Kit Revision Date: 07/02/2025

834BLV Flame Retardant Epoxy Kit

MG Chemicals Multipart Product Kit

This product is a kit made up of multiple parts. Each part is an independently packaged chemical component and has independent hazard assessments.

Kit Content

Part	*Product Name*	*Product Use*
A	834BLV-A	Resin for use with epoxy hardener
B	834BLV-B	Hardener for use with epoxy resin

Safety Data Sheets for each part listed above follow this cover sheet.

Transportation Instruction

Before offering this product kit for transport, read Section 14 for all parts listed above.

834BLV-A **FLAME RETARDANT EPOXY (PART A)**

Safety Data Sheet

Section 1: Identification

Product Identifier and Other Means of Identification

Product Name: 834BLV-A

Other Means of Identification: Flame Retardant Epoxy (Part A)

Related Part # 834BLV-450ML, 834BLV-3L, 834BLV-12L, 834BLV-60L

Recommended Use and Restriction on Use

Use: Resin for use with epoxy hardener

Uses Advised Against: Not for use as spray coating

Details of Manufacturer or Importer

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

Distributor
Mouser Electronic
1000 North Main Street
Mansfield, TX 76063
USA

☎ +1-905-331-1396
+1-800-340-0772
E-MAIL support@mgchemicals.com
info@mgchemicals.com
WEB www.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 the Chemical Material

GHS Categories

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

Note: The degree of severity is ranked within each hazard class from 1 (Highest Severity) to up to 5 (Lowest Severity), which is opposite to HMIS and NFPA conventions. Severity category rankings do not allow comparisons between classes.

Label Elements

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

Section continued on the next page

Continued…

Prevention	Precautionary Statements
P102	Keep out of reach of children.
P261	Avoid breathing fumes and vapors.
P280	Wear protective gloves and eye protection.
P264	Wash hands thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
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 or attention.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P333 + P313	If skin irritation or rash occurs: Get medical advice.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.
Storage	**Precautionary Statements**
Not applicable	Not applicable
Disposal	**Precautionary Statements**
P501	Dispose of contents in accordance to local, regional, and national regulations.

Hazards Not Otherwise Classified

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

Section 3: Composition/Information on Ingredients

CAS #	Chemical Name	%(weight)
25085-99-8	propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-,polymers	53%
21645-51-2	aluminum trihydrate	23%
68333-79-9	ammonium polyphosphate	16%
108-65-6	2-methoxy-1-methylethyl acetate	0.9%
1333-86-4	carbon black	0.8%
8052-41-3	Stoddard solvent	0.4%
162627-21-6	polyphosphoric acids	0.3%
64742-47-8	kerosine	0.2%
64742-95-6	naphtha, petroleum, light aromatic	0.1%
1330-20-7	xylene	0.1%

Section 4: First-Aid Measures

Exposure Condition	*GHS Code: Precautionary Statement*
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.
IF ON SKIN	P302 + P352, P333 + P313, P362 + P364
Immediate Symptoms	*redness, irritation, rash, dry skin, allergic contact dermatitis*
Response	Wash with plenty of water. Get medical advice or attention. Take off contaminated clothing and wash it before reuse.
IF INHALED	P304 + P340
Immediate Symptoms	*Low Toxicity: cough, irritation of the respiratory track*
Response	Remove person to fresh air and keep comfortable for breathing.

Continued on the next page

IF SWALLOWED	P301 + P330 + P331
Immediate Symptoms	*Low Toxicity: irritation, stomach/abdominal discomfort or pain*
Response	Rinse mouth. Do NOT induce vomiting.

