422B **(AEROSOL)**

Safety Data Sheet

Section 1: Identification

Product Identifier and Other Means of Identification

Product Identifier: Silicone Modified Conformal Coating

Other Means of Identification: Not available

Related Part # 422B-340G, 422B-340GCA

Recommended Use and Restriction on Use

Use: Conformal coating

Uses Advised Against: Not available

Details of Manufacturer or Importer

Manufacturer
MG Chemicals
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Burlington, Ontario L7L 5R6
CANADA

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FAX +1-800-340-0773
E-MAIL support@mgchemicals.com
WEB www.mgchemicals.com

MG Chemicals (Head Office)
9347-193 Street
Surrey, British Columbia V4N 4E7
CANADA

☎ +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 the transport of dangerous goods; 24/7 service
CANADA—Call CANUTEC collect at ***+1-613-996-6666*** or ****666*** on cellular phones

Section 2: Hazard(s) Identification

Classification of Hazardous Chemical

GHS Categories

Criteria		Category	Signal Word	Pictograms
Aspiration Hazard		1	Danger	Health
Specific Target Organ Toxicity	Repeated Exposure	2	Warning	Health
Reproductive Toxicity		2	Warning	Health
Carcinogenicity		2	Warning	Health
Flammable Aerosol		2	Warning	Flame
Gas under pressure		Liquefied gas	Warning	Gas cylinder
Eye Irritation		2	Warning	Exclamation
Skin Irritation		2	Warning	Exclamation
Acute Toxicity	Dermal [a)]	4	Warning	Exclamation
Acute Toxicity	Inhalation [a)]	4	Warning	Exclamation
Specific Target Organ Toxicity	Single Exposure	3	Warning	Exclamation

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.

a) CLP Annex VI mandated classification

Label Elements

Signal Word	**DANGER**
Pictograms	**Hazard Statements**
	H304: May be fatal if swallowed and enters airways H373: May cause damage to organs (liver, kidney, central nervous system, and inner ears) through prolonged or repeated exposure H351: Suspected of causing cancer H361: Suspected of damaging fertility or the unborn child
	H223: Flammable aerosol

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Pictograms	Hazard Statements
	H280: Contains gas under pressure; may explode if heated
	H319: Causes serious eye irritation H315: Causes skin irritation H312 + H332: Harmful in contact with skin or if inhaled H335: May cause respiratory irritation H336: May cause drowsiness or dizziness

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.
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P260	Do not breathe mist, vapors or spray.
P271	Use only outdoors or in a well-ventilated area.
P280	Wear protective gloves, protective clothing, eye protection, and face protection.
P264	Wash hands and exposed skin thoroughly after handling.

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Response	Precautionary Statements
P312	Call a POISON CENTER or doctor if you feel unwell.
P308 + P313	IF exposed or concerned: Get medical advice or attention.
P301 + P310, P331	IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P332 + P313	If skin irritation occurs: Get medical advice or attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
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 or attention.
Storage	**Precautionary Statements**
P410 + P412	Protect from sunlight. Do not expose to temperatures exceeding 50 °C [122 °F].
P403	Store in a well-ventilated place.
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
Simple Asphyxiants	May displace oxygen and cause rapid suffocation.	Warning	None
Defats skin	Repeated exposure may cause skin dryness or cracking.	None	None

Section 3: Composition/Information on Ingredients

CAS #	Chemical Name	%(weight)
115-10-6	dimethyl ether	36%
67-64-1	acetone	21%
1330-20-7	xylene (mixed isomers)	17%
78-93-3	2-butanone	13%
100-41-4	ethylbenzene	4%
108-88-3	toluene	<1%

