772
+(1) 905-331-1396
info@mgchemicals.com

Distributor:

Masline
511 Clinton Ave S
Rochester, New York 14620
United States
+(1) 586-546-5373

· **Information department:** sds@mgchemicals.com

· Emergency telephone number:

For hazardous material incidents ONLY (leaks, spills, fires, exposures or accidents)
USA or CANADA-Call 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

2 Hazard identification

· Classification of the substance or mixture

Skin Irritation - Category 2

Eye damage/irritation – Category 2A

Sensitization - skin – Category 1

Reproductive Toxicity - Category 2

Specific target organ toxicity (repeated exposure) – Category 2

Aquatic Acute 1

Aquatic Chronic 1

H315 Causes skin irritation.

H319 Causes serious eye irritation.

H317 May cause an allergic skin reaction.

H361 Suspected of damaging fertility or the unborn child.

H373 May cause damage to the nervous system through prolonged or repeated exposure.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

(Contd. on page 2)

Safety Data Sheet

according to WHMIS 2022 and HCS 2024

Trade name: 9410

(Contd. of page 1)

Label elements

GHS label elements

The product is classified and labeled according to the Globally Harmonized System (GHS).

Hazard pictograms



GHS07 GHS08 GHS09

Signal word Warning

Hazard-determining components of labeling:

Silver (Powder)
phenol, polymer with formaldehyde, glycidyl ether
4,4'-isopropylidenediphenol
formaldehyde, oligomeric reaction products with phenol

Hazard statements

H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H361 Suspected of damaging fertility or the unborn child.
H373 May cause damage to the nervous system through prolonged or repeated exposure.
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

P102 Keep out of reach of children.
P201 Obtain special instructions before use.
P202 Do not handle until all safety precautions have been read and understood.
P260 Do not breathe vapors or fumes.
P264 Wash thoroughly after handling.
P272 Contaminated work clothing should not be allowed out of the workplace.
P273 Avoid release to the environment.
P280 Wear protective gloves, protective clothing, and eye protection.
P302+P352 IF ON SKIN: Wash with plenty of water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 IF exposed or concerned: Get medical advice.
P333+P313 If skin irritation or rash occurs: Get medical advice.
P337+P313 If eye irritation persists: Get medical advice.
P362+P364 Take off contaminated clothing and wash it before reuse.
P391 Collect spillage.
P405 Store locked up.
P501 Dispose of contents and container in accordance with local, regional, and national regulations.

Other hazards

Long term exposure to silver powder or compounds can lead to an irreversible blue-grey discoloration of the skin.

—CA—
(Contd. on page 3)

Safety Data Sheet

according to WHMIS 2022 and HCS 2024

Date of issue 04/27/2026

Version number 7.00

Revision: 04/27/2026

Trade name: 9410

(Contd. of page 2)

3 Composition/Information on ingredients

- **Chemical characterization: Mixtures**

- **Description:** Mixture of the substances listed below with nonhazardous additions.

· Dangerous components:		
7440-22-4	silver powder: (particle diameter >100 nm and <1 mm)	63% w/w
28064-14-4	phenol, polymer with formaldehyde, glycidyl ether Alternative CAS number: 9003-36-5	25% w/w
68698-70-4	4,4'-isopropylidenediphenol	5% w/w
68609-97-2	oxirane, mono[(C12-14-alkyloxy)methyl] derivs	4% w/w
9003-35-4	formaldehyde, oligomeric reaction products with phenol	3% w/w

4 First-aid measures

- **Description of first aid measures**

- **General information:** Immediately remove any clothing soiled by the product.

- **After inhalation:**

- Remove person to fresh air and keep comfortable for breathing.

- If feeling unwell: Call a POISON CENTRE or doctor.

- If exposed or concerned: Get medical advice/attention.

- **After skin contact:**

- Wash with plenty water.

- If skin irritation or rash occurs: Get medical advice or attention.

- Take off contaminated clothing and wash it before reuse.

- If exposed or concerned: Get medical advice or attention.

- **After eye contact:**

- Rinse cautiously with water for 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

- If eye irritation persists: Get medical advice or attention.

- If exposed or concerned: Get medical advice/attention.

- **After swallowing:**

- Rinse mouth.

- Do NOT induce vomiting.

- If symptoms persist consult doctor.

- If exposed or concerned: Get medical advice or attention.

- **Most important symptoms and effects, both acute and delayed**

- No further relevant information available.

- **Indication of any immediate medical attention and special treatment needed**

- No further relevant information available.

