

841ER-A

(PART A)

# Safety Data Sheet

## Section 1: Identification

### Product Identifier and Other Means of Identification

**Product Name:** 841ER-A**Other Means of Identification:** Super Shield™ Nickel Epoxy Conductive Paint (Part A)**Related Part #** 841ER-250ML, 841ER-1.17L, 841ER-3.25L

### Recommended Use and Restriction on Use

**Use:** Nickel conductive epoxy resin**Uses Advised Against:** Not available

### Details of Manufacturer or Importer

**Manufacturer**MG Chemicals  
1210 Corporate Drive  
Burlington, Ontario L7L 5R6  
CANADAMG 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  
**Web** www.mgchemicals.com**☎** +1-905-331-1396  
**Fax** +1-905-331-2682  
**E-mail** 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 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

**841ER-A**
**(PART A)**
**Section 2: Hazard(s) Identification**
**Classification of Hazardous Chemical**
**GHS Categories**

Criteria		Category	Signal Word	Pictograms
Eye Damage		1	Danger	Corrosion
Flammable Liquid		2	Danger	Flame
Specific Target Organ Toxicity	Repeated Exposure	1	Danger	Health
Carcinogenicity		2	Warning	Health
Sensitization	Skin	1	Warning	Exclamation
Skin Irritation		2	Warning	Exclamation
Specific Target Organ Toxicity	Single Exposure	3	Warning	Exclamation
Hazardous to the Aquatic Environment	Chronic	3	none	none


*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>DANGER</b>
<b>Pictograms</b>	<b>Hazard Statements</b>
	H318: Causes serious eye damage
	H225: Highly flammable liquid and vapor
	H372: Causes damage to lungs through prolonged or repeated exposure by inhalation H351: Suspected of causing cancer

*Section continued on the next page*

**841ER-A**
**(PART A)**
*Continued...*

<b>Pictograms</b>	<b>Hazard Statements</b>
	H317: May cause an allergic skin reaction H315: Causes skin irritation H336: May cause dizziness or drowsiness
No Symbol Mandated	H412: Harmful to aquatic life with long lasting effects
<b>Prevention</b>	<b>Precautionary Statements</b>
P201, P202	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof equipment.
P243	Take action to prevent static discharges.
P260	Do not breathe mist, vapors or spray.
P270	Do not eat, drink or smoke when using this product.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves, protective clothing and eye protection.
P272	Contaminated work clothing should not be allowed out of the workplace.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
<b>Response</b>	<b>Precautionary Statements</b>
P370 + P378	In case of fire: Use dry chemical, carbon dioxide, chemical foam, or water spray to extinguish.
P308 + P313	IF exposed or concerned: Get medical advice or attention.
P314	Get medical advice or attention if you feel unwell.
P304 + P340, P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTRE or doctor if you feel unwell.

*Section continued on the next page*

**841ER-A**
**(PART A)**
*Continued...*

<b>Response</b>	<b>Precautionary Statements</b>
P305 + P351 + P338, P310	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
P303 + P361 + P352	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Wash with plenty of water or shower.
P333 + P313 P363	If skin irritation or rash occurs: Get medical advice or attention. Wash contaminated clothing before reuse.
<b>Storage</b>	<b>Precautionary Statements</b>
P403 + P235 P405	Store in a well-ventilated place. Keep cool. Store locked up.
<b>Disposal</b>	<b>Precautionary Statements</b>
P501	Dispose of contents in accordance to local, regional, national and international regulations.

