

Red Insulating Varnish



4228

Dielectric Strength (dry): 3000 V / mil

- Protect motor windings, small dry type transformers, and coils from arcing, discharge and oxidation
- Class F thermal protection (20,000 @ 150°C)
- High dielectric strength

Specifications

Physical Properties	
Type	Modified Alkyd
Color	Red
Gloss (60°)	80+
Thinner	Xylol
Weight per Gallon	8.84 ± 2.0% lbs
Dielectric Str. dry	3000 V / mil
Dielectric Str. wet	1500 V / mil
Tack free time	10 min
Cure time (25°C)	20 min
Non-Volatile by Weight	51.8 ± 2.0%
Non-Volatile by Volume	40.8 ± 2.0%
Coverage (at 1 mil with 4228-4L)	655 sq ft
Mandrel 1/2 inch	No Cracking
Mandrel 1/4 inch	No Cracking
Volitile Organic Compounds (VOC)	4.28 lbs / gal



Available Sizes

Catalog Number	Sizes Available	Description
4228-55ML	55ml (2 oz)	Liquid
4228-1L	950ml (1 quart)	Liquid
4228-4L	4L (1 gal)	Liquid

Material Safety Data Sheet

Section 1: Product Identification

MSDS Code: 4228**Name: Red Insulating Varnish****Related Part Numbers: 4228-55ML, 4228-1L, 4228-4L**

Use: High voltage protective coating for motor windings.

Section 2: Hazardous Ingredients

CAS#	Chemical Name	Percentage by weight	ACGIH TWA	Osha Pel	Osha Stel
1330-20-7	Xylene	<45	100ppm	100ppm	150ppm
1309-37-1	Red Iron Oxide	<6	*N/E	*N/E	*N/E
100-41-4	Ethyl Benzene	<6	100ppm	100ppm	N/E
1332-37-2	Iron oxide	<18	N/E	N/E	N/E

Section 3: Hazards Identification

WHMIS Codes: B2, D2A**NFPA Ratings:** Health 2 Flammability 3 Reactivity 0**HMIS Ratings:** Health 2 Flammability 3 Reactivity 0**Eyes:** Causes eye irritation.**Skin:** Possible absorption through skin. Prolonged exposure de-fats skin producing flaky cracking dermatitis**Inhalation:** Harmful if inhaled. May cause nausea, dizziness, hallucinations, headache, and loss of coordination.**Ingestion:** Harmful if swallowed. Burning in mouth, stomach. May cause headache, dizziness, nausea, vomiting, and abdominal pain. May cause central nervous system depression.**Chronic:** No effects known.

Section 4: First Aid Measure

Eyes: Remove contact lenses. Flush with water or saline. Get medical aid.**Skin:** Wash skin with soap and water. Remove contaminated clothing. Get medical aid if symptoms persist.**Inhalation:** Immediately remove from exposure to fresh air.**Ingestion:** Do not induce vomiting. Keep person warm. Get medical aid.

Section 5: Fire Fighting Measures

Autoignition Temperature:	272°C	Flash Point:	15°C	LEL / UEL:	1 / 7
Extinguishing Media:	Use water spray, dry chemical, carbon dioxide, or chemical foam.				
General Information:	Vapor is heavier than air and may travel along the ground or may be moved by ventilation and ignited.				

Section 6: Accidental Release Measures

Spill Procedure:	Remove all sources of ignition. Provide adequate ventilation. Wear appropriate personal protection. Sprinkle absorbent compound onto spill, then sweep into a plastic or metal container. Wipe up further residue with paper towel and place in container. Wash spill area with soap and water.
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Section 7: Handling and Storage

Handling:	Wash thoroughly after handling. Avoid contact with eyes, skin, and clothing. Do not ingest or inhale. Do not expose container to heat or flame.
Storage:	Keep away from sources of ignition. Store in a cool, dry, well-ventilated area, away from incompatible substances. Keep from freezing.

Section 8: Exposure Controls

Routes of entry:	Eyes, ingestion, inhalation, and skin.
Ventilation:	Use adequate general or local exhaust ventilation to keep airborne concentrations below exposure limits.
Personal Protection:	Wear appropriate protective eyeglasses or chemical safety goggles. Wear appropriate protective clothing to prevent skin contact. Use a NIOSH approved respirator when necessary.

Section 9: Physical and Chemical Properties

Physical State:	Red Liquid	Odor:	N/e	Solubility:	Insoluble	Evaporation Rate:	N/a		
Boiling Point:	N/a	Specific Gravity:	1.06	Vapor Pressure:	1 PSI @20°C	Vapor Density:	N/a	pH:	N/e

Section 10: Stability and Reactivity

Stability:	Stable at normal temperatures and pressures.
Conditions to avoid:	Temperatures over 40°C, ignition sources, strong oxidizing agents and incompatible substances.
Incompatibilities:	Strong acids, bases, oxidizing agents, sodium, barium, and aluminum.
Polymerization:	Will not occur.
Decomposition:	Carbon monoxide, carbon dioxide, and water. Toxic vapors possible due to incomplete combustion.

Section 11: Toxicological Information

Sensitization: (effects of repeated exposure)	Prolonged or repeated skin contact may cause dermatitis.
Carcinogenicity: (risk of cancer)	No

Teratogenicity: (risk of malformation in an unborn fetus) No

Reproductive Toxicity: (risk of sterility) This product contains xylene, a known embryo toxin. Pregnant women must avoid all contact with this product.

Mutagenicity: (risk of heritable genetic effects) No

Lethal Exposure Concentrations:	Ingestion (LD50): 4300 mg/kg (rat)	Inhalation (LC50): 5000 ppm/4h	Skin (LD50): N/e
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Section 12: Ecological Information

General Information: Avoid runoff into storms and sewers, which lead into waterways. Water runoff can cause environmental damage.

Environmental Impact Data: (percentage by weight)

CFC: 0	HFC:	Cl.Solv: 0	VOC: 65	HCFC: 0	ODP: 0
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Section 13: Disposal Information

General Information: Dispose of in accordance with all local, provincial, state, and federal regulations. Water runoff can cause environmental damage.

Section 14: Transportation Information

Ground: (All sizes 4 liters or less)

Consumer Commodity / ORM-D.

Air:

Shipper must be trained and certified. Refer to IATA regulations, UN# 1263, packing groups 3.

Sea:

Shipper must be trained and certified. Refer to IMDG regulations. Limited Quantity, UN# 1263, Paint.

Section 15: Regulatory Information

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by the Controlled Products Regulations.

SARA (Superfund Amendments and Reauthorization Act of 1986, USA, 40 CFR 372.4)

This Product contains Ethyl Benzene CAS#100-41-4 (<6%) and Xylene CAS#1330-20-7(<45%) toxic chemicals subject to the reporting requirements.

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

This product contains Ethyl Benzene CAS#100-41-4 (<6%) and Xylene CAS#1330-20-7(<45%) chemicals 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.

CAA (Clean Air Act, USA)

This product does not contain any class 1-ozone depletors.

This product does not contain any class 2-ozone depletors.

This product does not contain any chemicals listed as hazardous air pollutants.

California Proposition 65 (Chemicals know to cause cancer or reproductive toxicity, May 1, 1997 revision, USA)

This product contains a chemical known to the state of California to cause birth defects or other reproductive harm.