

SUPER SHIELD NICKEL CONDUCTIVE COATING

841-LIQUID

Safety Data Sheet

Section 1: Identification

Product Identifier and Other Means of Identification

Product Name: Super Shield™ Nickel Conductive Coating**Other Means of Identification:** Revêtement de Nickel Conducteur Super Shield™**Related Part #** 841-900ML, 841-1G

Recommended Use and Restriction on Use

Use: Electrically conductive coating and EMI shielding paint**Uses Advised Against:** Not available

Details of Manufacturer or Importer

Manufacturer

MG Chemicals
1210 Corporate Drive
Burlington, Ontario L7L 5R6
CANADA

MG 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

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 dangerous goods; Collect 24/7CANADA—Call CANUTEC collect **+1-613-996-6666** or ***666** on cellular phones

SUPER SHIELD NICKEL CONDUCTIVE COATING
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Section 2: Hazard(s) Identification
Classification of Hazardous Chemical
GHS Categories

Criteria	Category	Signal Word	Pictograms
Flammable Liquid	2	Danger	Flame
Specific Target Organ Toxicity Repeated Exposure	1	Danger	Health
Carcinogenicity	2	Warning	Health
Reproductive Toxicity	2	Warning	Health
Sensitization Skin sensitizer	1	Warning	Exclamation
Eye irritation	2	Warning	Exclamation
Skin Irritation	2	Warning	Exclamation
Specific Target Organ Toxicity Single Exposure	3	Warning	Exclamation
Hazardous to the Aquatic Environment Chronic	3	<i>none</i>	<i>none</i>

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

Signal Word	DANGER
Pictograms	Hazard Statements
	H225: Highly flammable liquid and vapor
	H372: Causes damages to organs (lungs, central nervous system, inner ear) through prolonged or repeated exposure by inhalation H351: Suspected of causing cancer H361: Suspected of damaging fertility or the unborn child
	H319: Causes serious eye irritation H315: Causes skin irritation H317: May cause allergic skin reaction H336: May cause drowsiness and dizziness

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Pictograms	Hazard Statements
<i>No pictogram mandated</i>	H412: Harmful to aquatic life with long lasting effects
Prevention	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.
P210	Keep away from heat, hot surfaces, sparks, flames, and other ignition sources. No Smoking.
P240	Ground and bond container and receiving equipment.
P241	Use explosion-proof electrical, ventilating, and lighting equipment.
P243	Take action to prevent static discharges.
P233	Keep container tightly closed.
P260	Do not breathe mist, vapors, and spray.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves, protective clothing, and eye protection.
P272	Contaminated work clothing should not be allowed out of the workplace.
P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P273	Avoid release to the environment.
Response	Precautionary Statements
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 attention.
P303 + P361 + P364, P352	IF ON SKIN (or hair): Take off immediately all contaminated clothing and wash it before reuse. Wash with plenty of water or shower.
P333 + P313	If skin irritation or rash occurs: Get medical advice.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER or doctor if you feel unwell.

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Response	Precautionary Statements
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice.
Storage	Precautionary Statements
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
Disposal	Precautionary Statements
P501	Dispose of contents in accordance to local, regional, national, and international regulations.

Hazards Not Otherwise Classified

Other Criteria	Hazard Statements/Precautionary Statement	Signal Word	Pictograms
Defats skin	Repeated exposure may cause skin dryness or cracking.	None	None

Section 3: Composition/Information on Ingredients

CAS #	Chemical Name	%(weight)
7440-02-0	nickel	48%
108-88-3	toluene	12%
67-64-1	acetone	8%
110-19-0	isobutyl acetate	4%
110-43-0	heptan-2-one	4%
64-17-5	ethanol	3%
14807-96-6	talc	2%
141-78-6	ethyl acetate	2%
108-65-6	1-methoxy-2-propanol acetate	1%

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Section 4: First-Aid Measures