Safety Data Sheet

according to WHMIS 2022 and HCS 2024

Date of issue 04/27/2026

Version number 7.00

Revision: 04/27/2026

Trade name: 9410

(Contd. of page 3)

5 Fire-fighting measures

- **Extinguishing media**
 - **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **Special hazards arising from the substance or mixture**
Not flammable or combustible, but burns if involved in a fire. Produces irritating smoke of unknown toxicity in fires. Prevent fire-fighting wash from entering waterway or sewer system. Inhalation of metal fumes may cause metal fever and irritate the respiratory tract. The flu-like symptoms of metal fever may be delayed, occurring 4 to 12 hours after exposure.
 - **Hazardous combustion products:**
Carbon Oxides (CO_x)
Nitrogen Oxides (NO_x)
ammonia
toxic metal fumes
- **Advice for firefighters**
 - **Protective equipment:** Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Ensure adequate ventilation
Avoid breathing the fumes or vapors.
Remove or keep away all sources of extreme heat or open flames.
- **Environmental precautions:**
Avoid release to the environment.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Ensure adequate ventilation.
Scoop paste into a chemical-resistant container. Wipe residue with a paper towel, and place dirty towels in container. Use soap and water to remove the last traces of residue.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

7 Handling and storage

- **Precautions for safe handling**
Obtain, read and follow all safety instructions before use.
Ensure good ventilation/exhaustion at the workplace.
Wear protective gloves and eye protection.
Wash hands and exposed skin thoroughly after handling.
Take off contaminated clothing and wash it before reuse.

(Contd. on page 5)

Safety Data Sheet
according to WHMIS 2022 and HCS 2024

Date of issue 04/27/2026

Version number 7.00

Revision: 04/27/2026

Trade name: 9410

(Contd. of page 4)

Collect spillage.

Contaminated work clothing should not be allowed out of the workplace.

- **Information about protection against explosions and fires:** No special measures required.

- **Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:**

- Keep in a dry and clean area, away from incompatible substances

- **Information about storage in one common storage facility:** Not required

- **Further information about storage conditions:** Keep receptacle tightly sealed.

- **Specific end use(s)** See section 1.2

8 Exposure controls/ Personal protection

- **Control parameters**

- **Components with limit values that require monitoring at the workplace:**

7440-22-4 silver powder: (particle diameter >100 nm and <1 mm)

EV (Canada)	TWA: 0.1* 0.01** mg/m ³ *metal;**water-soluble compounds (as silver)
PEL (USA)	TWA: 0.01 mg/m ³
REL (USA)	TWA: 0.01 mg/m ³

- **Additional information:**

- The lists that were valid during the creation were used as basis.

- Refer to the national or regional occupational exposure limit regulation for abbreviations and acronyms.

- **Exposure controls**

- **Appropriate engineering controls** Keep airborne concentrations below exposure limits.

- **Personal protective equipment:**

- **General protective and hygienic measures:**

- Keep away from foodstuffs, beverages and feed.

- Immediately remove all soiled and contaminated clothing.

- Wash hands before breaks and at the end of work.

- Avoid contact with the eyes and skin.

- **Breathing equipment:**

- If the product is heated or worker has a known allergic reaction, consider using a full mask with organic vapor cartridge or with an independent air supply.

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

- Advice should be sought from respiratory protection specialists.

- **Protection of hands:**

- Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

(Contd. on page 6)

Trade name: 9410

(Contd. of page 5)



Protective gloves: EN374

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Safety glasses or tightly sealed goggles: EN 166

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· Physical state	Solid
· Form:	Pasty
· Color:	Silver grey
· Odor:	Mild
· Odor threshold:	Not determined
· Melting point/Melting range:	Undetermined
· Boiling point/Boiling range:	≥150 °C (≥302 °F)
· Flammability:	Non flammable
· Explosion limits:	
· Lower:	Not applicable
· Upper:	Not applicable
· Flash point:	104 °C (219.2 °F)
· Auto igniting:	160 °C (320 °F)
· Decomposition temperature:	Not determined
· pH-value:	Not determined
· Viscosity:	
· Kinematic at 20 °C (68 °F):	20.5 mm ² /s
· Dynamic:	Not determined
· Solubility in / Miscibility with	
· Water:	Insoluble.
· Partition coefficient (n-octanol/water):	Not determined

(Contd. on page 7)

Safety Data Sheet
according to WHMIS 2022 and HCS 2024

Date of issue 04/27/2026

Version number 7.00

Revision: 04/27/2026

Trade name: 9410

(Contd. of page 6)

<ul style="list-style-type: none"> · Vapor pressure: Not determined · Relative density at 23.1 °C (73.6 °F): 2.34 · Vapor density (air=1): >1 · Particle characteristics Not determined
<ul style="list-style-type: none"> · Other information · Important information on protection of health and environment, and on safety. · Ignition temperature: Product is not selfigniting. · Danger of explosion: Product does not present an explosion hazard. · Organic solvents: Not available · VOC content: 0.000 % · Solids content: 100.0 % · Evaporation rate Not determined

