

4228

RED INSULATING VARNISH

Safety Data Sheet

Section 1: Identification

Product Identifier and Other Means of Identification

Product Identifier: 4228**Other Means of Identification:** Red Insulating Varnish**Related Part #** 4228-55ML, 4228-225ML, 4228-1L, 4228-4L, 4228-20L

Recommended Use and Restriction on Use

Use: High voltage protective coating**Uses Advised Against:** Not available

Details of Manufacturer or Importer

ManufacturerMG Chemicals
1210 Corporate Drive
Burlington, Ontario L7L 5R6
CANADAMG Chemicals (Head Office)
9347-193 Street
Surrey, British Columbia V4N 4E7
CANADA**☎** +1-800-340-0772**FAX** +1-800-340-0773**E-MAIL** support@mgchemicals.com**WEB** www.mgchemicals.com**☎** +1-905-331-1396**FAX** +1-905-331-2682**E-MAIL** info@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

4228
RED INSULATING VARNISH
Section 2: Hazard(s) Identification
Classification of Hazardous Chemical
GHS Categories

| Criteria | Category | Signal Word | Pictograms |
|---|----------|-------------|-------------|
| Flammable Liquid | 3 | Warning | Flame |
| Carcinogenicity | 2 | Warning | Health |
| Specific Target Organ Toxicity Repeated Exposure | 2 | Warning | Health |
| Sensitization Skin | 1 | Warning | Exclamation |
| Skin Irritation | 2 | Warning | Exclamation |
| Eye Irritation | 2 | Warning | Exclamation |
| Specific Target Organ Toxicity Single Exposure | 3 | Warning | Exclamation |
| Hazardous to Aquatic Environment Acute | 2 | <i>none</i> | <i>none</i> |


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 |
|  | H226: Flammable liquid and vapor |
|  | H373: May cause damage to organs (liver, kidney, and inner ear) through prolonged or repeated exposure H351: Suspected of causing cancer |

Section continued on the next page

4228
RED INSULATING VARNISH
Continued...

| Pictograms | Hazard Statements |
|---|---|
|  | H317: May cause an allergic skin reaction H315: Causes skin irritation H319: Causes serious eye irritation H335: May cause respiratory irritation H336: May cause dizziness or drowsiness |
| No Symbol Mandated | H401: Toxic to aquatic life |
| Prevention | Precautionary Statements |
| P102 | Keep out of reach of children. |
| P201 | Obtain special instructions before use. |
| P202 | Do not handle until all safety precautions have been read and understood. |
| 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 electrical, ventilating, and lighting equipment. |
| P243 | Take action to prevent static discharges. |
| P260 | Do not breathe mist, vapors, and spray. |
| P271 | Use only outdoors or in well-ventilated area. |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |
| P264 | Wash hands thoroughly after handling. |
| P280 | Wear protective gloves, protective clothing, eye protection, and face protection. |
| P273 | Avoid release to the environment. |
| Response | Precautionary Statements |
| P370 + P378 | In case of fire: Use dry chemical, carbon dioxide, chemical foam, or water spray to extinguish. |
| P308 + P313 | IF exposed or concerned: Get medical advice or attention. |

Section continued on the next page

4228
RED INSULATING VARNISH
Continued...

| Response | Precautionary Statements |
|--------------------|--|
| P303 + P361 + P352 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Wash with plenty of water or shower. |
| P333 + P313 | If skin irritation or rash occurs: Get medical advice or attention. |
| P363 | Wash contaminated clothing before reuse. |
| P304 + P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P312 | Call a POISON CENTRE 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. |

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) |
|--------------|---------------------------------|------------------|
| 1330-20-7 | xylene (mixed isomers) | 42% |
| 100-41-4 | ethylbenzene | 6% |
| 1317-61-9 | iron (III) oxide | 2% |
| 96-29-7 | butan-2-one oxime ^{a)} | 0.8% |

a) Also known as MEKO (methyl ethyl ketoxime)

4228
RED INSULATING VARNISH
Section 4: First-Aid Measures

| <i>Exposure Condition</i> | <i>GHS Code/Symptoms/Precautionary Statement</i> |
|-----------------------------|--|
| IF ON SKIN (or hair) | P303 + P361 + P352, P333 + P313, P308 + P313, P363 |
| Immediate Symptoms | <i>irritation, dry skin, redness</i> |
| Response | Take off immediately all contaminated clothing. Wash with plenty of water or shower. If skin irritation or rash occurs: Get medical advice or attention. IF exposed or concerned: Get medical advice or attention. Wash contaminated clothing before reuse. |
| IF INHALED | P304 + P340, P312, P308 + P313 |
| Immediate Symptoms | <i>Irritation of respiratory tract, cough, sore throat, drowsiness, dizziness, headaches</i> |
| Response | Remove person to fresh air and keep comfortable for breathing. If feeling unwell: Call a POISON CENTRE or doctor. If exposed or concerned: Get medical advice or attention. |
| IF IN EYES | P305 + P351 + P338, P337 + P313 |
| Immediate Symptoms | <i>redness, severe irritation, pain, blurred vision</i> |
| 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 SWALLOWED | P301 + P330, P331, P308 + P313 |
| Immediate Symptoms | <i>burning sensation, abdominal pain, nausea, headaches, dizziness, drowsiness</i> |
| Response | Rinse mouth. Do NOT induce vomiting. If exposed or concerned: Get medical advice or attention |

