4228A

Safety Data Sheet

Section 1: Identification

Product Identifier and Other Means of Identification

Product Identifier: 4228A

Other Means of Identification: Red Insulating Varnish

Related Part # 4228A-55ML, 4228A-225ML, 4228A-1L, 4228A-4L, 4228A-20L

Recommended Use and Restriction on Use

Use: High voltage protective coating

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

Section 2: Hazard(s) Identification

Classification of Hazardous Chemical

GHS Categories

Criteria	Category	Signal Word	Pictograms
Flammable Liquid	3	Warning	Flame
Eye Irritation	2	Warning	Exclamation
Specific Target Organ Toxicity Single Exposure	3	Warning	Exclamation

Note: The degree of severity is ranked within each hazard class from 1 (Highest Severity) to up to 5 (Lowest Severity). Severity categories rankings do not allow comparisons between classes.

Label Elements

Signal Word	**DANGER**
Pictograms	**Hazard Statements**
	H226: Flammable liquid and vapor
	H336: May cause dizziness or drowsiness H319: Causes serious eye irritation

Section continued on the next page

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.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P241	Use explosion proof equipment.
P243	Take action to prevent static discharges.
P261	Avoid breathing dust, fumes and vapours.
P271	Use only outdoors or in a well-ventilated area.
P264	Wash hands thoroughly after handling.
P280	Wear protective gloves, protective clothing, and eye protection.
Response	**Precautionary Statements**
P370 + P378	In case of fire: Use dry chemical, carbon dioxide, chemical foam, or water spray
P303 + P361 + P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312	Call a POISON CENTER or doctor if you feel unwell.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313	If eye irritation persists: Get medical advice or attention.
Storage	**Precautionary Statements**
P403 + P235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
Disposal	**Precautionary Statements**
P501	Dispose of contents in accordance to local, regional, national, and international regulations.

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Hazards Not Otherwise Classified

Other Criteria	Hazard Statements/Precautionary Statement	Signal Word	Pictograms
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	42%
110-43-0	methyl amyl ketone	4%
71-36-3	n-butanol	2
108-65-6	2-methoxy-1-methylethyl acetate	<1%

Section 4: First-Aid Measures

Exposure Condition	*GHS Code/Symptoms/Precautionary Statement*
IF ON SKIN (or hair)	P303 + P361 + P353
Immediate Symptoms	*mild irritation, dry skin, redness*
Response	Take off immediately all contaminated clothing. Rinse skin with water.
IF INHALED	P304 + P340, P312
Immediate Symptoms	*cough, sore throat, drowsiness, dizziness, headaches*
Response	Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.
IF IN EYES	P305 + P351 + P338, P337 + P313
Immediate Symptoms	*redness, severe irritation, pain, blurred vision*
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.

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IF SWALLOWED	P301 + P330, P331
Immediate Symptoms	*nausea, abdominal pain*
Response	Rinse mouth. Do NOT induce vomiting.

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	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. Prevent fire-fighting wash from entering waterway or sewer system.
Combustion Products	Produces carbon oxides (CO, CO_2)
Fire-Fighter	Wear self-contained breathing apparatus and full fire-fighting turn-out gear.

Section 6: Accidental Release Measures

Personal Protection	See personal protection recommendations in Section 8.
Precautions for Response	Remove or keep away all sources of extreme heat or open flames. Avoid breathing the mist, spray, and vapors.
Environmental Precautions	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, 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. **RECOMMENDATION:** Use a grounded stainless steel or carbon steel container.
Disposal Methods	Dispose of spill waste according to Section 13.

Section 7: Handling and Storage

Prevention	Keep out of reach of children.
	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
	Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment. Take precautionary measures against static discharge.
	Avoid breathing mist, vapors, and spray. Use only outdoors or in a well-ventilated area. Keep container tightly closed.
Handling	Wear protective gloves, protective clothing, and eye protection.
	Wash hands thoroughly after handling.
Storage	Store in a well-ventilated place. Keep cool.
	Store locked up.