Section 5: Fire-Fighting Measures

Extinguishing Media	In case of fire: Use water fog or fine spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Specific Hazards	Do not use direct water stream, may spread fire. Violent steam generation or eruption may occur upon application of direct water steam to hot liquids. Container may rupture from gas generation in a fire situation. Dense smoke is emitted when burned without sufficient oxygen.
Combustion Products	Produces carbon oxides (CO, CO_2), phenolics, 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 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 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. Wipe off residues with paper towels and place the used towels in the waste container. Use 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.
	Avoid breathing fumes and vapors.
	Contaminated work clothing should not be allowed out of the workplace.
	Avoid release to the environment.
Handling	Wear protective gloves and eye protection.
	Take off contaminated clothing and wash it before reuse.
	Wash hands thoroughly after handling.
	Collect spillage.
Storage	Not applicable

Section 8: Exposure Controls/Personal Protection

Substances with Occupational Exposure Limit Values

Chemical Name	Country or Vendor	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
aluminum metal and insoluble compounds [a)]	ACGIH	1 mg/m^3	Not established
	U.S.A. OSHA PEL	15 mg/m^3	Not established
	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
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	3.0 mg/m^3	Not established
	Canada ON	3.5 mg/m^3	Not established
	Canada QC	3.5 mg/m^3	Not established
Stoddard solvent	ACGIH	100 ppm	Not established
	U.S.A. OSHA PEL	500 ppm	Not established
	Canada AB	100 ppm	Not established
	Canada BC	290 mg/m^3	50 mg/m^3
	Canada ON	100 ppm	Not established
	Canada QC	100 ppm	Not established

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Continued…

Chemical Name	Country or Vendor	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
kerosine	ACGIH	Not established	Not established
	U.S.A. OSHA PEL	Not established	Not established
	Canada AB	Not established	Not established
	Canada BC	200 mg/m^3	Not established
	Canada ON	Not established	Not established
	Canada QC	Not established	Not established
xylene	ACGIH	100 ppm	150 ppm
	U.S.A. OSHA PEL	100 ppm	150 ppm
	Canada AB	100 ppm	150 ppm
	Canada BC	100 ppm	150 ppm
	Canada ON	100 ppm	150 ppm
	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 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

Engineering Controls

Ventilation

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

Because the carbon black is 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.

Personal Protective Equipment

Eye protection

Wear appropriate protective eyeglasses or chemical safety goggles.

RECOMMENDATION: Use safety glasses with lateral protection (side shields).

Skin Protection

For likely contacts, use of protective butyl rubber, neoprene, or other chemically resistant gloves.

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

Section continued on the next page

Respiratory Protection	If the product is heated or worker has a known allergic reaction, consider using a full mask with organic vapor cartridge or with an independent air supply. Generally, for emergencies and exposure above 0.5 mg/m^3, use a self-contained breathing apparatus with full face piece operated in a pressure positive mode. **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**	1.36%
Appearance	Black	**Upper Flammability Limit**	6.89%
Odor	Mild	**Vapor Pressure @25 °C**	Not available
Odor Threshold	Not available	**Vapor Density**	Not available
pH	Not available	**Relative Density @25 °C**	1.51
Freezing/Melting Point	Not available	**Solubility in Water**	Not available
Initial Boiling Point	>110 °C [>230 °F]	**Partition Coefficient n-octanol/water**	Not available
Flash Point	Not available	**Auto-ignition Temperature** [a)]	>220 °C [>428 °F]
Evaporation Rate	Not available	**Decomposition Temperature**	Not available
Flammability	Non flammable	**Viscosity @25 °C**	3928 cP

Section 10: Stability and Reactivity

Reactivity	Masses of more than one pound (0.5 kg) of product plus an aliphatic amine will cause irreversible polymerization with considerable heat buildup.
Chemical Stability	Chemically stable at normal temperatures and pressures.
Conditions to Avoid	Avoid prolonged exposure to temperatures above 250 °C. Avoid short term exposure to temperatures above 300 °C.
Incompatibilities	Avoid contact with oxidizing materials. Avoid contact with acids and bases. Avoid unintended contact with amines.
Polymerization	Will not occur on its own.
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	May cause redness, severe eye irritation, and pain.
Skin	May cause redness, irritation, dry skin, and rash.
Inhalation	Mist may cause irritation to the nose, throat and lung (upper respiratory tract). Will result in cough.
Ingestion	It may cause irritation or abdominal discomfort. At higher concentrations symptoms include abdominal pain, diarrhoea, and unconsciousness.
Chronic	Prolonged and repeated exposure may lead to skin sensitization.