**Hazards Not Otherwise Classified**

<b>Other Criteria</b>	<b>Hazard Statements/Precautionary Statement</b>	<b>Signal Word</b>	<b>Pictograms</b>
None	None	None	None

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

<b>CAS #</b>	<b>Chemical Name</b>	<b>%(weight)</b>
7440-02-0	nickel	53%
78-93-3	2-butanone <sup>a)</sup>	15%
123-86-4	n-butyl acetate	10%
25068-38-6	bisphenol-A-(epichlorhydrin)	8%
71-36-3	butan-1-ol	7%
14807-96-6	talc (no asbestos fiber)	3%
68609-97-2	alkyl glycidyl ether	2%

a) Also known as methyl ethyl ketone (MEK)

**841ER-A**
**(PART A)**
**Section 4: First-Aid Measures**

<i>Exposure Condition</i>	<i>GHS Code/Symptoms/Precautionary Statements</i>
<b>IF IN EYES</b>	P305 + P351 + P338, P310
<b>Immediate Symptoms</b>	<i>irritation, redness, pain, burn, eye damage</i>
<b>Response</b>	Rinse cautiously with water for at least 30 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
<b>IF ON SKIN (or hair)</b>	P303 + P361 + P352, P333 + P313, P363
<b>Immediate Symptoms</b>	<i>redness, irritation, rash, dry skin</i>
<b>Response</b>	Take off immediately all contaminated clothing. Wash with plenty of water or shower. If skin irritation or rash occurs: Get medical advice or attention. Wash contaminated clothing before reuse.
<b>IF INHALED</b>	P304 + P340, P312, P308 + P313
<b>Immediate Symptoms</b>	<i>cough, shortness of breath, dizziness, drowsiness, headaches</i>
<b>Response</b>	Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTRE or doctor if you feel unwell. IF exposed or concerned: Get medical advice or attention.
<b>IF SWALLOWED</b>	P301 + P330, P331, P308 + P313
<b>Immediate Symptoms</b>	<i>abdominal pain, nausea, headaches, dizziness, drowsiness, vomiting</i>
<b>Response</b>	Rinse mouth. Do NOT induce vomiting. IF exposed or concerned: Get medical advice or attention.

**841ER-A****(PART A)****Section 5: Fire-Fighting Measures**

<b>Extinguishing Media</b>	In case of fire: Use dry chemical, carbon dioxide, chemical foam, or water spray to extinguish.  Use water spray to cool containers.
<b>Specific Hazards</b>	Produces irritating and toxic fumes in fires or in contact with hot surfaces. May produce very toxic nickel carbonyl gas in the presence of carbon monoxide in a reducing atmosphere.  The vapors are heavier than air and may accumulate in low-lying areas. Vapors may travel long distances and ignite at an ignition source, which can cause a flashback or an explosion.  Prevent fire-fighting wash from entering waterway or sewer system.
<b>Combustion Products</b>	Produces carbon oxides (CO, CO <sub>2</sub> ), nickel oxides fumes, and nitrogen oxides (NO <sub>x</sub> ).
<b>Fire-Fighter</b>	Wear self-contained breathing apparatus and full fire-fighting turnout gear.

**Section 6: Accidental Release Measures**

<b>Personal Protection</b>	See personal protection recommendations in Section 8.
<b>Precautions for Response</b>	Do not breathe the mist, spray or vapors. 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 Methods</b>	Contain with inert absorbent (such as soil, sand, vermiculite).
<b>Cleaning Methods</b>	Collect liquid in a sealable, solvent-resistant container. Sprinkle inert absorbent compound onto spill, then sweep into the container. Wash spill area with soap and water to remove the last traces of residue.
<b>Disposal Methods</b>	Dispose of spill waste according to Section 13.

**841ER-A**
**(PART A)**
**Section 7: Handling and Storage**
**Prevention**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

Keep container tightly closed.

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground and bond container and receiving equipment. Use explosion-proof equipment. Take action to prevent static discharges.

Do not breathe mist, vapors or spray. Do not eat, drink or smoke when using this product.

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

Avoid release to the environment.

**Handling**

Wear protective gloves, protective clothing, and eye protection.

Take off contaminated clothing and wash it before reuse.

Use only outdoors or in a well-ventilated area.

Wash hands thoroughly after handling.

**Storage**

Store in a well-ventilated place. Keep cool.

Store locked up.