Section 4: First-Aid Measures

Exposure Condition	*GHS Code/Symptoms/Precautionary Statements*
IF SWALLOWED	P301 + P310, P331, P308 + P313
Immediate Symptoms	*burning sensation, abdominal pain, nausea, vomiting, headaches, dizziness, drowsiness*
Response	Immediately call a POISON CENTER or doctor. Do NOT induce vomiting. IF exposed or concerned: Get medical advice or attention.
IF INHALED	P304 + P340, P312, P308 + P313
Immediate Symptoms	*irritation of the respiratory track, cough, dizziness, drowsiness, headaches (in extreme exposure cases: nausea, unconsciousness)*
Response	Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTERor doctor if you feel unwell. IF exposed or concerned: Get medical advice or attention.
IF ON SKIN	P302 + P352, P332 + P313, P362 + P364, P308 + P313
Immediate Symptoms	*redness, irritation, dry skin*
Response	Wash with plenty of water. If skin irritation occurs: Get medical advice or attention. Take off contaminated clothing and wash it before reuse. IF exposed or concerned: Get medical advice or attention.

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IF IN EYES	P305 + P351 + P338, P337 + P313
Immediate Symptoms	*redness , severe irritation, pain*
Response	Rinse cautiously with water for at least 20 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice or attention.

Section 5: Fire-Fighting Measures

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	Aerosols containers may erupt with force at temperatures above 50 °C [122 °F]. 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.
Combustion Products	Produces carbon oxides (CO, CO_2).
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 mist, spray or vapors. Remove or keep away all sources of extreme heat or open flames.
Environmental Precautions	Avoid releasing to the environment.
Containment Methods	Not applicable
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.
Disposal Methods	Dispose of spill waste according to Section 13.

Section 7: Handling and Storage

Prevention	Keep out of reach of children.
	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.
	Do not breathe mist, vapors or spray. Use only outdoors or in a well-ventilated area.
	Do not pierce or burn, even after use.
Handling	Do not spray on an open flame or other ignition source.
	Wear protective gloves, protective clothing, eye protection, and face protection.
	Take off contaminated clothing and wash it before reuse.
	Wash hands and exposed skin thoroughly after handling.
	Avoid release to the environment.
Storage	Protect from sunlight. Do not expose to temperatures exceeding 50 °C [122 °F].
	Store in a well-ventilated place.
	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)
dimethyl ether	ACGIH	Not established	Not established
	U.S.A. WEEL	1 000 ppm	Not established
	Canada AB	Not established	Not established
	Canada BC	1 000 ppm	Not established
	Canada ON	Not established	Not established
	Canada QC	Not established	Not established

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Chemical Name	Country/ Provinces	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
acetone	ACGIH	500 ppm	750 ppm
	U.S.A. OSHA PEL	1 000 ppm	Not established
	Canada AB	500 ppm	750 ppm
	Canada BC	250 ppm	500 ppm
	Canada ON	500 ppm	750 ppm
	Canada QC	750 ppm	1 000 ppm
xylene (mixed isomers)	ACGIH	100 ppm	150 ppm
	U.S.A. OSHA PEL	100 ppm	Not established
	Canada AB	100 ppm	150 ppm
	Canada BC	100 ppm	150 ppm
	Canada ON	100 ppm	150 ppm
	Canada QC	100 ppm	150 ppm
2-butanone	ACGIH	200 ppm	300 ppm
	U.S.A. OSHA PEL	200 ppm	Not established
	Canada AB	200 ppm	300 ppm
	Canada BC	50 ppm	100 ppm
	Canada ON	200 ppm	300 ppm
	Canada QC	150 ppm	300 ppm
ethylbenzene	ACGIH	20 ppm	Not established
	U.S.A. OSHA PEL	100 ppm	Not established
	Canada AB	100 ppm	125 ppm
	Canada BC	20 ppm (2B)	Not established
	Canada ON	100 ppm	125 ppm
	Canada QC	100 ppm	125 ppm
toluene	ACGIH	20 ppm	Not established
	U.S.A. OSHA PEL	200 ppm	300 ppm
	Canada AB	50 ppm	Not established
	Canada BC	20 ppm	Not established
	Canada ON	20 ppm	Not established
	Canada QC	100 ppm	150 ppm

Note: Ingredients are listed in descending weight contribution order (from greatest to least). The ACGIH[1], OSHA (Table Z-1), and Canadian provinces exposure limits were consulted. Limits from the RTECS[2] database and 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.

