SAI Global File #004008 Burlington, Ontario, Canada

834ATH-A (PART A)

Safety Data Sheet

Section 1: Identification

Product Identifier and Other Means of Identification

Product Name: 834ATH-A

Other Means of Identificaion: ATH Flame Retardant Epoxy: Encapsulating and Potting

Compound (Part A)

Related Part # 834ATH-375ML, 834ATH-3L, 834ATH-60L

Recommended Use and Restriction on Use

Use: Epoxy resin for use with hardeners to pot devices or encapsulate components

Uses Advised Against: Not for use as a spray coating

Details of Manufacturer or Importer

Manufacturer

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

+1-800-340-0772

FAX +1-800-340-0773

E-MAIL support@mgchemicals.com

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@mqchemicals.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

834ATH-A

(PART A)

Section 2: Hazard(s) Identification

Classification of Hazardous Chemical

GHS Categories

Criteria	_	Category	Signal Word	Pictograms
Sensitization	Skin	1	Warning	Exclamation
Eye Irritation		2	Warning	Exclamation
Skin Irritation		2	Warning	Exclamation
Carcinogenicity		2	Warning	Health
Hazardous to the Aquatic Environment	Chronic	2	none	Environment

Note: The degree of severity is ranked within each hazard class from

Label Elements

Signal Word	WARNING
Pictograms	Hazard Statements
	H319: Causes serious eye irritation
	H315: Causes skin irritation
•	H317: May cause an allergic skin reaction
	H351: Suspected of causing cancer
*	H411: Toxic to aquatic life with long lasting effects

Section continued on the next page

^{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.



SAI Global File #004008 Burlington, Ontario, Canada

834ATH-A (PART A)

Continued..

Continued 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.
P261	Avoid breathing fumes and vapors.
P280	Wear protective gloves, protective clothing, eye protection, and face protection.
P272	Contaminated work clothing should not be allowed out of the workplace.
P264	Wash hands thoroughly after handling.
P273	Avoid release to the environment.
Response	Precautionary Statements
P308 + P313	IF exposed or concerned: Get medical advice or attention.
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.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P332 + P313	If skin irritation or rash occurs: Get medical advice or attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.
Storage	Precautionary Statements
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
None	None	None	None



834ATH-A (PART A)

Section 3: Composition/Information on Ingredients

CAS #	Chemical Name	%(weight)
25068-38-6	bisphenol-A epoxy resin (reaction product)	50%
21645-51-2	aluminum trihydrate	17%
84852-53-9	1,1'-(1,2-ethanediyl) bis[2,3,4,5,6-pentabromo-benzene	14%
68609-97-2	alkyl glycidyl ether	8%
138265-88-0	zinc borate, hydrated ^{a)}	6%
1309-64-4	antimony trioxide	3%
64741-65-7	naphtha, petroleum, heavy alkylate	1%
1333-86-4	carbon black	0.6%

a) The anhydrous inorganic salt is listed under the CAS# 1332-07-6

Cootion	A. Eirot /	Aid Measures	ч
	4- FIISI-1		ч

Exposure Condition	GHS Code/Symptoms/Precautionary Statements
IF IN EYES	P305 + P351 + P338, P337 + P313
Immediate Symptoms	redness, 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.
IF ON SKIN	P302 + P352, P332 + P313, P362 + P364, P308 + P313
Immediate Symptoms	redness, irritation, dry skin, allergic contact dermatitis
Response	Wash with plenty of water.
	If skin irritation or rash occurs: Get medical advice or attention.
	Take off contaminated clothing and wash it before reuse.
	IF exposed or concerned: Get medical advice or attention.
IF INHALED	P304 + P340, P308 + P313
Immediate Symptoms	cough, irritation of the respiratory track
Response	Remove person to fresh air and keep comfortable for breathing.
	IF exposed or concerned: Get medical advice or attention.

Section continued on the next page

Page **4** of **18**



SAI Global File #004008 Burlington, Ontario, Canada

834ATH-A (PART A)

IF SWALLOWED P301 + P330 + P331, P308 + P313

Immediate Symptoms irritation

Response Rinse mouth. Do NOT induce vomiting.

IF exposed or concerned: Get medical advice or attention.

Section 5: Fire-Fighting Measures

Extinguishing Media In case of fire: Use extinguishing media suitable for surrounding

materials.

Specific Hazards Not flammable or combustible, but burns if involved in a fire.

Produces irritating smoke and toxic smoke in fires.

Prevent fire-fighting wash from entering waterway or sewer

system.