4228

RED INSULATING VARNISH**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. Do not breathe the mist, spray, and vapors. |
| Environmental Precautions | Avoid releasing to the environment. Prevent spill from entering drains and waterways. |
| Containment Methods | Contain with inert and non-flammable absorbent (such as soil, sand, vermiculite). |
| Cleaning Methods | Collect liquid in a sealable, 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. |

4228

RED INSULATING VARNISH**Section 7: Handling and Storage****Prevention**

Keep out of reach of children.

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood.

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.

Do not breathe mist, vapors, and spray. Use only outdoors or in a well-ventilated area. Keep container tightly closed.

Avoid release to the environment.

Handling

Contaminated work clothing should not be allowed out of the workplace.

Wear protective gloves, protective clothing, eye protection, and face protection.

Wash hands thoroughly after handling.

Storage

Store in a well-ventilated place. Keep cool.

Store locked up.

4228
RED INSULATING VARNISH
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) |
|---------------------------|-----------------------|---------------------------------------|---|
| xylene (mixed isomers) | ACGIH | 100 ppm | 150 ppm |
| | U.S.A. OSHA PEL | 100 ppm | Not established |
| | Canada AB | 100 ppm | 150 ppm |
| | Canada BC | 100 ppm | 150 ppm |
| | Canada ON | 100 ppm | 150 ppm |
| | Canada QC | 100 ppm | 150 ppm |
| ethylbenzene | ACGIH | 20 ppm | Not established |
| | U.S.A. OSHA PEL | 100 ppm | Not established |
| | Canada AB | 100 ppm | 125 ppm |
| | Canada BC | 20 ppm (2B) | Not established |
| | Canada ON | 100 ppm | 125 ppm |
| | Canada QC | 100 ppm | 125 ppm |

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.
 (2B) Carcinogen

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 polyvinyl alcohol (PVA), viton, or other chemically resistant gloves.
 For incidental contacts, use nitrile or other chemically resistant gloves.

Section continued on the next page

4228
RED INSULATING VARNISH

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% |
| Appearance | Red | Upper Flammability Limit | 7% |
| Odor | Aromatic | Vapor Pressure @20 °C | 0.67 kPa [5 mmHg] |
| Odor Threshold | ≥0.324 ppm | Vapor Density | 3.67 (Air = 1) |
| pH | Not available | Relative Density @20 °C | 1.06 |
| Freezing/Melting Point | Not available | Solubility in Water | Negligible |
| Initial Boiling Point | 136 °C [276.8 °F] | Partition Coefficient (n-octanol/water) | Not available |
| Flash Point ^{a)} | 24 °C [75.2 °F] | Auto-ignition Temperature ^{b)} | 464 °C [867 °F] |
| Evaporation Rate | 0.86 (ButAc = 1) | Decomposition Temperature | Not available |
| Flammability | Flammable | Viscosity @40 °C | >20.5 mm ² /s |

a) Pensky-Martens closed cup value

b) Values based on the component with the lowest auto-ignition value.

4228

RED INSULATING VARNISH**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, skin irritation, and dry skin. |
| Inhalation | May cause irritation of the respiratory tract, cough, sore throat, drowsiness, dizziness, and headaches. Severe overexposure may lead to loss of consciousness. |
| Eyes | Causes redness, severe irritation, pain, and blurred vision. |
| Ingestion | May cause a burning sensation, abdominal pain, and headaches, nausea. |
| Chronic | <p>Prolonged or repeated exposure may defat skin and cause dermatitis. Prolonged and repeated exposure may lead to skin sensitization.</p> <p>Prolonged and repeated exposure is possibly carcinogenic based on inhalation studies on rats.</p> <p>Prolonged or repeated exposure may damage the liver and kidneys.</p> <p>Long term exposure to loud noises and product vapors may lead to some hearing loss.</p> |

Section continued on the next page

4228
RED INSULATING VARNISH
Acute Toxicity (Lethal Exposure Concentrations)

| Chemical Name | LD50 oral | LD50 dermal | LC50 inhalation |
|----------------------|---------------------|------------------------|---------------------------------------|
| xylene | 4 350 mg/kg Rat | >5 000 mg/kg Rabbit | 5 000 ppm 4 h Rat |
| ethylbenzene | 3 500 mg/kg Rat | >5 000 mg/kg Rabbit | 35 500 mg/m ³ 2 h Mouse |
| iron (III) oxide | >5 000 mg/kg Rat | Not available | >5.05 mg/L 4 h (dust) Rat |
| butan-2-one oxime | 2326 mg/kg Rat | >1 000 mg/kg Rabbit | 20 mg/L 4 h (vapor) Rat |
| ATE Mixture | >5 000 mg/kg Rat | >5 000 mg/kg Rabbit | 41 mg/L 4 h (vapor) |

