

4226A

(AEROSOL)

Safety Data Sheet

Section 1: Identification

Product Identifier and Other Means of Identification

Product Identifier: 4226A**Other Means of Identification:** Clear Insulating Varnish (Aerosol)**Related Part #** 4226A-340G

Recommended Use and Restriction on Use

Use: High voltage protective coating for electronic and electrical devices**Uses Advised Against:** Not available

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
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

4226A**(AEROSOL)****Section 2: Hazard(s) Identification****Classification of Hazardous Chemical****GHS Categories**

Criteria	Category	Signal Word	Pictograms
Flammable Aerosol	2	Warning	Flame
Gas under pressure	Liquefied gas	Warning	Gas cylinder
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). Severity categories do not allow comparisons between classes.

Label Elements

Signal Word	Warning
Pictograms	Hazard Statements
	H223: Flammable aerosol
	H280: Contains gas under pressure; may explode if heated
	H336: May cause dizziness or drowsiness
Prevention	Precautionary Statements
P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

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Prevention	Precautionary Statements
P211	Do not spray on an open flame or other ignition source.
P251	Do not pierce or burn, even after use.
P261	Avoid breathing mist, spray, or vapors.
P271	Use only outdoors or in well-ventilated area.
Response	Precautionary Statements
P304 + P340, P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTRE or doctor if you feel unwell.
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, or international regulations.

Hazards Not Otherwise Classified

Other Criteria	Hazard Statements/Precautionary Statement	Signal Word	Pictograms
Simple Asphyxiant	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)
123-86-4	n-butyl acetate	43%
74-98-6	Propane	20%
75-28-5	Isobutane	11%
110-43-0	heptan-2-one	4%
136-52-7	cobalt bis(2-ethylhexanoate)	<0.1%

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Section 4: First-Aid Measures

<i>Exposure Condition</i>	<i>GHS Code/Symptoms/Precautionary Statement</i>
IF ON SKIN (or hair)	P303 + P361 + P364 + P353, P333 + P313
Immediate Symptoms	<i>light irritation, dry skin, redness</i>
Response	Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water or shower. If skin irritation or rash occurs: Get medical advice or attention
IF INHALED	P304 + P340 + P312, P308 + P313
Immediate Symptoms	<i>irritation, headache, drowsiness, dizziness, cough, nausea</i>
Response	Remove person to fresh air and keep comfortable for breathing. If feeling unwell: Call a POISON CENTRE or doctor
IF SWALLOWED	P301 + P330 + P331
Immediate Symptoms	<i>irritation, burning sensation, abdominal pain, dizziness, drowsiness, nausea</i>
Response	Do NOT induce vomiting. Rinse mouth.
IF IN EYES	P305 + P351 + P338
Immediate Symptoms	<i>low toxicity: mild eye irritation, redness, pain</i>
Response	Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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) and toxic fumes.
Fire-Fighter	Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

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Section 6: Accidental Release Measures

Personal Protection	See personal protection recommendations in Section 8.
Precautions for Response	Avoid breathing mist, spray, or vapors. Remove or keep away all sources of extreme heat or open flames.
Environmental Precautions	Not applicable
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. Avoid breathing mist, spray, or vapors. Use only outdoors or in a well-ventilated area. Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Do not pierce or burn, even after use. Do not spray on an open flame or other ignition source.
Handling	Wear protective gloves, protective clothing, and eye protection or face protection. Take off contaminated clothing and wash it before reuse.
Storage	Protect from sunlight. Do not expose to temperatures exceeding 50 °C [122 °F]. Store in a well-ventilated place. Store locked up.

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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)
n-butyl acetate	ACGIH U.S.A. OSHA PEL Canada AB Canada BC Canada ON Canada QC	150 ppm 150 ppm 150 ppm 20 ppm 150 ppm 150 ppm	Not established Not established 200 ppm 200 ppm Not established 200 ppm
propane	ACGIH U.S.A. OSHA PEL Canada AB Canada BC Canada ON Canada QC	See footnote ^{a)} 1 000 ppm 1 000 ppm 1 000 ppm 1 000 ppm 1 000 ppm	Not established Not established Not established Not established Not established Not established
isobutane <i>alkane (C2-C4)</i> <i>aliphatic hydrocarbon gas</i>	ACGIH U.S.A. OSHA PEL Canada AB Canada BC Canada ON Canada QC	See footnote ^{a)} Not established 1 000 ppm 1 000 ppm 800 ppm Not established	Not established Not established Not established Not established Not established Not established
heptan-2-one <i>methyl amyl ketone</i>	ACGIH U.S.A. OSHA PEL Canada AB Canada BC Canada ON Canada QC	50 ppm 100 ppm 50 ppm 50 ppm 25 ppm 50 ppm	Not established Not established Not established Not established Not established Not established

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) Refer to the ACGIH Appendix F: Minimum Oxygen Content for Asphyxia TLV Basis

Engineering Controls
Ventilation

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

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(AEROSOL)**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 or other chemically resistant gloves.

For occasional contacts, use disposable nitrile gloves or other chemically resistant gloves.

Respiratory Protection

For over-exposures up to 10 x OEL of mist, vapors, and spray, wear respirator such as a half-mask respirator with organic vapor cartridges.

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

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.