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

Chemical Name	Country/ Provinces	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
nickel (dust)	ACGIH	1.5 mg/m <sup>3</sup>	Not established
	U.S.A. OSHA PEL	1 mg/m <sup>3</sup>	Not established
	Canada AB	1.5 mg/m <sup>3</sup>	Not established
	Canada BC	0.05 mg/m <sup>3</sup>	Not established
	Canada ON	1 mg/m <sup>3</sup>	Not established
	Canada QC	1 mg/m <sup>3</sup>	Not established

*Section continued on the next page*

**841ER-A**
**(PART A)**
*Continued...*

<b>Chemical Name</b>	<b>Country/ Provinces</b>	<b>Long Term Exposure Limits (PEL)</b>	<b>Short Term Exposure Limits (STEL)</b>
2-butanone	ACGIH U.S.A. OSHA PEL Canada AB Canada BC Canada ON Canada QC	200 ppm 200 ppm 200 ppm 50 ppm 200 ppm 150 ppm	300 ppm 300 ppm 300 ppm 100 ppm 300 ppm 300 ppm
n-butyl acetate	ACGIH U.S.A. OSHA PEL Canada AB Canada BC Canada ON Canada QC	150 ppm 150 ppm 150 ppm 20 ppm 150 ppm 150 ppm	Not established Not established 200 ppm 200 ppm Not established 200 ppm
butan-1-ol	ACGIH U.S.A. OSHA PEL Canada AB Canada BC Canada ON Canada QC	20 ppm 100 ppm 20 ppm 15 ppm 20 ppm 50 ppm (Ceiling)	Not established Not established Not established 30 ppm (Ceiling) Not established Not established
talc (without asbestos fibers)	ACGIH U.S.A. OSHA PEL Canada AB Canada BC Canada ON Canada QC	2 mg/m <sup>3</sup> 20 mppcf <sup>a)</sup> 2 mg/m <sup>3</sup> 2 mg/m <sup>3</sup> 2 mg/m <sup>3</sup> 3 mg/m <sup>3</sup>	Not established Not established Not established Not established Not established 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 RTECS database<sup>2</sup> and data 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) Millions of particles per cubic foot air, based on impinge samples counted by light-field technique.

**Engineering Controls**
**Ventilation**

Keep airborne concentrations below the occupational exposure limits (OEL).

*Section continued on the next page*



**841ER-A****(PART A)****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 butyl rubber or other chemically resistant gloves.

For incidental contacts, use disposable natural rubber 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.

Above 10 x OEL, use a positive-pressure, air-supplied respirator or a self-contained breathing apparatus.

**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.

**841ER-A**
**(PART A)**
**Section 9: Physical and Chemical Properties**

<b>Physical State</b>	Liquid	<b>Lower Flammability Limit</b> <sup>b)</sup>	1.7%
<b>Appearance</b>	Grey	<b>Upper Flammability Limit</b> <sup>b)</sup>	11%
<b>Odor</b>	Alcohol-like	<b>Vapor Pressure @20 °C</b>	Not available
<b>Odor Threshold</b>	0.007 ppm	<b>Vapor Density</b>	>4 (Air =1)
<b>pH</b>	Not available	<b>Relative Density @25 °C</b>	1.8
<b>Freezing/Melting Point</b>	Not available	<b>Solubility in Water</b>	Partially miscible
<b>Initial Boiling Point</b> <sup>a)</sup>	≥80 °C [≥176 °F]	<b>Partition Coefficient n-octanol/water</b>	Not available
<b>Flash Point</b> <sup>a)</sup>	-9 °C [16 °F]	<b>Auto-ignition Temperature</b>	Not available
<b>Evaporation Rate</b>	Not available	<b>Decomposition Temperature</b>	Not available
<b>Flammability</b>	Highly Flammable	<b>Viscosity @25°C</b>	200 mm <sup>2</sup> /s

a) Based on 2-butanone component

b) Values calculated using Raoult's Law and Le Chatelier principle for solvent components.