Section 8: Exposure Controls/Personal Protection

Substances with Occupational Exposure Limit Values

Chemical Name	Country/ Provinces	Long Term Exposure Limits (PEL)	Short Term Exposure Limits (STEL)
n-butyl acetate	ACGIH	Not established	Not established
	U.S.A. OSHA PEL	150 ppm	Not established
	Canada AB	150 ppm	200 ppm
	Canada BC	20 ppm	Not established
	Canada ON	150 ppm	200 ppm
	Canada QC	150 ppm	200 ppm
methyl amyl ketone	ACGIH	Not established	Not established
	U.S.A. OSHA PEL	100 ppm	50 ppm
	Canada AB	50 ppm	Not established
	Canada BC	Not established	Not established
	Canada ON	25 ppm	Not established
	Canada QC	50 ppm	Not established
n-butanol	ACGIH	20 ppm	Not established
	U.S.A. OSHA PEL	100 ppm	Not established
	Canada AB	20 ppm	Not established
	Canada BC	15 ppm	30 ppm (Ceiling)
	Canada ON	20 ppm	Not established
	Canada QC	50 ppm (Ceiling)	Not established
2-methoxy-1-methylethyl acetate	ACGIH	Not established	Not established
	U.S.A. OSHA PEL	Not established	Not established
	Canada AB	Not established	Not established
	Canada BC	50 ppm	75 ppm
	Canada ON	50 ppm	Not established
	Canada QC	Not established	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.

Engineering Controls

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

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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 polyvinyl alcohol (PVA), viton, 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, use a positive-pressure, air-supplied respirator or a self-contained breathing apparatus. **RECOMMENDATION:** Consult your local safety supply store to ensure that your respirator has a NIOSH (U.S.) approved filter cartridges appropriate for the ingredients listed in Section 3. The respirator should be fitted to the employee by a professional. Ensure vapor cartridges are stored in sealed plastic bags when not being used.

General Hygiene Considerations

Wash hands thoroughly with water and soap after handling.

Section 9: Physical and Chemical Properties

Physical State	Liquid	**Lower Flammability Limit**	1.2%
Appearance	Red	**Upper Flammability Limit**	7.3%
Odor	Aromatic	**Vapor Pressure @20 °C**	10 4 hPa [8 mmHg]
Odor Threshold	Not available	**Vapor Density**	>2.5 (Air = 1)
pH	Not available	**Relative Density @20 °C**	0.81
Freezing/Melting Point	Not available	**Solubility in Water**	Negligible
Initial Boiling Point	116 °C [240.8 °F]	**Partition Coefficient (n-octanol/water)**	Not available
Flash Point [a)]	25 °C [77 °F]	**Auto-ignition Temperature** [b)]	220 °C [428 °F]
Evaporation Rate	Not available)	**Decomposition Temperature**	Not available
Flammability	Flammable	**Viscosity @40 °C**	Not available

Section 10: Stability and Reactivity

Reactivity	Not available
Chemical Stability	Chemically stable at normal temperatures and pressures
Conditions to Avoid	Ignition sources, open flames, excessive heat, and incompatible substances
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.

Section 11: Toxicological Information

Summary of Effects and Symptoms by Routes of Exposure

Skin	Causes skin redness, mild skin irritation, and dry skin.
Inhalation	May cause cough, sore throat, drowsiness, dizziness, and headaches. Severe overexposure may lead to lost of consciousness.
Eyes	Causes redness, severe irritation, pain, and blurred vision.
Ingestion	May cause nausea and abdominal pain.
Chronic	Prolonged or repeated exposure may defat skin and cause dermatitis.

Acute Toxicity (Lethal Exposure Concentrations)

Chemical Name	**LD50 oral**	**LD50 dermal**	**LC50 inhalation**
n-butyl acetate	>5 000 mg/kg Rat	>5 000 mg/kg Rabbit	Not available
methyl amyl ketone	>5 000 mg/kg Rat	2 000 mg/kg Rabbit	17 mg/L 4 h (vapor) Rat
n-butanol	2292 mg/kg Rat	>3 434 mg/kg Rabbit	18. mg/L 4 h (vapor) Rat
2-methoxy-1-methylethyl acetate	>5 000 mg/kg Rat	5 000 mg/kg Rabbit	Not available
ATE Mixture	>5 000 mg/kg Rat	>5 000 mg/kg Rabbit	295 mg/L

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

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Other Toxicological Effects

Skin corrosion/irritation	Based on tests on rabbits, the n-butyl acetates, methyl amyl ketone, n-butanol, are slight skin irritants.
Serious eye damage/irritation	Based on tests on rabbits, the n-butyl acetates, methyl amyl ketone, methyl ethyl acetate are slight eye irritants. N-butanol is severely irritating to the eyes.
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 methyl amyl ketone can affect the central nervous system by oral and inhalation, causing drowsiness or dizziness.
STOT-repeated exposure	Based on available data, the classification criteria are not met.
Aspiration hazard	Mixture is not a class 1 aspiration hazard. Based on available data, the classification criteria are not met.

