

MATERIAL SAFETY DATA SHEET

Z.L.N. 100

Section 1: PRODUCT AND COMPANY IDENTIFICATION

Product Name: Z.L.N. 100
Product Use: Electrical contact aid.
Manufacturer/Supplier: Hubbell Power Systems
210 North Allen Street
Centralia, MO
65240
Phone Number: (573) 682-8465
Emergency Phone: (573) 682-8465
Date of Preparation: March 16, 2011

Section 2: HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

WARNING

MAY CAUSE EYE IRRITATION. MAY CAUSE SKIN IRRITATION.

Potential Health Effects: See Section 11 for more information.

Likely Routes of Exposure: Skin contact, eye contact, and ingestion.

Eye: May cause eye irritation. Metal grit can scratch eyes.
Skin: May cause skin irritation. May cause sensitisation by skin contact.
Ingestion: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.
Inhalation: Not a normal route of exposure.

Chronic Effects: Prolonged or repeated contact may dry skin and cause irritation.

Signs and Symptoms: Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

Medical Conditions Aggravated By Exposure: Asthma. Allergies.

Target Organs: Skin, eyes and gastrointestinal tract.

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

Potential Environmental Effects: May cause long-term adverse effects in the aquatic environment. See Section 12 for more information.

Section 3: COMPOSITION / INFORMATION ON INGREDIENTS

Ingredient	CAS #	Wt. %
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	60 - 100
Aluminum oxide	1344-28-1	10 - 30
Nickel	7440-02-0	1 - 5
Aluminum, elemental	7429-90-5	1 - 5

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Section 4: FIRST AID MEASURES

- Eye Contact:** In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Contains abrasive particles. Consult a physician.
- Skin Contact:** In case of contact, immediately flush skin with plenty of water. Call a physician if irritation develops and persists.
- Inhalation:** If breathed in, move person into fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
- Ingestion:** If swallowed, do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person.
- General Advice:** In case of accident or if you feel unwell, seek medical advice immediately (show the label or MSDS where possible).
- Note to Physicians:** Symptoms may not appear immediately.

Section 5: FIRE FIGHTING MEASURES

- Flammability:** Not flammable by WHMIS/OSHA criteria.
- Means of Extinction:**
- Suitable Extinguishing Media:** Carbon dioxide and dry chemical. Foam and water may cause frothing.
- Unsuitable Extinguishing Media:** Not available.
- Products of Combustion:** May include, and are not limited to: oxides of carbon.
- Explosion Data:**
- Sensitivity to Mechanical Impact:** Not available.
- Sensitivity to Static Discharge:** Not available.
- Protection of Firefighters:** Keep upwind of fire. Wear full fire fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

Section 6: ACCIDENTAL RELEASE MEASURES

- Personal Precautions:** Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.
- Environmental Precautions:** Keep out of drains, sewers, ditches, and waterways. Minimize use of water to prevent environmental contamination.
- Methods for Containment:** Contain and/or absorb spill with inert material (e.g. sand, vermiculite), then place in a suitable container. Do not flush to sewer or allow to enter waterways. Use appropriate Personal Protective Equipment (PPE).
- Methods for Clean-Up:** Scoop up material and place in a disposal container. Spills of this material are a slipping hazard.
- Other Information:** Not available.

Section 7: HANDLING AND STORAGE

- Handling:**
Avoid contact with skin and eyes. Do not swallow. Use only in well-ventilated areas. Handle and open container with care. When using do not eat or drink. Wash hands before eating, drinking, or smoking.

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Storage:

Keep out of the reach of children. Keep container tightly closed and dry. Store in a cool place.

Section 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines

Ingredient	Exposure Limits	
	OSHA-PEL	ACGIH-TLV
Distillates (petroleum), hydrotreated heavy naphthenic	5 mg/m ³ (mist) 15 mg/m ³ (total) TWA;	5 mg/m ³ (mist)
Aluminum oxide	5 mg/m ³ (resp)	10 mg/m ³
Nickel	1 mg/m ³	1.5 mg/m ³
Aluminum, elemental	5 mg/m ³	1 mg/m ³

Engineering Controls: Use ventilation adequate to keep exposures (airborne levels of dust, fume, vapor, etc.) below recommended exposure limits.

Personal Protective Equipment:

Eye/Face Protection: Wear eye/face protection.

Hand Protection: Wear suitable gloves.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: Not applicable under normal conditions of use. Use only in well-ventilated areas. In case of insufficient ventilation, wear suitable respiratory equipment.

General Hygiene Considerations: Handle according to established industrial hygiene and safety practices.

Section 9: PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Viscous oil.
Color:	Gray-brown.
Odour:	Mild oil-like.
Odour Threshold:	Not available.
Physical State:	Liquid.
pH:	Not available.
Viscosity:	> 1 (Air = 1)
Freezing Point:	Not available.
Boiling Point:	Not available.
Flash Point:	~ 232 °C (~ 449.6 °F)
Evaporation Rate:	< 1 (Water = 1)
Lower Flammability Limit:	Not available.
Upper Flammability Limit:	Not available.
Vapor Pressure:	Not available.
Vapor Density:	> 1 (Air = 1)
Specific Gravity:	1.08
Solubility in Water:	Negligible.

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Coefficient of Water/Oil Distribution: Not available.
Auto-ignition Temperature: ~ 260 °C (~ 500 °F)
Percent Volatile, wt. %: Not available.
VOC content, wt. %: Not available.

Section 10: STABILITY AND REACTIVITY

Stability: Stable under normal storage conditions.
Conditions of Reactivity: Heat. Incompatible materials.
Incompatible Materials: Strong acids. Strong alkalis. Oxidizers.
Hazardous Decomposition Products: May include, and are not limited to: oxides of carbon.
Possibility of Hazardous Reactions: No dangerous reaction known under conditions of normal use.