<i>Exposure Condition</i>	<i>GHS Code/Symptoms/Precautionary Statements</i>
IF ON SKIN (or hair)	P303 + P361, P352, P333 + P313, P308 + P313, P363
Immediate Symptoms	<i>redness, dry skin, irritation, allergic contact dermatitis</i>
Response	Take off immediately all contaminated clothing. Wash with plenty of water or shower. If skin irritation or rash occurs: Get medical advice. If exposed or concerned: Get medical attention. Wash contaminated clothing before reuse.
IF INHALED	P304 + P340, P312, P308 + P313
Immediate Symptoms	<i>drowsiness, dizziness, cough, headaches, sore throat, nausea, weakness</i>
Response	Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell. IF exposed or concerned: Get medical attention.
IF IN EYES	P305 + P351 + P338, P337 + P313
Immediate Symptoms	<i>redness, irritation, blurry vision, pain</i>
Response	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.
IF SWALLOWED	P301 + P330, P310, P308 + P313
Immediate Symptoms	<i>nausea, sore throat, diarrhea, drowsiness, dizziness</i>
Response	Rinse mouth. Do NOT induce vomiting. IF exposed or concerned: Get medical attention.

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Extinguishing Media	In case of fire: Use dry chemical, carbon dioxide, chemical foam, or water spray to extinguish. Use water spray to cool containers.
Specific Hazards	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. In the presence of carbon monoxide and in a reducing atmosphere (low in oxygen or other oxidizing agents), can produce tetracarbonylnickel which is extremely toxic. Prevent fire-fighting wash from entering waterway or sewer system.
Combustion Products	Combustion may produce carbon oxides (CO,CO ₂) and nickel oxides fumes, and tetracarbonylnickel.
Fire-Fighter	Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

Section 6: Accidental Release Measures

Personal Protection	See personal protection recommendations in Section 8.
Precautions for Response	Do not breathe the mist, spray, and vapors. Remove or keep away all sources of extreme heat or open flames.
Environmental Precautions	Avoid releasing to the environment. Prevent spill from entering drains and waterways.
Containment Methods	Contain with inert and non-flammable absorbent (such as soil, sand, vermiculite).
Cleaning Methods	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. RECOMMENDATION: Use a grounded stainless steel or carbon steel container.
Disposal Methods	Dispose of spill waste according to Section 13.

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Section 7: Handling and Storage

Prevention

Keep out of reach of children.

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

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 electrical, ventilating, and lighting equipment. Take precautionary measures against static discharge.

Keep container tightly closed.

Do not breathe mist, vapors, and spray. Use only outdoors or in a well-ventilated area.

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

Avoid release to the environment.

Handling

Wear protective gloves, protective clothing, and eye protection.

Take off immediately all contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reuse.

Wash hands thoroughly after handling.

Collect spill.

Storage

Store in 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 (inhalable fraction)	ACGIH	1.5 mg/m ³	Not established
	U.S.A. OSHA PEL	1 mg/m ³	Not established
	Canada AB	1.5 mg/m ³	Not established
	Canada BC	0.05 mg/m ³	Not established
	Canada ON	1 mg/m ³	Not established
	Canada QC	1 mg/m ³	Not established

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Chemical Name	Country/ Provinces	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
toluene	ACGIH U.S.A. OSHA PEL Canada AB Canada BC Canada ON Canada QC	20 ppm 200 ppm 50 ppm 20 ppm 20 ppm (Skin) 100 ppm	Not established 300 ppm Not established Not established Not established 150 ppm
acetone	ACGIH U.S.A. OSHA PEL Canada AB Canada BC Canada ON Canada QC	500 ppm 1000 ppm 500 ppm 250 ppm 500 ppm 750 ppm	750 ppm Not established 750 ppm 500 ppm 750 ppm 1000 ppm
isobutyl acetate	ACGIH U.S.A. OSHA PEL Canada AB Canada BC Canada ON Canada QC	150 ppm 150 ppm 150 ppm 150 ppm 150 ppm 150 ppm	Not established Not established Not established Not established Not established Not established
heptan-2-one <i>methyl amyl ketone</i>	ACGIH U.S.A. OSHA PEL Canada AB Canada BC Canada ON Canada QC	50 ppm 100 ppm 50 ppm 50 ppm 25 ppm 50 ppm	Not established Not established Not established Not established Not established Not established
ethanol	ACGIH U.S.A. OSHA PEL Canada AB Canada BC Canada ON Canada QC	Not established 1 000 ppm 1 000 ppm Not established Not established 1 000 ppm	1 000 ppm Not established Not established 1 000 ppm 1 000 ppm Not established
talc (non-asbestos fiber)	ACGIH U.S.A. OSHA PEL Canada AB Canada BC Canada ON Canada QC	2 mg/m ³ 20 mppcf ^{a)} 2 mg/m ³ 2 mg/m ³ 2 mg/m ³ 3 mg/m ³	Not established Not established Not established Not established Not established Not established
ethyl acetate	ACGIH U.S.A. OSHA PEL Canada AB Canada BC Canada ON Canada QC	400 ppm 400 ppm 400 ppm 150 ppm 400 ppm 400 ppm	Not established Not established Not established Not established Not established Not established