10 Stability and reactivity

- **Reactivity** Reacts exothermically with amines.
- **Chemical stability** Chemically stable at normal temperatures and pressures.
 - **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** Reacts with heat.
- **Conditions to avoid**
Avoid open flames, excessive heat, sparks, ignition sources, and incompatible substances.
Do not use in away that forms mist or aerosolizes the product.
- **Incompatible materials:**
Oxidizing agents
Strong acids
Strong bases
Peroxides
- **Hazardous decomposition products:**
No dangerous decomposition products known.
Hazardous combustion products: see section 5.

11 Toxicological information

- **Information on toxicological effects**
 - **Acute toxicity:**

· LD/LC50 values that are relevant for classification:		
ATE (Acute Toxicity Estimate)		
Oral	LD50	10,000 mg/kg

(Contd. on page 8)

Safety Data Sheet
 according to WHMIS 2022 and HCS 2024

Date of issue 04/27/2026

Version number 7.00

Revision: 04/27/2026

Trade name: 9410

(Contd. of page 7)

28064-14-4 phenol, polymer with formaldehyde, glycidyl ether		
Oral	LD50	>2,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rabbit)
68698-70-4 4,4'-isopropylidenediphenol		
Oral	LD50	500 mg/kg (ATE)
68609-97-2 oxirane, mono[(C12-14-alkyloxy)methyl] derivs		
Oral	LD50	19,200 mg/kg (rat)
Dermal	LD50	4,500 mg/kg (rat)

- **Primary irritant effect:**
 - **on the skin:** Irritant to skin and mucous membranes.
 - **on the eye:** Irritating effect.
- **Sensitization:** Sensitization possible through skin contact.
- **Summary of effects and symptoms by route of exposure**
 - **Eyes:**
 - pain
 - redness, serious irritation
 - **Skin:**
 - dry skin
 - rash, allergic contact dermatitis
 - redness, irritation
 - **Inhalation:** none known or expected
 - **Swallowed:** none known or expected
- **Delayed and immediate effects as well as chronic effects from short and long-term exposure**

Exposure to silver powder may also cause argyria, an irreversible blue-grey discoloration of the skin. Prolonged or repeated exposure may cause skin allergies.
- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:
 Irritant

· IARC (International Agency for Research on Cancer)
None of the ingredients is listed.
· NTP (National Toxicology Program)
None of the ingredients is listed.

12 Ecological information

- **Toxicity**
 - **Aquatic toxicity:**
 - Very toxic to aquatic life with long lasting effect.
 - Avoid release to the environment.
 - Collect spillage.

(Contd. on page 9)

Safety Data Sheet
 according to WHMIS 2022 and HCS 2024

Date of issue 04/27/2026

Version number 7.00

Revision: 04/27/2026

Trade name: 9410

(Contd. of page 8)

28064-14-4 phenol, polymer with formaldehyde, glycidyl ether	
LC50 96h	>1–≤10 mg/L (not defined) In Europe, similar epoxy resin mixtures with CAS 28064-14-4 are generally classified as chronic category 2 marine pollutant due to LC50 96 h of >1 mg/L but ≤10 mg/L.

- **Persistence and degradability** No further relevant information available.
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable
 - **vPvB:** Not applicable
- **Other adverse effects**
 - **Remark:** Very toxic for fish

13 Disposal considerations

- **Waste treatment methods**
 - **Recommendation:** This material and its container must be disposed of as hazardous waste.
- **Uncleaned packagings:**
 - **Recommendation:**
 Containers may still present a chemical hazard/ danger when empty.
 Dispose of contents in accordance with all local, regional, national, and international regulations.
 Where possible retain label warnings and SDS and observe all notices pertaining to the product.

14 Transport information

· UN-Number	
· DOT/TDG, IMDG, IATA	UN3077
· UN proper shipping name	
· DOT/TDG	NOT REGULATED by DOT Environmentally hazardous substance, solid, n.o.s. (Silver (Powder), phenol, polymer with formaldehyde, glycidyl ether)
· IMDG	NOT REGULATED for sea freight IMDG according to 2.10.2.7 for sizes up to 5 kg. ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Silver (Powder), phenol, polymer with formaldehyde, glycidyl ether), MARINE POLLUTANT
· IATA	NOT REGULATED by Air IATA Special Provision A197 for sizes 5kg or less. Environmentally hazardous substance, solid, n.o.s. (Silver

(Contd. on page 10)

