

4226A

# Safety Data Sheet

## Section 1: Identification

### Product Identifier and Other Means of Identification

**Product Identifier:** 4226A**Other Means of Identification:** Clear Insulating Varnish**Related Part #** 4226A-55ML, 4226A-1L, 4226A-3.78L, 4226A-18.9L, 4226A-Drum

### 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](mailto:support@mgchemicals.com)  
**WEB** [www.mgchemicals.com](http://www.mgchemicals.com)

**E-MAIL** (Competent Person): [sds@mgchemicals.com](mailto: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

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

Criteria	Category	Signal Word	Pictograms
Flammable Liquid	3	Warning	Flame
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**

<b>Signal Word</b>	<b>WARNING</b>
<b>Pictograms</b>	<b>Hazard Statements</b>
	H226: Flammable liquid and vapour
	H336: May cause drowsiness or dizziness.
<b>Prevention</b>	<b>Precautionary Statements</b>
P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Use explosion proof equipment.
P243	Take action to prevent static discharges.
P261	Avoid breathing mist, spray, or vapors.
P271	Use only outdoors or in well-ventilated area.

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<b>Prevention</b>	<b>Precautionary Statements</b>
P280	Wear protective gloves, protective clothing, and eye protection or face protection.
<b>Response</b>	<b>Precautionary Statements</b>
P370 + P378	In case of fire: Use dry chemical, carbon dioxide, chemical foam, or water spray to extinguish.
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
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.
<b>Storage</b>	<b>Precautionary Statements</b>
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
<b>Disposal</b>	<b>Precautionary Statements</b>
P501	Dispose of contents in accordance to local, regional, national, or international regulations.

### Hazards Not Otherwise Classified

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

### Section 3: Composition/Information on Ingredients

<b>CAS #</b>	<b>Chemical Name</b>	<b>%(weight)</b>
123-86-4	n-butyl acetate	48%
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>
<b>IF ON SKIN (or hair)</b>	P303 + P361 + P353
<b>Immediate Symptoms</b>	<i>irritation, dry skin, redness</i>
<b>Response</b>	Take off immediately all contaminated clothing and wash it before reuse. Rinse skin with water or shower.
<b>IF INHALED</b>	P304 + P340 + P312, P308 + P313
<b>Immediate Symptoms</b>	<i>irritation, headache, drowsiness, dizziness, cough, nausea</i>
<b>Response</b>	Remove person to fresh air and keep comfortable for breathing. If feeling unwell: Call a POISON CENTRE or doctor
<b>IF SWALLOWED</b>	P301 + P330 + P331
<b>Immediate Symptoms</b>	<i>irritation, burning sensation, abdominal pain, dizziness, drowsiness, nausea</i>
<b>Response</b>	Do NOT induce vomiting. Rinse mouth.
<b>IF IN EYES</b>	P305 + P351 + P338
<b>Immediate Symptoms</b>	<i>low toxicity: mild eye irritation, redness, pain</i>
<b>Response</b>	Rinse cautiously with water for 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

**Section 5: Fire-Fighting Measures**

<b>Extinguishing Media</b>	In case of fire: Use dry chemical, carbon dioxide, chemical foam, or water spray to extinguish.  Use water spray to cool containers.
<b>Specific Hazards</b>	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.
<b>Combustion Products</b>	Produces carbon oxides (CO, CO <sub>2</sub> ) and toxic fumes.
<b>Fire-Fighter</b>	Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

**4226A****Section 6: Accidental Release Measures**

<b>Personal Protection</b>	See personal protection recommendations in Section 8.
<b>Precautions for Response</b>	Avoid breathing mist, spray, or vapors. Remove or keep away all sources of extreme heat or open flames.
<b>Environmental Precautions</b>	Not applicable
<b>Containment Methods</b>	Contain with inert and non-flammable absorbent (such as soil, sand, vermiculite).
<b>Cleaning Methods</b>	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.
<b>Disposal Methods</b>	Dispose of spill waste according to Section 13.

