

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

Product name: **LORD 2232 SILVER CONDUCTIVE COATING**  
Product Use/Class: **Conductive Coating**

LORD Corporation  
111 LORD Drive  
Cary, NC 27511-7923 USA

Telephone: 814 868-3180  
Non-Transportation Emergency: 814 763-2345  
Chemtrec 24 Hr Transportation Emergency No.  
800 424-9300 (Outside Continental U.S. 703 527-3887)

**EFFECTIVE DATE:** 07/13/2021

**2. HAZARDS IDENTIFICATION****GHS CLASSIFICATION:**

Flammable liquids Category 3  
Acute toxicity Inhalation - Dust and Mist Category 4 - 19.9% of the mixture consists of ingredient(s) of unknown toxicity.  
Serious eye damage/eye irritation Category 2A  
Skin sensitization Category 1  
Reproductive toxicity Category 2  
Specific target organ systemic toxicity (single exposure) Category 3  
Specific target organ systemic toxicity (single exposure) Category 1 Central nervous system, Hematopoietic System, Kidney, Respiratory system  
Specific target organ systemic toxicity (repeated exposure) Category 2 Hematopoietic System, Kidney  
Specific target organ systemic toxicity (repeated exposure) Category 1 Respiratory system  
Specific target organ systemic toxicity (repeated exposure) Category 1 Eyes, optic nerve  
Aspiration hazard Category 1  
Hazardous to the aquatic environment - acute hazard Category 3  
Hazardous to the aquatic environment - chronic hazard Category 3

**GHS LABEL ELEMENTS:****Symbol(s)****Signal Word**

DANGER

**Hazard Statements**

Flammable liquid and vapor.  
Harmful if inhaled.  
Causes serious eye irritation.  
May cause an allergic skin reaction.  
Suspected of damaging fertility or the unborn child.  
May cause drowsiness or dizziness.  
May cause respiratory irritation.  
Causes damage to organs.(Central nervous system, Hematopoietic System, Kidney, Respiratory system)  
May cause damage to organs through prolonged or repeated exposure.(Hematopoietic System, Kidney)  
Causes damage to organs through prolonged or repeated exposure if inhaled.(Respiratory system)  
Causes damage to organs through prolonged or repeated exposure.(Eyes, optic nerve)  
May be fatal if swallowed and enters airways.

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Harmful to aquatic life.  
Harmful to aquatic life with long lasting effects.

## Precautionary Statements

### Prevention

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.  
Ground/Bond container and receiving equipment.  
Use explosion-proof electrical/ventilating/lighting equipment.  
Use only non-sparking tools.  
Take precautionary measures against static discharge.  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Use personal protective equipment as required.  
Do not breathe dust/fume/gas/mist/vapors/spray.  
Wash thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
Contaminated work clothing should not be allowed out of the workplace.  
Avoid release to the environment.

### Response

In case of fire: refer to section 5 of SDS for extinguishing media.  
Call a POISON CENTER or doctor/physician if you feel unwell.  
IF exposed: Call a POISON CENTER or doctor/physician.  
Specific treatment (see supplemental first aid instructions on this label).  
IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.  
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
If skin irritation or rash occurs: Get medical advice/attention.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.  
Continue rinsing.  
IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.  
Do NOT induce vomiting.  
Wash contaminated clothing before reuse.

### Storage

Store in a well-ventilated place. Keep cool.  
Store in a well-ventilated place. Keep container tightly closed.  
Store locked up.

### Disposal:

Dispose of contents/container in accordance with waste/disposal laws and regulations of your country or particular locality.

### Other Hazards:

**This product contains component(s) which have the following warnings; however based on the GHS classification criteria of your country or locale, the product mixture may be outside the respective category(s).**

**Acute:** Dermal absorption possible. Vapor harmful; may affect the brain or nervous system causing dizziness, headache or nausea. Hot vapor can cause nose and throat irritation. Possible irritation of the respiratory system can occur causing a variety of symptoms such as dryness of the throat, tightness of the chest, and shortness of breath. May cause central nervous system depression characterized by the following progressive steps: headache, dizziness, staggering gait, confusion, unconsciousness or coma. May cause allergic respiratory reaction. May cause skin irritation. May be harmful if swallowed. Ingestion is not an expected route of entry in industrial or commercial uses.  
**Chronic:** May cause liver damage. Prolonged or repeated contact may result in dermatitis. Repeated exposure to smoke or fumes generated by heating this product may lead to respiratory sensitization (asthma) in susceptible individuals. This product contains silver; localized argyria may occur from silver particles imbedded in skin during handling. ACGIH considers the glycol ether solvent in this product to be an A3 carcinogen (confirmed animal carcinogen with unknown relevance in humans). Repeated exposure to n-butyl acetate caused fetotoxic and developmental effects in laboratory animals.