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Chemical Name	Country/ Provinces	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
1-methoxy-2-propanol acetate	ACGIH U.S.A. OSHA WEEL Canada AB Canada BC Canada ON Canada QC	Not established 50 ppm Not established 50 ppm 50 ppm Not established	Not established Not established Not established 75 ppm Not established 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 the RTECS database² and from suppliers' SDSs were also consulted. Short term exposure limits (STEL) are usually for 15 min and long term permissible exposure limits (PEL) for 8 h.

a) Million of particles per cubic foot of air. Based on impinge samples counted by light-field technique.

Skin—can be absorbed through the skin.

Engineering Controls

Ventilation

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

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, fluorinated rubber, or other chemically resistant gloves.

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

Respiratory Protection

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.

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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

Physical State	Liquid	Lower Flammability Limit ^{b)}	1%
Appearance	Steel grey	Upper Flammability Limit ^{b)}	12%
Odor	Aromatic, sweetish	Vapor Pressure ^{b)}	100 hPa [75 mmHg]
Odor Threshold	2 ppm	Vapor Density	>2 (Air =1)
pH	Not available	Relative Density @25 °C	1.67
Freezing/Melting Point	Not available	Solubility in Water	Partially soluble
Initial Boiling Point ^{a)}	≥56 °C [≥132 °F]	Partition Coefficient n-octanol/water	Not available
Flash Point ^{a)}	-17 °C [1.4 °F]	Auto-ignition Temperature ^{c)}	≥315 °C [≥599 °F]
Evaporation Rate	>1 (ButAc=1)	Decomposition Temperature	Not available
Flammability (solid, gas)	Not applicable	Viscosity ^{d)} @40 °C	>34 mm ² /s

a) The values are based on the acetone component.

b) Lower and Upper Explosive Limits of mixture calculated using Le Chatelier principle and component LFL and UFL limits

c) The auto-ignition value is based on 1-methoxy-2-propanol acetate, which is the component with the lowest value.

d) Kinematic viscosity at 40 °C for separation layer

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Reactivity	The nickel can react vigorously with acids and liberate hydrogen, which can form an explosive mixture in air. Nickel may react with carbon monoxide in a reducing atmosphere to form a very toxic nickel carbonyl gas.
Chemical Stability	Chemically stable at normal temperatures and pressures
Conditions to Avoid	Avoid open flames, ignition sources, excessive heat, and incompatible substances.
Incompatibilities	Oxidizing agents, strong acids, acid anhydrides
Polymerization	Will not occur
Decomposition	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**

Eyes	Cause eye redness, severe irritation, blurry vision, and pain.
Skin	May cause skin redness, irritation, dry skin, and allergic contact dermatitis.
Inhalation	May cause drowsiness, dizziness, cough, and nausea. An extreme over-exposure can lead to a sore throat, headaches, weakness, and loss of consciousness.
Ingestion	May cause nausea, sore throat, and diarrhea (see inhalation symptoms).
Chronic	Prolonged or repeated exposure may cause skin dryness, cracking, as well as defatting the skin. Chronic inhalation exposure to vapors, mists, or aerosols of nickel and toluene can affect the central nervous system, damage the lungs, and cause hearing loss due to co-exposure to loud noises. Ingestion or inhalation of paint material, mist, or vapor during pregnancy may increase the chances fetal death and developmental defects.

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Acute Toxicity (Lethal Exposure Concentrations)

Chemical Name	LD50 oral	LD50 dermal	LC50 inhalation
nickel	5 000 mg/kg Rat	Not available	Not available
toluene	636 mg/kg Rat	12 124 mg/kg Rabbit	49 g/m ³ 4h Rat
acetone	5 800 mg/kg Rat	20 mL/kg Rabbit ^{a)}	16 000 ppm 4 h Rat ^{a)}
isobutyl acetate	13 400 mg/kg Rat	>17 400 mg/kg Rabbit	>13.24 mg/L 6 h Rat
2-heptanone	1 670 mg/kg Rat	12 600 µL/kg Rabbit	Not available
ethanol	7 060 mg/kg Rat	Not available	20 000 ppm 10 h Rat
talc (non-asbestos fiber)	Not available	Not available	Not available
ethyl acetate	5 620 mg/kg Rat	>20 000 µL/kg Rabbit	45 g/m ³ 2 h Mouse
1-methoxy-2-propanol acetate	8 532 mg/kg Rat	>5 g/kg Rabbit	Not available

Note: Toxicity data from the RTECS² and ECHA databases were consulted. The data from supplier SDSs were also consulted.

a) According to supplier safety data sheet.