**Section 7: Handling and Storage**

<b>Prevention</b>	<p>Keep out of reach of children.</p> <p>Avoid breathing mist, spray, or vapors. Use only outdoors or in a well-ventilated area. Keep container tightly closed.</p> <p>Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.</p> <p>Ground and bond container and receiving equipment. Use explosion-proof equipment. Take precautionary measures against static discharge.</p>
<b>Handling</b>	<p>Wear protective gloves, protective clothing, and eye protection or face protection.</p> <p>Take off contaminated clothing and wash it before reuse.</p>
<b>Storage</b>	<p>Store in a well-ventilated place. Keep cool.</p> <p>Store locked up.</p>

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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	150 ppm	Not established
	U.S.A. OSHA PEL	150 ppm	Not established
	Canada AB	150 ppm	200 ppm
	Canada BC	20 ppm	200 ppm
	Canada ON	150 ppm	Not established
	Canada QC	150 ppm	200 ppm
heptan-2-one <i>methyl amyl ketone</i>	ACGIH	50 ppm	Not established
	U.S.A. OSHA PEL	100 ppm	Not established
	Canada AB	50 ppm	Not established
	Canada BC	50 ppm	Not established
	Canada ON	25 ppm	Not established
	Canada QC	50 ppm	Not established

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

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

**Skin Protection**

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

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**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.

**Section 9: Physical and Chemical Properties**

<b>Physical State</b>	Liquid	<b>Lower Flammability Limit</b> <sup>c)</sup>	1%
<b>Appearance</b>	Clear	<b>Upper Flammability Limit</b> <sup>c)</sup>	7%
<b>Odor</b>	Aromatic solvent, strong sweetish	<b>Vapor Pressure</b> <sup>c)</sup> <b>@20 °C</b>	1.2 kPa [8.8 mmHg]
<b>Odor Threshold</b>	Not available	<b>Vapor Density</b>	≥3.9 (Air =1)
<b>pH</b>	Not available	<b>Relative Density</b> <b>@25 °C</b>	0.957
<b>Freezing/Melting Point</b>	Not available	<b>Solubility in Water</b>	Partly miscible
<b>Initial Boiling Point</b> <sup>a)</sup>	≥126 °C [≥259 °F]	<b>Partition Coefficient</b> <b>n-octanol/water</b>	Not available
<b>Flash Point</b> <sup>b)</sup>	27 °C [81 °F]	<b>Auto-ignition Temperature</b>	≥415 °C [≥779 °F]
<b>Evaporation Rate</b>	~0.8 (ButAc = 1)	<b>Decomposition Temperature</b>	Not available
<b>Flammability</b>	Flammable	<b>Viscosity</b> <b>@40 °C</b>	>20.5 mm <sup>2</sup> /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

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### Section 10: Stability and Reactivity

<b>Reactivity</b>	Not available
<b>Chemical Stability</b>	Chemically stable at normal temperatures and pressures
<b>Conditions to Avoid</b>	Avoid open flames, excessive heat, sparks, ignition sources, and incompatible substances
<b>Incompatibilities</b>	Strong oxidizing agents, strong reducing agents, strong bases
<b>Polymerization</b>	Will not occur
<b>Decomposition</b>	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

<b>Eyes</b>	Low toxicity: May cause mild eye irritation, redness, or pain.
<b>Skin</b>	Causes a light skin irritation, dry skin, and redness.
<b>Inhalation</b>	May cause cough, dizziness, drowsiness, headache, and blurred vision.
<b>Ingestion</b>	May cause nausea, cough, dizziness, headache, sore throat, and weakness.
<b>Chronic</b>	Not applicable

#### Acute Toxicity (Lethal Exposure Concentrations)

<b>Chemical Name</b>	<b>LD50 oral</b>	<b>LD50 dermal</b>	<b>LC50 inhalation</b>
n-butyl acetate	>10 768 mg/kg Rat	>17 600 mg/kg Rabbit	21.1 mg/L 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 RTECS<sup>2</sup> and ECHA databases were consulted. The data from supplier SDSs were also consulted.