**Section 10: Stability and Reactivity**

<b>Reactivity</b>	<p>The nickel can react vigorously with acids and liberate hydrogen, which can form an explosive mixture in air.</p> <p>Nickel may react with carbon monoxide in a reducing atmosphere to form a very toxic nickel carbonyl gas.</p>
<b>Chemical Stability</b>	Chemically stable at normal temperatures and pressures.
<b>Conditions to Avoid</b>	Ignition sources, open flames, excessive heat, and incompatible substances
<b>Incompatibilities</b>	Strong oxidizing agents, strong acids, strong bases
<b>Polymerization</b>	Will not occur
<b>Decomposition</b>	Will not decompose under normal conditions. For thermal decomposition, see combustion products in Section 5.

**841ER-A**
**(PART A)**
**Section 11: Toxicological Information**
**Summary of Effects and Symptoms by Routes of Exposure**

<b>Eyes</b>	Causes severe irritation, redness, pain, or burns.
<b>Skin</b>	Causes skin irritation, redness, rash, or dry skin.
<b>Inhalation</b>	May cause cough, shortness of breath, dizziness, drowsiness, or headaches.
<b>Ingestion</b>	May cause nausea, sore throat, abdominal pain, and diarrhea (also see inhalation symptoms).
<b>Chronic</b>	Chronic inhalation exposure to nickel dust or mist may damage lungs.

**Acute Toxicity (Lethal Exposure Concentrations)**

<b>Chemical Name</b>	<b>LD50 oral</b>	<b>LD50 dermal</b>	<b>LC50 inhalation</b>
nickel	5 000 mg/kg Rat	Not available	Not available
2-butanone	2 737 mg/Kg Rat	6 480 mg/Kg Rabbit	23.5 mg/L 8 h Rat
n-butyl acetate	>10 768 mg/kg Rat	>17 600 mg/kg Rabbit	390 ppm 4 h Rat
bisphenol-A-(epichlorhydrin)	11 400 mg/kg Rat	100 pph 7 h Rabbit	Not available
butan-1-ol	790 mg/kg Rat	3 400 mg/kg Rabbit	Not available
talc	Not available	Not available	Not available
alkyl glycidyl ether	19 200 mg/kg Rat	4 500 mg/kg Rat	Not available

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

*Section continued on the next page*

**841ER-A****(PART A)****Other Toxicological Effects**

<b>Skin corrosion/irritation</b>	Bisphenol-A, butan-1-ol, and alkyl glycidyl ether are known skin irritants.
<b>Serious eye damage/irritation</b>	The 7% butan-1-ol in the mixture is expected to cause severe eye irritation or irreversible eye damage.
<b>Sensitization</b> (allergic reactions)	Exposure to the epoxy resin and nickel may cause an allergic skin reaction.
<b>Carcinogenicity</b> (risk of cancer)	Nickel is classified as a suspect carcinogen based on animal intratracheal instillation (intubation) or interperitoneal (in body cavity) injection studies. A reliable 2008 study by Oller et al. shows no carcinogenicity for the nickel metal via normal inhalation route. <b>Nickel [7440-02-0]</b> IARC Group 2B: Possibly carcinogenic to humans ACGIH A5: Not suspected as a human carcinogen CA Prop 65: Listed as a carcinogen NTP: Reasonably anticipated to be human carcinogen
<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>	The 2-butanone, N-butyl acetate and butan-1-ol can affect the central nervous system by inhalation causing drowsiness or dizziness, and they are a respiratory system irritant.
<b>STOT-repeated exposure</b>	Inhalation dust/mist containing nickel particles of less than 0.1 mm may cause chronic inflammation, lung fibrosis, and accumulation of the nickel particles.
<b>Aspiration hazard</b>	Based on available data, the classification criteria are not met. It has a kinematic viscosity >20.5 mm <sup>2</sup> /s.

## 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 nickel of less than a 1 mm but more than 100 nm (larger than nanoparticles), which release ionic silver levels that are harmful to the environment. While massive nickel is insoluble in water, its powder is considered sufficiently soluble to give rise to an ecological hazard by EU regulators. The classification that follows takes into account to chronic aqueous toxicity of category 3 assignment of the EU.