Combustion Products Produces carbon oxides (CO,CO₂), bromines, hydrogen bromide,

and toxic fumes.

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

Avoid breathing fumes or 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, chemical-resistant container. Sprinkle

inert absorbent compound onto spill, then sweep into the container. Use soap and water to remove the last traces of

residue.

Disposal Methods

Dispose of spill waste according to Section 13.

Section continued on the next page



SAI Global File #004008 Burlington, Ontario, Canada

834ATH-A (PART A)

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.

Avoid breathing fumes and vapors. Avoid release to the environment.

Handling Wear protective gloves, protective clothing, eye protection, and

face protection.

Contaminated work clothing should not be allowed out of the

workplace.

Wash hands thoroughly after handling.

Do NOT mix more than 2 kg of epoxy at a time. This product is exothermic (produces heat when curing) and the temperature at the core may become high to activate the flame retardant and emit toxic fumes. Do NOT heat cure above 100 $^{\circ}$ C [212 $^{\circ}$ F].

Collect spillage.

Storage Store locked up.

Section 8: Exposure Controls/Personal Protection

Substances with Occupational Exposure Limit Values

Chemical Name	Country	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
aluminum metal	ACGIH	1 mg/m ³	Not established
and insoluble	U.S.A. OSHA PEL	15 mg/m ³	Not established
compounds ^{a)}	Canada AB	10 mg/m ³	Not established
	Canada BC	1 mg/m ³	Not established
	Canada ON	1 mg/m ³	Not established
	Canada QC	10 mg/m ³	Not established
antimony trioxide a)	ACGIH	0.5 mg/m ³	Not established
	U.S.A. OSHA PEL	0.5 mg/m ³	Not established
	Canada AB	0.5 mg/m ³	Not established
	Canada BC	0.5 mg/m ³	Not established
		(carcinogen)	
	Canada ON	0.5 mg/m ^{3 b)}	Not established
	Canada QC	0.5 mg/m ³	Not established

Section continued on the next page

Page **6** of **18**



SAI Global File #004008 Burlington, Ontario, Canada

834ATH-A (PART A)

Continued ...

Chemical Name	Country	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
1,1'-(1,2-ethanediyl) bis[2,3,4,5,6- pentabromo-benzene	manufacturer	2 mg/m ³	Not established
naphtha, petroleum, heavy distillate	ACGIH	100 ppm (525 mg/m³)	Not established
·	U.S.A. OSHA PEL	500 ppm (2 900 mg/m ³)	Not established
	Canada AB	572 mg/m ³	Not established
	Canada BC	290 mg/m ³	580 mg/m ³
	Canada ON	100 ppm	Not established
	Canada QC	525 mg/m ³	Not established
carbon black ^{a)}	ACGIH	3.5 mg/m ³	Not established
	U.S.A. OSHA PEL	3.5 mg/m ³	Not established
	Canada AB	3.5 mg/m ³	Not established
	Canada BC	3 mg/m ³	Not established
	Canada ON	3.5 mg/m ³	Not established
	Canada QC	3.5 mg/m ³	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' SDS were also consulted. Short term exposure limits (STEL) are for 15 min and long term permissible exposure limits (PEL) for 8 h.

- a) Respirable airborne particles
- b) Keep airborne concentration as low as possible

Engineering Controls

Ventilation

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

Because the carbon black and antimony trioxide are bound to the liquid mixture, it does not present an airborne hazard under normal use. Ensure adequate ventilation if the product is mechanically misted or aerosolized.

Section continued on the next page.



SAI Global File #004008 Burlington, Ontario, Canada

834ATH-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 nitrile 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 or in case of fire, 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.



SAI Global File #004008 Burlington, Ontario, Canada

834ATH-A (PART A)

Section 9: Physical and Chemical Properties

Physical State	Liquid	Lower Flammability Limit	Not available
Appearance	Black	Upper Flammability Limit	Not available
Odor	Mild	Vapor Pressure @20 °C	Not available
Odor Threshold	Not available	Vapor Density	Not available
рH	Not available	Relative Density @25 °C	1.4
Freezing/Melting	Not	Solubility in	Insoluble
Point	available	Water	
Initial Boiling	>150 °C	Partition Coefficient n-octanol/water	Not
Point ^{a)}	[>302 °F]		available
Flash Point a)	150 °C	Auto-ignition	Not
	[302 °F]	Temperature	available
Evaporation	Not	Decomposition	Not
Rate	available	Temperature	available
Flammability	Not	Viscosity	3 300 cSt
(solid, gas)	applicable	@25 °C	

a) The closed cup flash point and boiling point for component with the lowest reported value.