Safety Data Sheet
 according to WHMIS 2022 and HCS 2024




Date of issue 04/27/2026

Version number 7.00

Revision: 04/27/2026

Trade name: 9410

(Contd. of page 9)

(Powder), phenol, polymer with formaldehyde, glycidyl ether)	
<ul style="list-style-type: none"> · Transport hazard class(es) · DOT/TDG, IATA 	
 	
<ul style="list-style-type: none"> · Class · Label 	9 Miscellaneous dangerous substances and articles 9
<ul style="list-style-type: none"> · IMDG 	
	
<ul style="list-style-type: none"> · Class · Label 	9 Miscellaneous dangerous substances and articles 9
<ul style="list-style-type: none"> · Packing group · DOT/TDG, IMDG, IATA 	III
<ul style="list-style-type: none"> · Environmental hazards: · Marine pollutant: · Special marking (IATA): 	MARINE POLLUTANT ENVIRONMENTALLY HAZARDOUS Symbol (fish and tree)
<ul style="list-style-type: none"> · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code 	Not applicable
<ul style="list-style-type: none"> · Transport/Additional information: · DOT/TDG · Quantity limitations · Remarks: 	On passenger aircraft/rail: 400 kg On cargo aircraft only: 400 kg Special marking with the symbol (fish and tree).
<ul style="list-style-type: none"> · IMDG · Limited quantities (LQ) · Excepted quantities (EQ) 	5 kg Code: E1 Maximum net quantity per inner packaging: 30 g Maximum net quantity per outer packaging: 1000 g
<ul style="list-style-type: none"> · Special precautions for user · Hazard identification number (Kemler code): · EMS Number: · Stowage Category 	Not applicable 90 F-A,S-F A

(Contd. on page 11)



Safety Data Sheet
according to WHMIS 2022 and HCS 2024

Date of issue 04/27/2026

Version number 7.00

Revision: 04/27/2026

Trade name: 9410

(Contd. of page 10)

· Stowage Code	SW23 When transported in BK3 bulk container, see 7.6.2.12 and 7.7.3.9.
· UN "Model Regulation":	UN 3077 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (SILVER (POWDER), PHENOL, POLYMER WITH FORMALDEHYDE, GLYCIDYL ETHER), 9, III

15 Regulatory information

· **Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **OSHA Hazard Communication Standard (29 CFR Part 1900)**

The safety data sheet and label comply with HCS 2024.

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

The safety data sheet and label comply with the Hazardous Product Act and WHMIS 2022.

· **Sara**

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

7440-22-4 | silver powder: (particle diameter >100 nm and <1 mm)

· **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

· **Hazardous Air Pollutants**

None of the ingredients is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**

· **TLV (Threshold Limit Value)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

(Contd. on page 12)

Safety Data Sheet
according to WHMIS 2022 and HCS 2024

Date of issue 04/27/2026

Version number 7.00

Revision: 04/27/2026

Trade name: 9410

(Contd. of page 11)

· **Canadian substance listings:**

· Canadian Domestic Substances List (DSL)	
7440-22-4	silver powder: (particle diameter >100 nm and <1 mm)
28064-14-4	phenol, polymer with formaldehyde, glycidyl ether
68609-97-2	oxirane, mono[(C12-14-alkyloxy)methyl] derivs
9003-35-4	formaldehyde, oligomeric reaction products with phenol
· Canadian Non-Domestic Substances List (NDSL)	
68698-70-4	4,4'-isopropylidenediphenol
· Canadian Ingredient Disclosure list (limit 0.1%)	
None of the ingredients is listed.	
· Canadian Ingredient Disclosure list (limit 1%)	
7440-22-4	silver powder: (particle diameter >100 nm and <1 mm)

· **HMIS-ratings (scale 0 - 4)**

Health = * 2
 Fire = 1
 Reactivity = 0

· **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.

· **Per- and polyfluoroalkyl substances (PFAS)**

None of the ingredients is listed.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Regulatory department

· **Contact:** sds@mgchemicals.com

· **Date of previous version** 11/07/2025

· **Version number of previous version:** 6.01

· **Date of preparation** 04/27/2026

· **Abbreviations and acronyms:**

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

VOC: Volatile Organic Compounds (USA, EU)

(Contd. on page 13)



Safety Data Sheet
according to WHMIS 2022 and HCS 2024

Page 13/13

Date of issue 04/27/2026

Version number 7.00

Revision: 04/27/2026

Trade name: 9410

(Contd. of page 12)

LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
PBT: Persistent, Bioaccumulative and Toxic
vPvB: very Persistent and very Bioaccumulative
NIOSH: National Institute for Occupational Safety

— CA —