Section continued on the next page

Lethal Exposure Concentrations

Chemical Name	LD50 oral	LD50 dermal	LC50 inhalation
propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-,polymers	>5 000 mg/kg Rat	52 000 mg/kg Rabbit	Not available
aluminum trihydrate	79 000 mg/kg Rat	Not available	Not available
ammonium polyphosphate	500 mg/kg Rat	Not available	Not available
2-methoxy-1-methylethyl acetate	>5 000 mg/kg Rat	5 000 mg/kg Rabbit	Not available
carbon black	>5 000 mg/kg Rat	3 000 mg/kg Rabbit	Not available
Stoddard solvent	>5 000 mg/kg Rat	>3 000 mg/kg Rabbit	>5.5 mg/L 4 h Rat
kerosine	8 000 mg/kg Rat	4 000 mg/kg Rat	>17.38 mg/L 4 h Rat
naphtha, petroleum, heavy alkylate	>5 000 mg/kg Rat	>2 000 mg/kg Rabbit	Not available
xylene	3523 mg/kg Rat	1100 mg/kg Rabbit	>11 mg/L 4 h Rat
Mixture ATE	>2 000 mg/kg	>2 000 mg/kg	>10 mg/L (vapors)

Note: Toxicity data from the ECHA database was consulted. The data from supplier SDS were also consulted.

Section continued on the next page

Other Toxicological Effects

Skin corrosion/irritation	Causes skin irritation.
Serious eye damage/irritation	Causes serious eye irritation.
Respiratory and skin sensitization (allergic reactions)	The epoxy resin components (CAS# 25085-99-8) may cause skin sensitization in humans.
Carcinogenicity (risk of cancer)	The carbon black is a possible carcinogen by airborne routes of exposures. Because carbon black is bond in the epoxy liquid mixture, it is not expected to be available as an airborne hazard (dust, mist, or spray) under normal use. **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 (risk of heritable genetic effects)	Based on available data, the classification criteria are not met.
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 met.
STOT-single exposure	Based on available data, the classification criteria are not met.
STOT-repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Based on available data, the classification criteria are not met. There is <1% category 1 component and the kinematic viscosity is >20.5 mm^2/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.

The epoxy resin (CAS# 25085-99-8) are generally classified as a chronic category 2 marine pollutant due to LC50 96 h of >1 mg/L and ≤10 mg/L.

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

Acute Ecotoxicity

Not classified as acutely ecotoxic.

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

Section 13: Disposal Considerations

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.**

Sizes 5 L and under

Part A of 834BLV-450ML, 834BLV-
NOT REGULATED in TDG
per Special Provisions 99

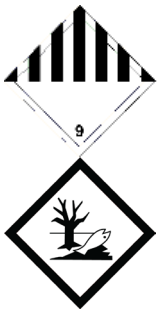
Sizes 5 L and under

834BLV-450ML, 834BLV-3L

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

49 CFR: Sizes greater than 5 L

Part A of 834BLV-12L, 834BLV-60L
UN number: UN3082
Shipping Name:
ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-,polymers)
Class: 9
Packing Group: III

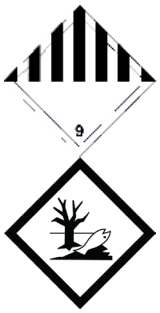


Marine Pollutant: Yes

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.