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Section 9: Physical and Chemical Properties

Physical State	Liquid, aerosol format	Lower Flammability Limit ^{c)}	2%
Appearance	Clear	Upper Flammability Limit ^{c)}	9%
Odor	Aromatic solvent, strong sweetish	Vapor Pressure ^{c)} @20 °C	407 kPa [3 053 mmHg]
Odor Threshold	Not available	Vapor Density	≥3.9 (Air =1)
pH	Not available	Relative Density @25 °C	0.93
Freezing/Melting Point	Not available	Solubility in Water	Partly miscible
Initial Boiling Point ^{a)}	≥126 °C [≥259 °F]	Partition Coefficient n-octanol/water	Not available
Flash Point ^{b)}	27 °C [81 °F]	Auto-ignition Temperature	≥415 °C [≥779 °F]
Evaporation Rate	~0.8 (ButAc = 1)	Decomposition Temperature	Not available
Flammability	Flammable	Viscosity @40 °C	>20.5 mm ² /s

a) Based on n-butyl acetate component, which has the lowest boiling point

b) Pensky-Martens closed cup value

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

Section 10: Stability and Reactivity

Reactivity	Not available
Chemical Stability	Chemically stable at normal temperatures and pressures
Conditions to Avoid	Avoid open flames, excessive heat, sparks, ignition sources, and incompatible substances
Incompatibilities	Strong oxidizing agents, strong reducing agents, strong bases
Polymerization	Will not occur
Decomposition	Will not decompose under normal conditions. For thermal decomposition, see combustion products in Section 5.

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Section 11: Toxicological Information

Summary of Effects and Symptoms by Routes of Exposure

Eyes	Low toxicity: May cause mild eye irritation, redness, or pain.
Skin	May causes light skin irritation, dry skin, and redness.
Inhalation	May cause cough, dizziness, drowsiness, headache, and blurred vision.
Ingestion	May cause an irritation, burning sensation, abdominal pain, dizziness, drowsiness, and nausea.
Chronic	Not applicable

Acute Toxicity (Lethal Exposure Concentrations)

Chemical Name	LD50 oral	LD50 dermal	LC50 Inhalation
n-butyl acetate	>10 768 mg/kg Rat	>17 600 mg/kg Rabbit	21.1 mg/L 4 h Rat
propane	Not applicable	Not applicable	>800 000 ppm 4 h Rat
isobutane	Not applicable	Not applicable	>570 000 ppm 4 h Rat
heptan-2-one	1 670 mg/kg Rat	12 600 µL/kg Rabbit	>16.7 mg/kg 4 h Rat (vapor)
cobalt bis(2-ethylhexanoate)	3 129 mg/kg Rat	5 690 mg/kg Guinea Pig	Not applicable
ATE Mixture	>2 000 mg/kg	>2 000 mg/kg	>100 mg/L (vapor)

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

Other Toxicological Effects

Skin corrosion/irritation	Based on available data, the classification criteria are not met.
Serious eye damage/irritation	Based on available data, the classification criteria are not met.

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4226A**(AEROSOL)****Sensitization**
(allergic reactions)

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

Carcinogenicity
(risk of cancer)

None of the ingredients are classified or listed as a carcinogen by IARC, ACGIH, CA Prop 65, or NTP.

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

N-butyl acetate and heptane-2-one can affect the central nervous system by inhalation causing drowsiness or dizziness.

STOT-repeated exposure

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

Aspiration hazardAspiration hazard criteria are not met. The mixture has a kinematic viscosity of $>20.5 \text{ mm}^2/\text{s}$ 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.

Based on available data, neither n-butyl acetate nor heptan-2-one are classified as aquatic environmental toxicants according to GHS criteria.

Cobalt bis(2-ethylhexanoate) is hazardous to the aquatic environment with a chronic category 3 classification.

Acute Ecotoxicity

Available toxicity data does not meet classification thresholds.

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4226A**(AEROSOL)****Chronic Ecotoxicity**

Available toxicity data does not meet classification thresholds.

Biodegradability

Not available

Bioaccumulation

Not available.

Other Effects

Actual volatile organic compound (VOC) = 81% [750 g/L]; Regulated VOC = 912 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 DOT 49 CFR (Parts 100 to 185) **Regulations.**Sizes 1 L and under
Limited Quantity**UN number:** UN1950
Shipping Name: AEROSOLS, flammable
Class: 2.1
Packing Group: Not applicable
Marine Pollutant: No*Section continued on the next page*

4226A**(AEROSOL)****Air****Refer to ICAO-IATA Dangerous Goods Regulations.**Sizes 1 L and under
Limited QuantityMax Net Qty/Pkg
30 kg G**UN number:** UN1950**Shipping Name:** AEROSOLS, 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:** AEROSOLS, flammable**Class:** 2.1**Packing Group:** Not applicable**Marine Pollutant:** No

Note: Shipper must be appropriately trained and certified before involvement with the transport of dangerous goods.

Section 15: Regulatory Information**Canada****Domestic Substance List (DSL) / Non-Domestic Substance Lists (NDSL)**

All hazardous ingredients are listed on the DSL/NDSL.

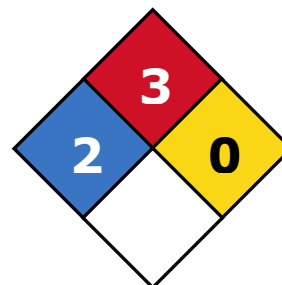
Hazardous Products Act (R.S.C., 1985, c. H-3)

The safety data sheet and label comply with the Hazardous Product Act and WHMIS 2015.

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4226A**(AEROSOL)****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 does not contain products that are listed as hazardous air pollutants.

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

This product contains n-butyl acetate (CAS# 123-86-4), 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 does not contain any substances known to be listed in California.

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.

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Section 16: Other Information**SDS Prepared by the** Regulatory Affairs Department**Date of Revision** 14 April 2022**Supersedes** Not applicable**Reason for Changes :** First release.**Reference**

1) All toxicological data were checked against the RTECS (Registry of Toxic Effects of Chemical Substances®)

2) 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).

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.

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4226A**(AEROSOL)**

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