

860

# Safety Data Sheet

## Section 1: Identification

### Product Identifier and Other Means of Identification

**Product Name:** 860**Other Means of Identification:** Silicone Heat Transfer Compound**Related Part #** 860-4G, 860-60G, 860-150G, 860-1P, 860-3.78L, 860-1G, 860-5GPSW

### Recommended Use and Restriction on Use

**Use:** Heat transfer compound**Uses Advised Against:** Not available

### Details of Manufacturer or Importer

**Manufacturer**MG Chemicals  
1210 Corporate Drive  
Burlington, Ontario L7L 5R6  
CANADA**Phone** +1-800-340-0772**Phone** +1-905-331-1396**Fax** +1-800-340-0773**Fax** +1-905-331-2682**E-mail** [support@mgchemicals.com](mailto:support@mgchemicals.com)**Web** [www.mgchemicals.com](http://www.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 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 serviceCANADA—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	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 and container in accordance to local, regional, national, and international regulations.

**Hazards Not Otherwise Specified**

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

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**Section 3: Composition/Information on Ingredients**

CAS #	Chemical Name	%(weight)
1314-13-2	zinc oxide	70%
112945-52-5	amorphous silica	3%

**Section 4: First-Aid Measures**

<i>Exposure Condition</i>	<i>GHS Code: Precautionary Statement</i>
<b>IF IN EYES</b>	P305 + P351+ P338
<b>Immediate Symptoms</b>	<i>redness, mild irritation</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>mild irritation</i>
<b>Response</b>	Wash with plenty of water.
<b>IF INHALED</b>	P304 + P340
<b>Immediate Symptoms</b>	<i>coughing, irritation of the respiratory tract</i>
<b>Delayed Symptoms</b>	If exposed to metal fumes, chills and fever-like symptoms may occur 4-12 hours after exposure.
<b>Response</b>	Remove person to fresh air and keep comfortable for breathing.
<b>IF SWALLOWED</b>	P301 + P330, P331
<b>Immediate Symptoms</b>	<i>low toxicity: abdominal pain, diarrhea, nausea, vomiting</i>
<b>Response</b>	Rinse mouth. Do NOT induce vomiting.

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**Section 5: Fire Fighting Measures**

<b>Extinguishing Media</b>	In case of fire: Use extinguishing media suitable for surrounding materials.  Not flammable or combustible, but burns if involved in a fire.
<b>Specific Hazards</b>	When the product is exposed to very high heat such as welding, this may cause harmful zinc oxide fumes.  Inhalation of fumes may cause metal fever and irritate the respiratory tract. The flu-like symptoms of metal fume fever may be delayed, occurring 4–12 hours after exposure.  Prevent fire-fighting wash from entering waterway or sewer system.
<b>Combustion Products</b>	Produces carbon oxides (CO, CO <sub>2</sub> ), metal fumes, zinc oxide (ZnO), and formaldehyde.
<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>	See personal protection recommendations in Section 8.
<b>Precautions for Response</b>	Avoid breathing fumes or dust. Remove or keep away all sources of extreme heat or open flames.
<b>Environmental Precautions</b>	Avoid releasing to the environment. Prevent spill from entering drains and waterways.
<b>Containment</b>	Not applicable—not readily flowable
<b>Cleaning</b>	Collect waste in a waste 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.

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**Section 7: Handling and Storage**

<b>Prevention</b>	Keep out of reach of children. Avoid breathing dust and fumes. Avoid release to the environment.
<b>Handling</b>	Wear protective gloves, protective clothing, and eye protection. Wash hands thoroughly after handling. Collect spillage.
<b>Storage</b>	Not applicable

**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)
zinc oxide (dust/mist)	ACGIH	2 mg/m <sup>3</sup>	Not established
	U.S.A. OSHA PEL	2 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
	Canada AB	2 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
	Canada BC	2 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
	Canada ON	2 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
fumes dust	Canada QC	2 mg/m <sup>3</sup>	10 mg/m <sup>3</sup>
	Canada QC	10 mg/m <sup>3</sup>	Not established
amorphous silica	ACGIH	Not established	Not established
	U.S.A. NIOSH	6 mg/m <sup>3</sup>	Not established
mineral dust	U.S.A. OSHA PEL	20 mppcf <sup>a)</sup>	Not established

*Note:* Ingredients are listed in descending weight contribution order (from greatest to least). The ACGIH1, 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. (mppcf) Millions of particles per cubic foot air, based on impinge samples counted by light-field technique.