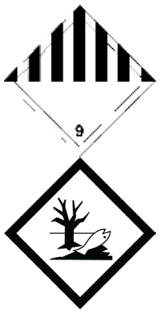
Section continued on the next page

Air

Refer to ICAO-IATA Dangerous Goods Regulations.	
Sizes 5 L and under *Part A of* 834BLV-450ML, 834BLV-3L **NOT REGULATED** Not Restricted, as per Special Provisions A197	Sizes greater than 5 L *Part A of 834BLV-12L, 834BLV-60L* **UN number**: UN3082 **Shipping Name**: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-,polymers) **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 packaging's 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

Sea

Refer to IMDG regulations.	
Sizes 5 L and under *Part A of* 834BLV-450ML, 834BLV-3L **NOT REGULATED** per 2.10.2.7	Sizes greater than 5 L *Part A of 834BLV-12L, 834BLV-60L* **UN number**: UN3082 **Shipping Name**: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (propane, 2,2-bis[p-(2,3-epoxypropoxy)phenyl]-,polymers) **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 <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/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 2023.

Section continued on the next page

USA

OSHA Hazard Communication Standard (29 CFR Part 1900)

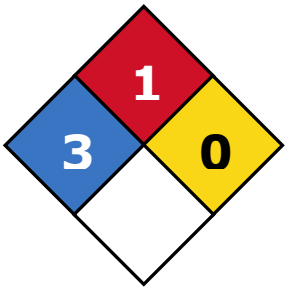
The safety data sheet and label comply with HCS 2024.

Other Classifications

HMIS® RATING

HEALTH:	* 3
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 any substances on the EPCRA.

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

Section continued on the next page

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 Regulatory department

Date of Revision 23 January 2025

Supersedes 09 May 2024

Reason for Changes: Minor revisions

Reference

1) ACGIH *2023 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 (2023).

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

Section continued on the next page

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

Phone: +1-905-331-1396

Mailing Addresses

Manufacturing & Support
1210 Corporate Drive
Burlington, Ontario, Canada
L7L 5R6

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.

834BLV-B **FLAME RETARDANT EPOXY (PART B)**

Safety Data Sheet

Section 1: Identification

Product Identifier and Other Means of Identification

Product Name: 834BLV-B

Other Means of Identification: Flame Retardant Epoxy (Part B)

Related Part # 834BLV-450ML, 834BLV-3L, 834BLV-12L, 834BLV-60L

Recommended Use and Restriction on Use

Use: Hardener for use with epoxy resin

Uses Advised Against: Not for use as spray coating

Details of Manufacturer or Importer

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

Distributor
Mouser Electronic
1000 North Main Street
Mansfield, TX 76063
USA

☎ +1-905-331-1396
+1-800-340-0772
E-MAIL support@mgchemicals.com
info@mgchemicals.com
WEB www.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 the Chemical Material

GHS Categories

Criteria		Category	Signal Word	Pictograms
Eye Damage		1	Danger	Corrosion
Sensitization	Skin	1	Warning	Exclamation
Skin irritation		2	Warning	Exclamation
Hazardous to the Aquatic Environment	Chronic	2	*none*	Environment

Note: The degree of severity is ranked within each hazard class from 1 (Highest Severity) to up to 5 (Lowest Severity), which is opposite to HMIS and NFPA conventions. Severity category rankings do not allow comparisons between classes.

Label Elements

Signal Word	**DANGER**
Pictograms	**Hazard Statements**
	H318: Causes serious eye damage
	H317: May cause an allergic skin reaction H315: Causes skin irritation
	H411: Toxic to aquatic life with long lasting effects

Section continued on the next page

Continued…

Prevention	Precautionary Statements
P102	Keep out of reach of children.
P261	Avoid breathing fumes and vapors.
P280	Wear protective gloves and eye protection.
P264	Wash hands thoroughly after handling.
P272	Contaminated work clothing should not be allowed out of the workplace.
P273	Avoid release to the environment.
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.
P310	Immediately call a POISON CENTER or doctor.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P333 + P313	If skin irritation or rash occurs: Get medical advice.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.
Storage	**Precautionary Statements**
Not applicable	Not applicable
Disposal	**Precautionary Statements**
P501	Dispose of contents in accordance to local, regional, and national regulations.