The n-butyl acetate ingredient is an acute category 3 environmental toxicant liquid (biodegradable, with minimal LC50 of 18 mg/L for fathead minnow).

In Europe, similar the epoxy resins with CAS# 25068-38-6 and MW <700 is generally classified as chronic category 2 marine pollutant. It generally has LC50 96 h of >1 mg/L but ≤10 mg/L.

Butan-1-ol and 2-butanone are not classifiable as environmental toxicants (with minimal LC50 of >100 mg/L).

- Butan-1-ol has a minimal LC50 96 h of 1 840 mg/L for Pimephales promelas (fathead minnow); and LC40 48 h of 44 mg/L, EC50 72 h of 648 mg/L Daphnia magna (water flea).
- The 2-butanone has minimal LC50 of 3 130 mg/L 96 h for Pimephales promelas (fathead minnow); EC50 24 h 5 102 mg/L 24 h Daphnia magna (water flea).

### Acute Ecotoxicity

Category 3

Harmful to aquatic life

### Chronic Ecotoxicity

Category 3

Harmful to aquatic life with long lasting effects

Avoid release to the environment.

### Biodegradability

Not readily biodegradable

### Other Effects

VOC (Regulated Volatile Organic Content) = 42% [753 g/L]

**841ER-A**

**(PART A)**

**Section 13: Disposal Information**

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

**Section 14: Transport Information**

**Ground**

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

Sizes 5 L and under  
841ER-250ML, 841ER-1.17L,  
841ER-3.25L  
**Limited Quantity**



**Air**

**Refer to ICAO-IATA Dangerous Goods Regulations.**

Sizes 0.5 L and under\*  
841ER-250ML, 841ER-1.17L  
**Limited Quantity**



Total net per  
package 1 L

Sizes up to 5 L (passenger), 60 L (cargo)  
841ER-3.25L  
**UN number:** UN1263  
**Shipping Name:** PAINT  
**Class:** 3  
**Packing Group:** II  
**Marine Pollutant:** No



\*Inner container max in combination package

*Section continued on the next page*

**841ER-A**
**(PART A)**
**Sea**
**Refer to IMDG regulations.**

Sizes 5 L and under

841ER-250ML, 841ER-1.17L,

841ER-3.25L

**Limited Quantity**


Sizes greater than 5 L

**UN number:** UN1263

**Shipping Name:** PAINT

**Class:** 3

**Packing Group:** II

**Marine Pollutant:** No


**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)**

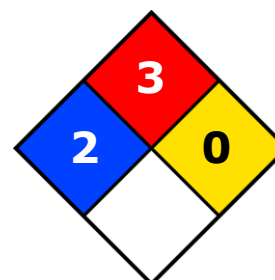
All hazardous ingredients are listed on the DSL/NDSL.

**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.

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

<b>HEALTH:</b>	<b>*</b>	<b>2</b>
<b>FLAMMABILITY:</b>		<b>3</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)

*Section continued on the next page*

**841ER-A****(PART A)****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 2-butanone acetate (CAS# 78-93-3; reportable quantity = 5 000 lb [2 268 kg]), n-butyl acetate (CAS# 123-86-4; reportable quantity = 5 000 lb [2 268 kg]), butan-1-ol (CAS# 71-36-3; reportable quantity = 5 000 lb [2 268 kg]), and nickel (CAS# 7440-02-0, reportable quantity = 100 lb [45.4 kg]), 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, USA)

This product contains nickel (CAS# 7440-02-0), which is listed as a carcinogen.

**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 it is therefore not governed by this regulation.

**Section 16: Other Information**

<b>MSDS Prepared by</b>	MG Chemical's Regulatory Department
<b>Date of Creation</b>	27 February 2020
<b>Supersedes</b>	28 January 2020
<b>Reason for Changes:</b>	Emergency response number change.

*Section continued on the next page*



**841ER-A****(PART A)****References**

- 1) ACGIH 2017 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 (2017).
- 2) All toxicological data were checked against the RTECS (Registry of Toxic Effects of Chemical Substances®), MDL Information Systems, Inc.

**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)

**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 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.