Section 11: TOXICOLOGY INFORMATION

EFFECTS OF ACUTE EXPOSURE

Component Analysis

Ingredient	LD ₅₀ (oral)	LC ₅₀
Distillates (petroleum), hydrotreated heavy naphthenic	>5000 mg/kg, rat	2.18 mg/L 4hr, rat
Aluminum oxide	> 5000 mg/kg, rat	Not available.
Nickel	> 9000 mg/kg, rat	Not available.
Aluminum, elemental	Not available.	Not available.

Eye: May cause eye irritation. Metal grit can scratch eyes. Symptoms may include discomfort or pain, excess blinking and tear production, with marked redness and swelling of the conjunctiva.

Skin: May cause skin irritation. May cause sensitisation by skin contact. Symptoms may include redness, edema, drying, defatting and cracking of the skin.

Ingestion: May be harmful if swallowed. May cause stomach distress, nausea or vomiting.

Inhalation: Not a normal route of exposure.

EFFECTS OF CHRONIC EXPOSURE

Target Organs: Not available.

Chronic Effects: Not hazardous by WHMIS/OSHA criteria.

Carcinogenicity: Hazardous by WHMIS/OSHA criteria.

Ingredient	Chemical Listed as Carcinogen or Potential Carcinogen *
Distillates (petroleum), hydrotreated heavy naphthenic	Not listed.
Aluminum oxide	Not listed.
Nickel	G-A5 (Ni0), I-2B, N-2, CP65
Aluminum, elemental	G-A4

* See Section 15 for more information.

Mutagenicity: Not hazardous by WHMIS/OSHA criteria.

Reproductive Effects: Not hazardous by WHMIS/OSHA criteria.

Developmental Effects:

Teratogenicity: Not hazardous by WHMIS/OSHA criteria.

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Embryotoxicity: Not hazardous by WHMIS/OSHA criteria.

Respiratory Sensitization: Not hazardous by WHMIS/OSHA criteria.

Skin Sensitization: Hazardous by WHMIS/OSHA criteria.

Toxicologically Synergistic Materials: Not available.

Section 12: ECOLOGICAL INFORMATION

Ecotoxicity: May cause long-term adverse effects in the aquatic environment.

Persistence / Degradability: Not available.

Bioaccumulation / Accumulation: Not available.

Mobility in Environment: Not available.

Section 13: DISPOSAL CONSIDERATIONS

Disposal Instructions:

This material must be disposed of in accordance with all local, state, provincial, and federal regulations.

Section 14: TRANSPORTATION INFORMATION

DOT Classification

Not regulated

TDG Classification

Not regulated

Section 15: REGULATORY INFORMATION

Federal Regulations

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

US: MSDS prepared pursuant to the Hazard Communication Standard (CFR29 1910.1200).

SARA Title III

Ingredient

Ingredient	Section 302 (EHS) TPQ (lbs.)	Section 304 EHS RQ (lbs.)	CERCLA RQ (lbs.)	Section 313
Distillates (petroleum), hydrotreated heavy naphthenic	Not listed.	Not listed.	Not listed.	Not listed.
Aluminum oxide	Not listed.	Not listed.	Not listed.	313
Nickel	Not listed.	Not listed.	100	313
Aluminum, elemental	Not listed.	Not listed.	Not listed.	313

State Regulations

California Proposition 65:

This product contains a chemical known to the state of California to cause cancer.

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Global Inventories

Ingredient

Distillates (petroleum), hydrotreated heavy naphthenic
Aluminum oxide
Nickel
Aluminum, elemental

Canada DSL/NDSL	USA TSCA
DSL	Yes.
DSL	Yes.
DSL	Yes.
DSL	Yes.

HMIS - Hazardous Materials Identification System

Health - 1* Flammability - 1 Physical Hazard - 0 PPE – B

NFPA - National Fire Protection Association:

Health - 1 Fire - 1 Reactivity - 0

Hazard Rating: 0 = minimal, 1 = slight, 2 = moderate, 3 = severe, 4 = extreme

WHMIS Classification(s):

Class D2A - Carcinogenicity
Class D2B - Skin Sensitization
Class D2B - Skin/Eye Irritant

WHMIS Hazard Symbols:



SOURCE AGENCY CARCINOGEN CLASSIFICATIONS:

OSHA (O) Occupational Safety and Health Administration.

ACGIH (G) American Conference of Governmental Industrial Hygienists.

A1 - Confirmed human carcinogen.
A2 - Suspected human carcinogen.
A3 - Animal carcinogen.
A4 - Not classifiable as a human carcinogen.
A5 - Not suspected as a human carcinogen.

IARC (I) International Agency for Research on Cancer.

1 - The agent (mixture) is carcinogenic to humans.
2A - The agent (mixture) is probably carcinogenic to humans; there is limited evidence of carcinogenicity in humans and sufficient evidence of carcinogenicity in experimental animals.
2B - The agent (mixture) is possibly carcinogenic to humans; there is limited evidence of carcinogenicity in humans in the absence of sufficient evidence of carcinogenicity in experimental animals.
3 - The agent (mixture, exposure circumstance) is not classifiable as to its carcinogenicity to humans.
4 - The agent (mixture, exposure circumstance) is probably not carcinogenic to humans.

NTP (N) National Toxicology Program.

1 - Known to be carcinogens.
2 - Reasonably anticipated to be carcinogens.

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Section 16: OTHER INFORMATION

Disclaimer:

The information contained in this document applies to this specific material as supplied. It may not be valid for this material if it is used in combination with any other materials. It is the user's responsibility to satisfy oneself as to the suitability and completeness of this information for the user's own particular use.

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