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**860****Engineering Controls**

- Ventilation** Keep airborne concentrations below the occupational exposure limits (OEL).  
The zinc oxide and silica dust are bound in the grease matrix and are not available as a respiration hazard under normal conditions.

**Personal Protective Equipment**

- Eye protection** Wear appropriate protective eyeglasses or chemical safety goggles.  
**RECOMMENDATION:** Ensure that glasses have side shields for lateral protection.
- Skin Protection** For likely contacts, use of protective nitrile gloves or other chemically resistant gloves.
- Respiratory Protection** For over-exposures up to 10 x OEL of dust and fumes, wear a an approved respirator with particulate filter that meets local, regional, and national standards.  
**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.

**General Hygiene Considerations**

Wash hands thoroughly with water and soap after handling.

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**Section 9: Physical and Chemical Properties**

<b>Physical State</b>	Solid	<b>Lower Flammability Limit</b>	Not applicable
<b>Appearance</b>	White paste	<b>Upper Flammability Limit</b>	Not applicable
<b>Odor</b>	None	<b>Vapor Pressure @20 °C</b>	Not available
<b>Odor Threshold</b>	Not applicable	<b>Vapor Density</b>	Not available
<b>pH</b>	Not available	<b>Relative Density @25 °C</b>	2.40
<b>Freezing/Melting Point</b>	Not available	<b>Solubility in Water</b>	Insoluble <sup>a)</sup>
<b>Initial Boiling Point</b>	>300 °C [>572 °F]	<b>Partition Coefficient n-octanol/water</b>	Not available
<b>Flash Point</b>	260 °C [500 °F]	<b>Auto-ignition Temperature</b>	Not available
<b>Evaporation Rate</b>	Not available	<b>Decomposition Temperature</b>	Not available
<b>Flammability</b>	Not flammable	<b>Viscosity @40 °C</b>	Not applicable

a) Inorganic components are sparingly soluble.

**Section 10: Stability and Reactivity**

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

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**Section 11: Toxicological Information****Summary of Effects and Symptoms by Routes of Exposure**

<b>Eyes</b>	May cause redness and mild irritation.
<b>Skin</b>	May cause mild skin irritation.
<b>Inhalation</b>	May cause coughing and irritation of the respiratory tract.  Inhalation of fumes may cause metal fever and irritate the respiratory tract. The flu-like symptoms of metal fume fever may be delayed, occurring 4–12 hours after exposure.
<b>Ingestion</b>	Low toxicity: abdominal pain, diarrhea, nausea, vomiting
<b>Chronic</b>	Not available

**Acute Toxicity (Lethal Exposure Concentrations)**

<b>Chemical Name</b>	<b>LD50 oral</b>	<b>LD50 dermal</b>	<b>LC50 inhalation</b>
zinc oxide	7 950 mg/kg Rat	Not available	2 500 mg/m <sup>3</sup> Mouse 4 h
amorphous silica	3 160 mg/kg Rat	Not available	Not available

*Note:* Toxicity data from ECHA were consulted. The data from supplier SDSs were also consulted.

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**860****Other Toxicological Effects**

<b>Skin corrosion/irritation</b>	Based on available data, the classification criteria are not met.
<b>Serious eye damage/irritation</b>	Based on available data, the classification criteria are not met.
<b>Sensitization</b> (allergic reactions)	Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b> (risk of cancer)	Not 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>	Not applicable. There are no category 1 components and the kinematic viscosity of the mixture is >20.5 mm <sup>2</sup> /s at 40 °C.