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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 n-butyl acetate ingredient is an acute category 3 environmental toxicant. It is biodegradable, with minimal LC50 96 h of 18 mg/L for fathead minnow.

Heptan-2-one, butan-1-ol, and 2-methoxy-1-methylethyl acetate do not meet classification criteria for aquatic environmental toxicants with LC50 and EC50 of >100 mg/L.

- Heptan-2-one, also called methyl amyl ketone, has a minimal LC50 96 h of 126 mg/L for Pimephales promelas (fathead minnow).
- Butan-1-ol has a minimal LC50 96 h of 1376 mg/L for Pimephales promelas (fathead minnow); an EC50 48 h of 1328 mg/L Daphnia magna (water flea); an ErC50 96 h of 225 mg/L Pseudokirchneriella subcapitata (green algae); and EC50 17 h of 4390 mg/L Pseudomonas putida (bacteria).
- The 2-methoxy-1-methylethyl acetate substance has a minimal LC50 96 h of 100 to 180 mg/L Salmo gairdneri (rainbow trout) and an EC50 48 h Daphnia magna (water flea).

Acute Ecotoxicity

Available toxicity data does not meet classification thresholds.

Chronic Ecotoxicity

Available toxicity data does not meet classification thresholds.

Biodegradability

Not available

Other Effects

Actual VOC (Volatile Organic Content) = 54% [561 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 *4228A-55ML, 4228A-225ML, 4228A-1L, 4228A-4L* **Limited Quantity**	Sizes greater than 5 L *4228A-20L* **UN number**: UN1263 **Shipping Name:** PAINT **Class:** 3 **Packing Group**: III **Marine Pollutant:** No
	

Air

Refer to ICAO-IATA Dangerous Goods Regulations.

Sizes 5 L and under *4228A-55ML, 4228A-225ML, 4228A-1L, 4228A-4L* **Limited Quantity** Total net quantity per package 10 L	Sizes up to 60 L (passenger), 120 L (cargo) *4228A-20L* **UN number**: UN1263 **Shipping Name**: PAINT **Class:** 3 **Packing Group**: III **Marine Pollutant**: No
	

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Sea

Refer to IMDG Regulations.

Sizes 5 L and under	Sizes greater than 5 L
4228A-55ML, 4228A-225ML, 4228A-1L, 4228A-4L **Limited Quantity**  Packing instructions P001	*Cat No: 4228A-20L* **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.

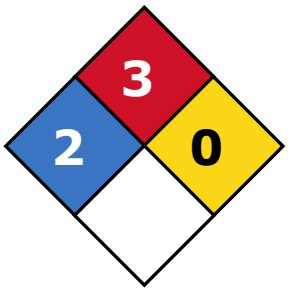
USA

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)

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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 substances 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) and n-butyl alcohol (CAS# 71-36-3), which can be subject to the CERCLA reporting requirements at a threshold of 5000 lb (2268 kg).

This product contains n-butyl alcohol (CAS# 71-36-3; reportable quantity = 1000 lb), which is subject to the reporting requirements of section 313 Title III of the SARA of 1986 and 40 CFR part 372.

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 on the California Proposition 65 list.

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 electronic equipment and is therefore not governed by this regulation.

Section 16: Other Information

SDS Prepared by	MG Chemical's Regulatory Department
Date of Review	02 November 2022
Supersedes	Not applicable
Reason for Changes:	New product

Reference

1) ACGIH *2022 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 (2022).

Abbreviations

ACGIH	American Conference of Governmental Industrial Hygienists (USA)
ATE	Acute Toxicity Estimate
IARC	International Agency for Research on Cancer
GHS	Globally Harmonized System of Classification of Labeling of Chemicals
LC50	Lethal Concentration 50%
LCLo	Lowest published lethal concentration
LD50	Lethal Dose 50%
NTP	National Toxicology Program
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.

Email: support@mgchemicals.com

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4228A

Mailing Addresses

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Disclaimer

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