Other Toxicological Effects
Skin corrosion/irritation

The toluene component is a known severe skin irritant.

**Serious eye
damage/irritation**

Acetone, ethanol, and ethyl acetate causes serious eye irritation. Contains mechanically abrasive particles.

**Sensitization
(allergic reactions)**

Exposure to nickel may cause allergic skin reaction.

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SUPER SHIELD NICKEL CONDUCTIVE COATING**841-LIQUID****Carcinogenicity**
(risk of cancer)

Nickel is classified as a suspect carcinogen based on animal studies by intratracheal instillation (intubation) or interperitoneal (in body cavity) injection. A reliable 2008 study by Oller et al. shows no carcinogenicity for the nickel metal via normal inhalation route.

Evidence of carcinogenicity of ethanol relates to excessive alcoholic beverage consumption, and doesn't relate to exposure risks when used in the workplace or as a non-comestible consumer product.

Nickel [CAS# 7440-02-0]

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

Ethanol [CAS# 64-17-5]

IARC Group 1: Possibly carcinogenic to humans in the form of alcoholic beverages (not ethanol)

ACGIH A4: Not classified as a human carcinogen

CA Prop 65: Listed as a carcinogen when consumed as a beverage

NTP: When in alcoholic beverage consumption, it is listed as a known carcinogen

Mutagenicity
(risk of heritable genetic effects)

Based on available data, the classification criteria are not met.

Reproductive Toxicity
(risk to sex functions)

Toluene and ethanol present reproductive hazards at large doses (>13 000 µg/day)

Teratogenicity
(risk of fetus malformation)

Harmful to unborn fetus in large doses

STOT-single exposure

Inhalation of toluene, acetone, isobutyl acetate, heptan-2-one, and ethyl acetate may affect the central nervous system causing dizziness and drowsiness.

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SUPER SHIELD NICKEL CONDUCTIVE COATING**841-LIQUID****STOT-repeated exposure**

Nickel particles can damage the respiratory tract. Based on rat studies, they can cause inflammation, pulmonary fibrosis and nickel particle accumulation.

Contains 12% toluene, which is a Cat 2 STOT repeated exposure hazard for the central nervous system and cochlear systems. Toluene is an ototoxic chemical according to rat studies: inhalation exposure in the presence of noise may lead to cochlear impairment.

Aspiration hazard

Based on available data, the classification criteria are not met. There is over 12% category 1 components, but the kinematic viscosity for the separation layer is $>20.5 \text{ mm}^2/\text{s}$ at 40 °C.

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 μm but more than 100 nm (larger than nanoparticles), which release ionic nickel 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. The classification that follows takes into account to chronic aqueous toxicity of category 3 for nickel powder.

Toluene is an acute category 2 aquatic toxicant with minimal LC50 of 7.63 mg/L for *Oncorhynchus mykiss* (rainbow trout); 8.9 mg/L 24 h *Daphnia magna* (water flea); 10 mg/L 24 h *Pseudokirchneriella subcapitata* (green algae).

Acetone, isobutyl acetate, heptan-2-one, ethanol, talc, ethyl acetate, and 1-methoxy-2-propanol acetate are not classifiable as an environmental toxicant (with minimal LC50 and EC50 of $>100 \text{ mg/L}$).

- Acetone has a minimal LC50 96 h of 5 540 mg/L for *Oncorhynchus mykiss* (rainbow trout) and an EC50 48 h of 13 500 mg/L for *Daphnia magna* (water flea).
- Isobutyl acetate as a minimal LC50 48 h of 101 mg/L for *Leuciscus idus melanotus* and 250 mg/L for *Daphnia magna* (water flea).
- Heptan-2-one has a minimal LC50 96 h of 126 mg/L for *Pimephales promelas* (fathead minnow).
- Ethanol has minimal LC50 of 12 000 mg/L 96 h for *Oncorhynchus mykiss* (rainbow trout) and 5 770 mg/L for *Pimephales promelas* (fathead minnow); LC 50 48 h of 5 012 mg/L for *Cerodaphnia* sp.