Hazards Not Otherwise Classified

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

Section continued on the next page

Section 3: Composition/Information on Ingredients

CAS #	Chemical Name	%(weight)
68410-23-1	Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	44%
21645-51-2	aluminum trihydrate	33%
68333-79-9	ammonium polyphosphate	16%
112-24-3	triethylenetetramine	4%
108-65-6	2-methoxy-1-methylethyl acetate	0.9%
1333-86-4	carbon black	0.8%
8052-41-3	Stoddard solvent	0.4%
162627-21-6	polyphosphoric acids, reaction products with 2-oxepanone and polyethylene glycol monomethylether	0.3%
64742-95-6	solvent naphtha (petroleum), light aromatic	0.1%

Section 4: First-Aid Measures

Exposure Condition	*GHS Code: Precautionary Statement*
IF IN EYES	P305 + P351 + P338, P310
Immediate Symptoms	*redness, severe irritation, pain, burns*
Response	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
IF ON SKIN	P302 + P352, P333 + P313, P362 + P364
Immediate Symptoms	*redness, irritation, rash*
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 INHALED	P304 + P340
Immediate Symptoms	*Low toxicity: mild irritation*
Response	Remove person to fresh air and keep comfortable for breathing.

Section continued on the next page

Continued…

IF SWALLOWED	P301 + P330 + P331
Immediate Symptoms	*Low toxicity: abdominal pain, nausea, vomiting, diarrhea*
Response	Rinse mouth. Do not induce vomiting.

Section 5: Fire-Fighting Measures

Extinguishing Media	In case of fire: Use water fog or fine spray, alcohol-resistant foam, dry chemical or carbon dioxide.
Specific Hazards	Not flammable or combustible but will burn if involved in a fire. It should self-extinguish when removed from external flame sources. Prevent fire-fighting wash from entering waterway or sewer system.
Combustion Products	Produces carbon oxides (CO, CO_2), nitrogen oxides (NO_x), 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 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 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. Wipe off residues with paper towels and place the used towels in the waste 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 continued on the next page

Section 7: Handling and Storage

Prevention	Keep out of reach of children.
	Avoid breathing fumes and vapors.
	Contaminated work clothing should not be allowed out of the workplace.
	Avoid release to the environment.
Handling	Wear protective gloves and eye protection.
	Take off contaminated clothing and wash it before reuse.
	Wash hands thoroughly after handling.
	Collect spillage.
Storage	Store locked up.

Section 8: Exposure Controls/Personal Protection

Substances with Occupational Exposure Limit Values

Chemical Name	Country or Vendor	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
aluminium metal and insoluble compounds	ACGIH	1 mg/m^3	Not established
	U.S.A. OSHA PEL	15 mg/m^3	Not established
	U.S.A (WEEL)	10 mg/m^3	Not established
	Canada AB	1 mg/m^3	Not established
	Canada BC	1 mg/m^3	Not established
	Canada ON	10 mg/m^3	Not established
triethylenetetramine	ACGIH	Not established	Not established
	U.S.A. OSHA PEL	Not established	Not established
	U.S.A (WEEL)	1 ppm	Not established
	Canada AB	Not established	Not established
	Canada BC	Not established	Not established
	Canada ON	0.5 mg/m^3 (Skin)	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	3.0 mg/m^3	Not established
	Canada ON	3.5 mg/m^3	Not established
	Canada QC	3.5 mg/m^3	Not established

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Chemical Name	Country or Vendor	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
Stoddard solvent	ACGIH	100 ppm	Not established
	U.S.A. OSHA PEL	500 ppm	Not established
	Canada AB	100 ppm	Not established
	Canada BC	290 mg/m^3	50 mg/m^3
	Canada ON	100 ppm	Not established
	Canada QC	100 ppm	Not established

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 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

Engineering Controls

Ventilation

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

Because the carbon black is 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.