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**4226A****Other Toxicological Effects**

<b>Skin corrosion/irritation</b>	Based on available data, the classification criteria are not met.
<b>Serious eye damage/irritation</b>	Based on available data, the classification criteria are not met.
<b>Sensitization</b> (allergic reactions)	Cobalt bis(2-ethylhexanoate) may cause skin sensitization based on animal study results.
<b>Carcinogenicity</b> (risk of cancer)	None of the ingredients are classified or listed as a carcinogen by IARC, ACGIH, CA Prop 65, or NTP.
<b>Mutagenicity</b> (risk of heritable genetic effects)	Based on available data, the classification criteria are not met.
<b>Reproductive Toxicity</b> (risk to sex functions)	Based on available data, the classification criteria are not met.
<b>Teratogenicity</b> (risk of fetus malformation)	Based on animal studies, cobalt bis(2-ethylhexanoate) has been shown to be a developmental toxicant.
<b>STOT-single exposure</b>	N-butyl acetate and heptane-2-one can affect the central nervous system by inhalation causing drowsiness or dizziness.
<b>STOT-repeated exposure</b>	Based on available data, the classification criteria are not met.
<b>Aspiration hazard</b>	Aspiration hazard criteria are not met. The mixture has a kinematic viscosity of $>20.5 \text{ mm}^2/\text{s}$ at $40 \text{ }^\circ\text{C}$ .

**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 2 classification.

**Acute Ecotoxicity**

Available toxicity data does not meet classification thresholds.

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### Chronic Ecotoxicity

Available toxicity data does not meet classification thresholds.

### Biodegradability

Not available

### Bioaccumulation

Not available.

### Other Effects

Actual volatile organic compound (VOC) = 54% [521 g/L]; Regulated VOC = 918 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 5 L and under  
4226A-55ML, 4226A-1L,  
4226A-3.78L

**Limited Quantity**



Sizes greater than 5 L (passenger)  
4226A-18.9L, 4226A-Drum

**UN number:** UN1263  
**Shipping Name:** PAINT  
**Class:** 3  
**Packing Group:** III  
**Marine Pollutant:** No



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### Air

**Refer to ICAO-IATA Dangerous Goods Regulations.**

Size 5 L and under  
4226A-55ML, 4226A-1L,  
4226A-3.78L

**Limited Quantity**

Max Net Qty/Pkg =  
10 L



Sizes greater than 10 L  
4226A-18.9L, 4226A-Drum

**UN number:** UN1263  
**Shipping Name:** PAINT  
**Class:** 3  
**Packing Group:** III  
**Marine Pollutant:** No



### Sea

**Refer to IMDG Regulations.**

Sizes 5 L and under  
4226A-55ML, 4226A-1L,  
4226A-3.78L

**Limited Quantity**


Sizes greater than 5 L  
4226A-18.9L, 4226A-Drum

**UN number:** UN1263  
**Shipping Name:** PAINT  
**Class:** 3  
**Packing Group:** III  
**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.

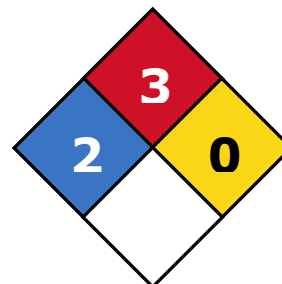
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**4226A****USA**

## Other Classifications

**HMIS<sup>®</sup> RATING**

<b>HEALTH:</b>	<b>* 2</b>
<b>FLAMMABILITY:</b>	<b>3</b>
<b>PHYSICAL HAZARD:</b>	<b>0</b>
<b>PERSONAL PROTECTION:</b>	

**NFPA<sup>®</sup> 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.

**4226A****Section 16: Other Information****SDS Prepared by the** Regulatory Affairs Department**Date of Revision** 25 September 2024**Supersedes** 14 July 2023**Reason for Changes :** Added new part number.**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
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](http://www.mgchemicals.com).

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Phone: +1-905-331-1396

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**4226A**

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