Section 10: Stability and Reactivity

Reactivity Reacts exothermically with amines.

Chemical Stability Chemically stable at normal temperatures and pressures

Conditions to

Avoid

Excessive heat (especially above 320 °C [608 °F]), and incompatible substances. Such temperatures would activate the flame retardant

and release active bromines to suppress flames.

Do not use in a way that forms a mist or aerosolize the product.

Incompatibilities Strong oxidizing agents, strong bases, strong acids

Polymerization Will not occur

Decomposition Will not decompose under normal conditions. For thermal

decomposition, see combustion products in Section 5.

Page **9** of **18**

SAI Global File #004008 Burlington, Ontario, Canada

834ATH-A

(PART A)

Section 11: Toxicological Information

Summary of Effects and Symptoms by Routes of Exposure

Eyes Causes serious eye irritation. May also cause eye redness or pain.

Skin May cause skin redness, irritation, dry skin, or allergic contact dermatitis.

Inhalation Not a likely route of exposure due to low volatility. Inhalation of vapors or

mist may cause irritation to the nose, throat and lung (upper respiratory

tract).

Ingestion Not a likely route of exposure. No acute toxicity effect known. See skin

and inhalation symptoms.

Chronic Prolonged or repeated exposure to the uncured epoxy resins used may

cause dermatitis and sensitization.

Inhalation of dust or mist may lead to cancer.

Acute Toxicity (Lethal Exposure Concentrations)

Chemical Name	LD50	LD50	LC50
	oral	dermal	inhalation
bisphenol-A epoxy resin (reaction product)	11 400 mg/kg	100 pph	Not
	Rat	7 h Rabbit ^{a)}	available
aluminum trihydrate	Not	Not	Not
	available	available	available
1,1'-(1,2-ethanediyl) bis[2,3,4,5,6-pentabromo-benzene	>5 000 mg/kg	>2 000 mg/kg	Not
	Rat ^{a)}	Rabbit ^{a)}	available
alkyl glycidyl ether	19 200 mg/kg	4 500 mg/kg	Not
	Rat ^{a)}	Rat ^{a)}	available
zinc borate, hydrated	>10 000 mg/kg	>10 000 mg/kg	Not
	Rat ^{a)}	Rabbit ^{a)}	available
antimony trioxide	>34 600 mg/kg	>2 000 mg/kg	Not
	Rat	Rabbit	available
naphtha, petroleum, heavy	Not	Not	Not
alkylate	available	available	available
carbon black	>15 g/kg	>3 g/kg	Not
	Rat	Rabbit	available

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

a) Supplier SDS



SAI Global File #004008 Burlington, Ontario, Canada

834ATH-A (PART A)

Other Toxicological Effects

Skin corrosion/irritation Causes skin irritation.

Serious eve damage/irritation Causes serious eye irritation.

Sensitization (allergic reactions) Skin sensitizer based on animal studies on the epoxy components

Carcinogenicity (risk of cancer)

The carbon black and antimony trioxide are possibly carcinogenic by airborne routes of exposures. Because they are both bound in the epoxy liquid mixture, it is not expected to be available as an airborne hazard (dust, mist, or spray) under normal use.

Antimony Trioxide [1309-64-4]

IARC Group 2B: Possibly carcinogenic to humans. This finding is based on a long term dust inhalation study for

female rats.

ACGIH A2: Suspected human carcinogen causing lung

cancer

CA Prop 65: Listed as a carcinogen

NTP: Not listed

Carbon Black [1333-86-4]

IARC Group 2B: Possibly carcinogenic to humans ACGIH A4: Not classified as a human carcinogen

CA Prop 65: Listed as a carcinogen (airborne, as unbound

particles of respirable size)

NTP: Not listed

Mutagenicity Based on available data, the classification criteria are not

(risk of heritable genetic effects)

Reproductive Toxicity

(risk to sex functions)

Based on available data, the classification criteria are not

met.

Teratogenicity (risk of fetus

malformation)

Based on available data, the classification criteria are not

STOT-single exposure Based on available data, the classification criteria are not

STOT-repeated exposure Based on available data, the classification criteria are not

met.

Section continued on the next page.

Page **11** of **18**



SAI Global File #004008 Burlington, Ontario, Canada

834ATH-A (PART A)

Aspiration hazard

Based on available data, the classification criteria are not met. There is no category 1 components, and the kinematic viscosity 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.

In Europe, similar epoxy resin mixtures with CAS# 25068-38-6 and average molecular weight of less than 700 are generally classified as chronic category 2 marine pollutant due to LC50 96 h of >1 mg/L but ≤ 10 mg/L.