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

Other Toxicological Effects

| | |
|--|--|
| Skin corrosion/irritation | Causes skin irritation based on Draize tests on animals. |
| Serious eye damage/irritation | Causes severe eye irritation based on Draize tests on animals. |
| Sensitization (allergic reactions) | The butan-2-one oxime can cause skin sensitization. |
| Carcinogenicity (risk of cancer) | Ethylbenzene [CAS# 100-41-4] IARC Group 2B: Possibly carcinogenic to humans ACGIH A3: Confirmed animal carcinogen with unknown relevance to humans CA Prop 65: Listed as a carcinogen 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. |

Section continued on the next page

4228**RED INSULATING VARNISH**

| | |
|---|---|
| Teratogenicity (risk of fetus malformation) | Based on available data, the classification criteria are not met. |
| STOT-single exposure | Xylene and ethylbenzene can affect the central nervous system by inhalation causing drowsiness or dizziness. |
| STOT-repeated exposure | Prolonged or repeated over-exposure to p-xylene and ethylbenzene and noise can lead to hearing loss (cochlear impairment) according to rat inhalation studies. Overexposure to high levels of ethylbenzene may damage the liver and kidneys. |
| Aspiration hazard | Mixture is not a class 1 aspiration hazard. Although it contains more than 10% components of category 1 for aspiration hazard, the mixture has a kinematic viscosity of >20.5 mm ² /s at 40 °C for the separation layer. |

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.

Xylene isomers mixture are expected to be acute category 2 environmental toxicant with minimal LC50 of 2.5 mg/L for fish.

Ethylbenzene is an acute category 2 environmental toxicant with minimal LC50 of 4.2 mg/L for *Oncorhynchus mykiss* (rainbow trout); 2.9 mg/L 48 h *Daphnia magna* (water flea).

Acute Ecotoxicity

Category 2

Toxic to aquatic life

Avoid release to the environment.

Chronic Ecotoxicity

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

Biodegradability

Not available

Other Effects

Actual VOC (Volatile Organic Content) = 49% [514 g/L]

4228

RED INSULATING VARNISH

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
4228-55ML, 4228-225ML, 4228-1L,
4228-4L

Limited Quantity



Sizes greater than 5 L
4228-20L

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
4228-55ML, 4228-225ML, 4228-1L,
4228-4L

Limited Quantity

Total net quantity
per package 10 L



Sizes up to 60 L (passenger), 120 L (cargo)
4228-20L

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



Section continued on the next page

4228

RED INSULATING VARNISH

Sea

Refer to IMDG Regulations.

Sizes 5 L and under
4228-55ML, 4228-225ML, 4228-1L,
4228-4L

Limited Quantity

Packing instructions
P001



Sizes greater than 5 L
Cat No: 4228-20L

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.

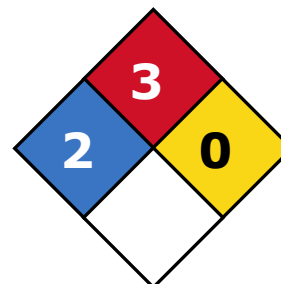
USA

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)

Section continued on the next page

4228**RED INSULATING VARNISH****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 contains xylenes and ethylbenzene that are listed as hazardous air pollutants.

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

This product contains ethylbenzene (CAS # 100-41-4; reportable quantity = 1 000 lb) and xylene (CAS# 1330-20-7, reportable quantity = 100 lb), which are 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 contains ethylbenzene, which is listed as a carcinogen.

Europe**RoHS** (Restriction of Hazardous Substances Directive)

This product does not contain any lead, cadmium, mercury, hexavalent chromium, PBB's, PBDE's, DEHP, BBP, DBP, or DIBP and complies with European RoHS regulations.

WEEE (Waste Electrical and Electronic Equipment Directive)

This product is not a piece of electrical or 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 | 06 March 2020 |
| Supersedes | 22 April 2019 |
| Reason for Changes: | Update to the emergency phone number information. |

Section continued on the next page

4228**RED INSULATING VARNISH****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) |
| 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

Phone: +1-905-331-1396

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

Head Office
9347-193rd Street
Surrey, British Columbia, Canada
V4N 4E7

Disclaimer

This safety data sheet is provided as an information resource only. *M.G. Chemicals, Ltd.* believes the information contained herein is accurate and compiled from reliable sources. It is the responsibility of the user to query and verify any information seeming suspect where doubt on the validity may exist. The buyer assumes all responsibility of using and handling the product in accordance with local, regional, national, and international regulations.