Personal Protective Equipment

Eye protection

Wear appropriate protective eyeglasses or chemical safety goggles.

RECOMMENDATION: Use safety glasses with lateral protection (side shields).

Skin Protection

For likely contacts, use of protective butyl rubber, neoprene, or other chemically resistant gloves.

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

Section continued on the next page

Respiratory Protection If the product is heated or worker has a known allergic reaction, consider using a full mask with organic vapor cartridge or with an independent air supply.

Generally, for emergencies and exposure above 0.5 mg/m^3, use a self-contained breathing apparatus with full face piece operated in a pressure positive mode.

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**	Not available
Appearance	Black	**Upper Flammability Limit**	Not available
Odor	Mild, amine-like	**Vapor Pressure @25 °C**	Not available
Odor Threshold	Not available	**Vapor Density**	Not available
pH	Not available	**Relative Density @25 °C**	1.30
Freezing/Melting Point	Not available	**Solubility in Water**	Practically insoluble
Initial Boiling Point	>110 °C [>230 °F]	**Partition Coefficient n-octanol/water**	Not available
Flash Point	Not available	**Auto-ignition Temperature**	Not available
Evaporation Rate	Not available	**Decomposition Temperature**	Not available
Flammability	Non flammable	**Viscosity @25 °C**	2 500 cP

Section 10: Stability and Reactivity

Reactivity	Will not react violently.
Chemical Stability	Chemically stable.
Conditions to Avoid	Avoid all sources of ignition: heat, sparks, open flame.
Incompatibilities	Strong oxidizing agents, strong acids, strong bases, and strong oxidants.
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	May cause chemical burns or severe eye irritation, redness, and pain.
Skin	May cause serious skin irritation. May cause skin sensitization. Triethylenetetramine can be absorbed through skin.
Inhalation	May cause cough, shortness of breath, or labored breathing.
Ingestion	Single dose oral toxicity is low. It may cause severe irritation to the digestive tract and nausea.
Chronic	Prolonged and repeated exposure may lead to skin sensitization reactions.

Section continued on the next page

Lethal Exposure Concentrations

Chemical Name	LD50 oral	LD50 dermal	LC50 inhalation
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	>2 000 mg/kg Rat	>2 000 mg/kg Rat	Not available
aluminum trihydrate	79 000 mg/kg Rat	Not available	Not available
ammonium polyphosphate	500 mg/kg Rat	Not available	Not available
triethylenetetramine	2 500 mg/kg Rat	805 mg/kg Rabbit	Not available
2-methoxy-1-methylethyl acetate	>5 000 mg/kg Rat	5 000 mg/kg Rabbit	Not available
carbon black	>5 000 mg/kg Rat	3 000 mg/kg Rabbit	Not available
Stoddard solvent	>5 000 mg/kg Rat	>3 000 mg/kg Rabbit	>5.5 mg/L 4 h Rat
polyphosphoric acids, reaction products with 2-oxepanone and polyethylene glycol monomethylether	Not available	Not available	Not available
solvent naphtha (petroleum), light aromatic	>5 000 mg/kg Rat	>2 000 mg/kg Rabbit	Not available
xylene	3 523 mg/kg Rat	1 100 mg/kg Rabbit	>11 mg/L 4 h Rat
Mixture ATE	>2 000 mg/kg	>2 000 mg/kg	>10 mg/L (vapors)

Note: Toxicity data from ECHA was consulted. The data from supplier SDS were also consulted.