(2B) Carcinogen

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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, nitrile, neoprene 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.

Section 9: Physical and Chemical Properties

Physical State	Liquid	**Lower Flammability Limit** [b]	3%
Appearance	Clear	**Upper Flammability Limit** [b]	26%
Odor	Ethereal	**Vapor Pressure @21 °C**	Not available
Odor Threshold	Not available	**Vapor Density**	>2 (Air = 1)
pH	Not available	**Relative Density @25 °C**	0.89
Freezing/Melting Point	Not available	**Solubility in Water**	Partially miscible
Initial Boiling Point [a]	≥56 °C [≥133 °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	Fast	**Decomposition Temperature**	Not available
Flammability	Flammable	**Viscosity @40 °C**	<20.5 mm^2/s

a) Values for flash point and other threshold based on dimethyl ether
b) Calculated using Raoult's Law and Le Chatelier Principle
c) Values for based on the component with the lowest auto-ignition value

Section 10: Stability and Reactivity

Reactivity	Not available
Chemical Stability	Chemically stable at normal temperatures and pressures
Conditions to Avoid	Ignition sources, open flames, temperatures above 50 °C [122 °F], and incompatible substances
Incompatibilities	Oxidizing agents, strong acids, strong bases
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

Ingestion	May cause a burning sensation, abdominal pain, nausea, vomiting, headaches, dizziness, and drowsiness. (See also inhalation symptoms)
Inhalation	May cause irritation of the respiratory track, cough, dizziness, drowsiness, and headaches (*in extreme overexposure cases: unconsciousness and death*).
Skin	May cause skin redness, irritation, and dry skin.
Eyes	May cause redness, serious eye irritation, and pain.
Chronic	Prolonged or repeated exposure may cause skin dryness, cracking, as well as defatting the skin. Chronic overexposure may have adverse effects on the liver, kidney, and central nervous system. Chronic exposure with co-exposure to loud noises may lead to hearing loss. Ethylbenzene is a possibly carcinogen according to IARC. Ingestion or inhalation of paint material, mist, or vapor during pregnancy may increase the chances fetal death and developmental defects.

Acute Toxicity (Lethal Exposure Concentrations)

Chemical Name	LD50 oral	LD50 dermal	LC50 inhalation
dimethyl ether	Not available	Not available	308 g/m^3 Rat
acetone	5 800 mg/kg Rat	20 mL/kg Rabbit	44 g/m^3 4 h Rat
xylene, isomers	4 350 mg/kg Rat	>5 000 mg/kg Rabbit	5 000 ppm 4 h Rat
2-butanone	2 737 mg/kg Rat	6 480 mg/kg Rabbit	23 500 mg/m^3 8 h Rat
ethylbenzene	3 500 mg/kg Rat	>5 000 mg/kg Rabbit	35 500 mg/m^3 2 h Mouse
toluene	636 mg/kg Rat	12 124 mg/kg Rabbit	49 g/m^3 4 h Rat

Note: Toxicity data from the RTECS[2] and ECHA databases were consulted. The data from supplier SDSs were also consulted.

Other Toxicological Effects

Skin corrosion/irritation	Xylene and toluene are known severe skin irritants.
Serious eye damage/irritation	Acetone and ethylbenzene cause serious eye irritation.
Sensitization (allergic reactions)	Based on available data, the classification criteria are not met.
Carcinogenicity (risk of cancer)	**Ethylbenzene [CAS# 100-41-4]** IARC Group 2B: Possibly carcinogenic to humans ACGIH A3: Confirmed animal carcinogen with unknown relevance to humans CA Prop 65: Listed as a carcinogen NTP: Not listed
Mutagenicity (risk of heritable genetic effects)	Based on available data, the classification criteria are not met.
Reproductive Toxicity (risk to sex functions)	At high doses, spermatogenisis was observed in male rat by inhalation of toluene.