Zinc borate is a category 1 chronic marine pollutant (with a LC50 96h 2.4 mg/L for Oncorhhynchus mykiss (rainbow trout); 76 mg/L 48 h Daphnia magna (water flea).

Antimony trioxide (CAS# 1309-64-4) is not classifiable under GHS because it has a LC50 of 833 mg/L for flathead minnow (pimpehales promelas) 96 h.

Based on available data, carbon black is not classified as environmental hazard according to GHS criteria.

Acute Ecotoxicity

Category 2

Toxic to aquatic life

Chronic Ecotoxicity

Category 2

Toxic to aquatic life with long lasting effects

Avoid release to the environment. Collect spillage.

Biodegradability

Not available

Bioaccumulation

Not available

SAI Global File #004008 Burlington, Ontario, Canada

834ATH-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 DOT 49 CFR (Parts 100 to 185) Regulations.

TDG: Sizes under 450 L

Part A of 834ATH-375ML, 834ATH-3L,

834ATH-60L kits

NOT REGULATED in TDG per Special Provisions 99

49 CFR: Sizes 5 L and under Part A of 834ATH-375ML.

834ATH-3L kits

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

49 CFR: Sizes greater than 5 L

Part A of 834ATH-601 kit

UN number: UN3082

Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Reaction product: bisphenol-A, zinc borate, naphtha petroleum)

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.

Section continued on the next page



SAI Global File #004008 Burlington, Ontario, Canada

(PART A) 834ATH-A

Air

Refer to ICAO-IATA regulations.

Sizes 5 L and under

Part A of 834ATH-375ML. 834ATH-3L kits

NOT REGULATED

On air waybill write: "Not Restricted, as per Special Provisions A197" Sizes greater than 5 L Part A of 834ATH-60L kit

UN number: UN3082 **Shipping Name:**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Reaction product: bisphenol-A, zinc borate, naphtha petroleum)

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.

Section continued on the next page



SAI Global File #004008 Burlington, Ontario, Canada

834ATH-A (PART A)

Sea

Refer to IMDG regulations.

Sizes 5 L and under

Part A of 834ATH-375ML, 834ATH-3L kits

NOT REGULATED

per 2.10.2.7

Sizes greater than 5 L Part A of 834ATH-60L kit

UN number: UN3082 **Shipping Name:**

ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Reaction product: bisphenol-A, zinc borate, naphtha petroleum)

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.

SAI Global File #004008 Burlington, Ontario, Canada

834ATH-A (PART A)

Section 15: Regulatory Information

Canada

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

All hazardous ingredients are listed on the DSL.

Ministerial conditions apply to 1,1'-(1,2-ethanediyl) bis[2,3,4,5,6-pentabromobenzene (CAS # 84852-53-9). See Canada Gazette, Part 1, Vol. 151, No. 41, October 14, 2017.

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:		1
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 does contain an "antimony compound", which is listed as hazardous air pollutants.

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

This product does not contain antimony trioxide (CAS# 1309-64-4) and zinc borate (CAS# 138265-88-0), which have a 1 000 lb reporting quantity requirements in section 313 Title III of the SARA of 1986 and 40 CFR part 372.

Section continued on the next page

Page **16** of **18**



SAI Global File #004008 Burlington, Ontario, Canada

834ATH-A (PART A)

TSCA (Toxic Substances Control Act of 1976, USA)

All substances are TSCA listed.

Contains 14% 1,1'-(1,2-ethanediyl)bis[2,3,4,5,6-pentabromo-benzene, with CAS# 84852-53-9, which is subject to a Significant New Use Rule (SNUR) 40 CFR 721.536.

California Proposition 65 (Chemicals known to cause cancer or reproductive toxicity, USA)

This product contains carbon black, but it is bound and exposures during normal conditions of uses are below the Safe Harbor Threshold.

This product contains antimony trioxide (airborne, unbound particles of respirable size), 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 is therefore not governed by this regulation.

Section 16: Other Information

SDS Prepared by Regulatory Department

Date of Review 11 February 2020 **Supersedes** 15 November 2016

Reason for Changes: Update transport section and format changes throughout safety data sheet.

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®)

Section continued on the next page

Page **17** of **18**

Chemicals

ISO 9001:2015 Quality Management System

SAI Global File #004008 Burlington, Ontario, Canada

834ATH-A (PART A)

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

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 Head Office

1210 Corporate Drive 9347–193rd Street

Burlington, Ontario, Canada Surrey, British Columbia, Canada

L7L 5R6 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.