Section continued on the next page

Other Toxicological Effects

Skin corrosion/irritation	Mixture causes severe skin irritation.
Serious eye damage/irritation	The epoxy hardener (CAS# 68082-29-1) and triethylenetetramine (CAS# 112-24-3) components cause severe eye damage.
Respiratory and skin sensitization (allergic reactions)	The epoxy hardener components (CAS# 68082-29-1, 112-24-3, and 112-57-2) may cause skin sensitization in humans.
Carcinogenicity (risk of cancer)	The carbon black is a possible carcinogen by airborne routes of exposures. Because carbon black is bound in the epoxy liquid mixture, it is not expected to be available as an airborne hazard (dust, mist, or spray) under normal use. **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 (risk of heritable genetic effects)	Based on available data, the classification criteria are not met.
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 met.
STOT-single exposure	Based on available data, the classification criteria are not met.
STOT-repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Based on available data, the classification criteria are not met. The kinematic viscosity is >20.5 mm^2/s at 40 °C.

Section continued on the next page

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.

The Reaction product of Fatty acids, C18-unsatd., dimers and trimers with amines, polyethylenepoly-, triethylenetetramine fraction (CAS# 68082-29-1) was classified as a chronic category 2 environmental toxicant.

Literature for the triethylenetetramine (CAS# 112-24-3) suggest low category 3 aquatic toxicity (LC50, IC50, and EC50 values of >100 mg/L for fish and between 10 and 100 for algae).

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

Acute Ecotoxicity

See chronic ecotoxicity

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

Section 13: Disposal Considerations

Dispose of contents in accordance with all local, regional, and national 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 B 834BLV-450ML, 834BLV-3L

NOT REGULATED in TDG per Special Provisions 99

49 CFR: Sizes 5 L and under

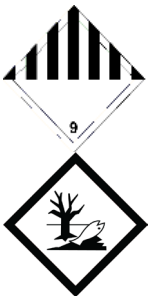
Part B of 834ATH-375ML, 834ATH-3L kits

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

49 CFR: Sizes greater than 5 L

Part B of 834BLV-12L, 834BLV-60L

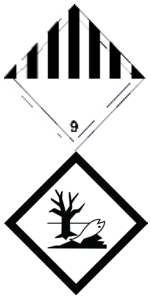
UN number: UN3082
Shipping Name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product of Fatty acids, C18-unsatd.)
Class: 9
Packing Group: III
Marine Pollutant: Yes



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.

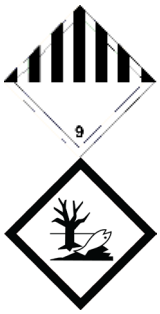
Section continued on the next page

Air

Refer to ICAO-IATA regulations.	
Sizes 5 L and under *Part B 834BLV-450ML, 834BLV-3L* **NOT REGULATED** On air waybill write: "Not Restricted, as per Special Provisions A197"	Sizes greater than 5 L *Part B 834BLV-450ML, 834BLV-3L* **UN number:** UN3082 **Shipping Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product of Fatty acids, C18-unsatd.) **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

Sea

Refer to IMDG regulations.	
Sizes 5 L and under *Part B 834BLV-450ML, 834BLV-3L* **NOT REGULATED** per 2.10.2.7	Sizes greater than 5 L *Part B of 834BLV-12L, 834BLV-60L* **UN number:** UN3082 **Shipping Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (reaction product of Fatty acids, C18-unsatd.) **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 <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/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 2023.

Section continued on the next page

USA

OSHA Hazard Communication Standard (29 CFR Part 1900)

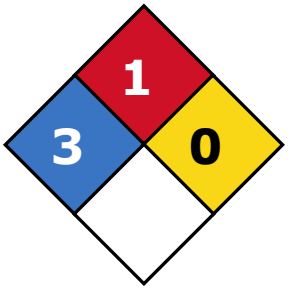
The safety data sheet and label comply with HCS 2024.

Other Classifications

HMIS® RATING

HEALTH:	* 3
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 is EPCRA compliant.

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

Section continued on the next page

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

MSDS Prepared by Regulatory Department

Date of Revision 23 January 2025

Supersedes 09 May 2024

Reason for Changes: Change in composition provoking a reclassification

Reference

1) ACGIH *2023 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 (2023).

Section continued on the next page

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.

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