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Teratogenicity (risk of fetus malformation)	Fetotoxicity is observed in animal studies for inhalation and oral exposures for toluene.
STOT-single exposure	Acetone, xylene, 2-butanone, and toluene can affect the central nervous system by inhalation causing drowsiness or dizziness. Xylene and ethylbenzene may further cause transient respiratory irritation.
STOT-repeated exposure	Prolonged or repeated over-exposure to p-xylene, ethylbenzene, toluene and noise can lead to hearing loss (cochlear impairment) according to rat inhalation studies. Prolonged or repeated over-exposure to xylenes can damage the liver, kidneys, and central nervous system. At high levels of exposures, ethylbenzene causes damage of the liver.
Aspiration hazard	The liquid content is classified as a category 1 aspiration hazard. It contains more than 10% category 1 components, and the kinematic viscosity is less than 20.5 mm^2/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.

Acetone is not classifiable as an aquatic toxicant. Acetone has a minimal LC50 96 h of 5 540 mg/L for Oncorhynchus mykiss (rainbow trout); EC50 48 h 13 500 mg/L Daphnia magna (water flea).

Xylene isomers mixture are expected to be a biodegradable acute category 2 environmental toxicant with minimal LC50 96 h of 2.5 mg/L for Oncorhynchus mykiss (rainbow trout); EC50 48 h of >1 mg/L Daphnia magna (water flea); EC50 72 h of 3.2 mg/L for Selenastrum capricornutum.

Ethylbenzene is an acute category 2 environmental toxicant with minimal LC50 96 h of 4.3 mg/L for Marone saxatilis (striped bass); 2.2 mg/L 48 h Daphnia magna (water flea); EC50 96 h of 4.2 mg/L for Selenastrum capricornutum (algae).

The 2-butanone ingredient is not classified as an environmental hazard according to GHS criteria.

Toluene is an acute category 2 environmental toxicant. It is rapidly biodegraable and has a 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).

Section continued on the next page

Acute Ecotoxicity

Available data doesn't give rise to classification as an acute ecotoxicant.

Chronic Ecotoxicity

Available data doesn't give rise to classification as a chronic ecotoxicant.

Biodegradability

Solvent system is readily biodegradable.

Other Effects

Actual VOC = 70% [627 g/L]

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 1 L and under **Limited Quantity** 	**UN number**: UN1950 **Shipping Name:** AEROSOL, flammable **Class:** 2.1 **Packing Group**: Not applicable **Marine Pollutant:** No

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Air

Refer to ICAO-IATA Dangerous Goods Regulations.	
Sizes 1 L and under **Limited Quantity** Max Net Qty/Pkg 30 kg G	 **UN number**: UN1950 **Shipping Name:** AEROSOL, flammable **Class:** 2.1 **Packing Group**: Not applicable Marine Pollutant: No

Sea

Refer to IMDG regulations.	
Sizes 1 L and under **Limited Quantity**	 **UN number**: UN1950 **Shipping Name:** AEROSOL, flammable **Class:** 2.1 **Packing Group**: Not applicable Marine Pollutant: No

Note: **Shipper must be appropriately <u>trained and certified</u> 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.

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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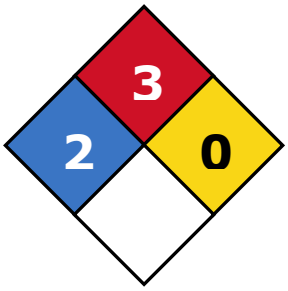
USA

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 xylene, ethylbenzene, and toluene, which are listed as hazardous air pollutants.

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

This product contains xylene (CAS# 1330-20-7, reportable quantity = 100 lb) ethylbenze (CAS# 100-41-4; reportable quantity = 1 000 lb), and toluene (CAS# 108-88-3; reportable quantity = 1 000 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) and 2-butanone (CAS# 78-93-3) , which is subject to the CERCLA reporting requirements at the 5 000 lb (2 268 kg) threshold.

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 ethylbenzene, which is listed as a carcinogen.

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

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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

Prepared by the	Regulatory Affairs Department
Date of Review	27 February 2020
Supersedes	07 February 2020
Reason for Changes:	Update to emergency contact information.

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®)

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.

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