**860****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 zinc oxide which is a chronic category 1 solid (non-biodegradable, minimal EC50 of 0.042 mg/L *Pseudokrichneriella subcapita*) that is harmful to the environment.

Based on available data, the polydimethyl siloxane fluid and amorphous silica are not classifiable as ecotoxic hazards according to GHS criteria.

**Acute Ecotoxicity**

See chronic ecotoxicity

**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**

Exempted volatile organic compounds (VOC) by EPA and CEPA regulations.

**Section 13: Disposal Information**

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 under 450 kg  
 860-4G, 860-60G, 860-150G,  
 860-1P, 860-3.78L, 860-1G

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

Sizes 5 kg and under

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

Sizes greater than 5 kg (USA)

860-5GPSW

**UN number:** UN3077

**Shipping Name:** ENVIRONMENTALLY  
 HAZARDOUS SUBSTANCE, SOLID,  
 N.O.S. (zinc oxide)

**Class:** 9

**Packing Group:** III

**Marine Pollutant:** Yes



**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.

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### Air

**Refer to ICAO-IATA regulations.**

**Sizes 5 kg and under**

860-4G, 860-60G, 860-150G,  
860-1P, 860-3.78L, 860-1G

**NOT REGULATED**

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

**Sizes greater than 5 kg**

860-5GPSW

**UN number:** UN3077

**Shipping Name:** ENVIRONMENTALLY  
HAZARDOUS SUBSTANCE, SOLID,  
N.O.S. (zinc oxide)

**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.

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## 860

### Sea

**Refer to IMDG regulations.**

Sizes 5 kg and under  
 860-4G, 860-60G, 860-150G,  
 860-1P, 860-3.78L, 860-1G  
**NOT REGULATED**  
 per 2.10.2.7

Sizes greater than 5 kg  
 860-5GPSW

**UN number:** UN3077  
**Shipping Name:** ENVIRONMENTALLY  
 HAZARDOUS SUBSTANCE, SOLID,  
 N.O.S.  
 (zinc oxide)  
**Class:** 9  
**Packing Group:** III  
**Marine Pollutant:** Yes



**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.**

### Section 15: Regulatory Information

#### Canada

#### Domestic Substance List (DSL) / Non-Domestic Substance Lists (NDSL)

All hazardous ingredients are listed on the DSL/NDSL.

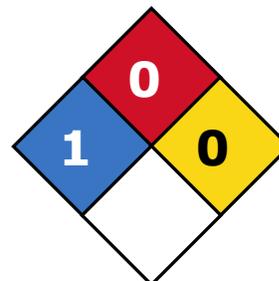
#### Hazardous Products Act (R.S.C., 1985, c. H-3)

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

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**860****USA****Other Classifications****HMIS® RATING**

<b>HEALTH:</b>	<b>1</b>
<b>FLAMMABILITY:</b>	<b>0</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 contains zinc compounds which 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)

This product does not contain any of the listed substances.

**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.

**860****Section 16: Other Information**

<b>SDS Prepared by</b>	Regulatory Department
<b>Date of Issue</b>	20 April 2023
<b>Supersedes</b>	20 February 2020
<b>Reason for Changes:</b>	Amended transport section and emergency response contact.

**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).

**Abbreviations**

ACGIH	American Conference of Governmental Industrial Hygienists (USA)
EC50	Half maximal effective concentration
EL50	Half maximal effective loading
IARC	International Agency for Research on Cancer
NOELR	No observable effect loading ratio
NTP	National Toxicology Program
GHS	Globally Harmonized System of Classification of Labeling of Chemicals
LC50	Lethal Concentration 50%
LCLo	Lowest published lethal concentration
LD50	Lethal Dose 50%
OEL	Occupational Exposure Limit
PEL	Permissible Exposure Limit
SDS	Safety Data Sheet
STEL	Short-Term Exposure Limit
TCLo	Lowest published toxic concentration
TWA	Time Weighted Average
VOC	Volatile Organic Content
Wt	Weight

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**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)

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

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