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- Ethyl acetate is has a minimal LC50 96 h of 220 mg/L for Pimephales promelas (fathead minnow); a LC50 48 h of 560 mg/L and EC50 24 h of 2 300 mg/L Daphnia magna (water flea); and an EC50 72 h 1 800 mg/L for Selenastrum.
- The 1-methoxy-2-propanol acetate component has a minimal LC50 96 h of ≥ 100 mg/L Salmo gairdneri); and EC50 48 h > 500 mg/L Daphnia magna (water flea).

Acute Ecotoxicity

Available toxicity data does not meet classification thresholds.

Chronic Ecotoxicity

Category 3

Harmful to aquatic life with long lasting effects.

Avoid release to the environment.

Biodegradability

The nickel content is not biodegradable.

Other Effects

Actual Volatile Organic Compounds (VOC) content.

VOC = 26% [441 g/L]

Note: A monetary refund can be obtained for recycling of nickel contained in the waste.

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

Sizes 5 L and under
841-900ML, 841-1G
Limited Quantity



Sizes greater than 5 L (cargo only)
FOR REFERENCE ONLY
UN number: UN1263
Shipping Name: PAINT
Class: 3
Packing Group: II
Marine Pollutant: No



Air

Refer to ICAO-IATA Dangerous Goods Regulations.

Sizes up to 5 L (passenger), 60 L (cargo)
841-900ML, 841-1G
UN number: UN1263
Shipping Name: PAINT
Class: 3
Packing Group: II
Marine Pollutant: No



Sea

Refer to IMDG regulations.

Sizes 5 L and under
841-900ML, 841-1G
Limited Quantity



Sizes greater than 5 L (cargo only)
FOR REFERENCE ONLY
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.

SUPER SHIELD NICKEL CONDUCTIVE COATING
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Section 15: Regulatory Information
Canada
Domestic Substance List (DSL) / Non-Domestic Substance Lists (NDSL)

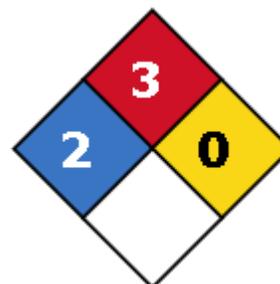
All hazardous ingredients are listed on the DSL.

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

HEALTH:	* 2
FLAMMABILITY:	3
PHYSICAL HAZARD:	0
PERSONAL PROTECTION:	

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 contains toluene (CAS# 108-88-3), which is listed as hazardous air pollutants.

EPCRA (Emergency Planning and Right to Know Act, USA, 40 CFR 372.45)

This product contains toluene (CAS# 108-88-3; reportable quantity = 1 000 lb) and nickel (CAS# 7440-02-0, reportable quantity = 100 lb), which are subject to the reporting requirements of section 313 Title III of the SARA of 1986 and 40 CFR part 372.

This product contains acetone (CAS# 67-64-1), isobutyl acetate (CAS# 110-19-0) and ethyl acetate (CAS# 141-78-6), which are subject to the CERCLA reporting requirements at the 5 000 lb (2 268 kg) threshold.

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SUPER SHIELD NICKEL CONDUCTIVE COATING**841-LIQUID****TSCA** (Toxic Substances Control Act of 1976, USA)

All substances are TSCA listed.

California Proposition 65 (Chemicals known to cause cancer or reproductive toxicity, June 06, 2014 revision, USA).

This product contains toluene, which is listed as reproductively toxic.

This product contains nickel, which is listed as a carcinogen.

This product contains ethanol, which is listed as reproductively toxic and as a carcinogen when in an alcoholic beverage.

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	Michel Hachey
Date of Review	27 February 2020
Supersedes	05 March 2019
Reason for Changes:	Revision of emergency phone number.

Reference

- 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®)

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SUPER SHIELD NICKEL CONDUCTIVE COATING**841-LIQUID****Abbreviations**

ACGIH	American Conference of Governmental Industrial Hygienists (USA)
ECHA	European Chemicals Agency
EU	European Union
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

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.

Email: support@mgchemicals.com

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