<b>3. COMPOSITION/INFORMATION ON INGREDIENTS</b>
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Chemical Name	CAS Number	Range
Silver	7440-22-4	40 - 45 %
Glycol ether solvent	PROPRIETARY	20 - 25 %
N-Butyl acetate	123-86-4	15 - 20 %
1-Methoxy-2-propyl acetate	108-65-6	10 - 15 %
Rosin, polymerized	PROPRIETARY	1 - 5 %
Amyl acetate	628-63-7	1 - 5 %

Any "PROPRIETARY" component(s) in the above table is considered trade secret, thus the specific chemical and its exact concentration is being withheld.

#### 4. FIRST AID MEASURES

**FIRST AID - EYE CONTACT:** Flush eyes immediately with large amount of water for at least 15 minutes holding eyelids open while flushing. Get prompt medical attention.

**FIRST AID - SKIN CONTACT:** Flush contaminated skin with large amounts of water while removing contaminated clothing. Wash affected skin areas with soap and water. Get medical attention if symptoms occur.

**FIRST AID - INHALATION:** Move person to fresh air. Restore and support continued breathing. If breathing is difficult, give oxygen. Get immediate medical attention.

**FIRST AID - INGESTION:** If swallowed, do not induce vomiting. Call a physician or poison control center immediately for further instructions. Never give anything by mouth if victim is rapidly losing consciousness, unconscious or convulsing.

#### 5. FIRE-FIGHTING MEASURES

**SUITABLE EXTINGUISHING MEDIA:** Carbon Dioxide, Dry Chemical, Foam, Water Fog

**UNSUITABLE EXTINGUISHING MEDIA:** Not determined for this product.

**SPECIFIC HAZARDS POSSIBLY ARISING FROM THE CHEMICAL:** Combustible liquid and vapor. During a fire, irritating and/or toxic gases and particulate may be generated by thermal decomposition or combustion. Keep containers tightly closed. Isolate from heat, electrical equipment, sparks, open flame, and other sources of ignition. Closed containers may rupture when exposed to extreme heat. Use water spray to keep fire exposed containers cool.

**SPECIAL PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS:** Wear full firefighting protective clothing, including self-contained breathing apparatus (SCBA). Water spray may be ineffective. If water is used, fog nozzles are preferable.

#### 6. ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES:** Remove all sources of ignition (flame, hot surfaces, and electrical, static or frictional sparks). Avoid contact. Avoid breathing vapors. Use self-contained breathing equipment.

**ENVIRONMENTAL PRECAUTIONS:** Do not contaminate bodies of water, waterways, or ditches, with chemical or used container.

**METHODS AND MATERIALS FOR CONTAINMENT AND CLEANUP:** Keep non-essential personnel a safe distance away from the spill area. Notify appropriate authorities if necessary. Avoid contact. Contain and remove with inert absorbent material and non-sparking tools. Before attempting cleanup, refer to hazard caution information in other sections of the SDS form.

#### 7. HANDLING AND STORAGE

**HANDLING:** Keep closure tight and container upright to prevent leakage. Avoid skin and eye contact. Wash thoroughly after handling. Avoid breathing of vapor or spray mists. Do not handle until all safety precautions have been read and

understood. Empty containers should not be re-used. Use with adequate ventilation. Because empty containers may retain product residue and flammable vapors, keep away from heat, sparks and flame; do not cut, puncture or weld on or near the empty container. Do not smoke where this product is used or stored.

**STORAGE:** Do not store or use near heat, sparks, or open flame. Store only in well-ventilated areas. Do not puncture, drag, or slide container. Keep container closed when not in use. Refer to OSHA 29CFR Part 1910.106 "Flammable and Combustible Liquids" for specific storage requirements.

**INCOMPATIBILITY:** Strong acids, bases, and strong oxidizers.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### COMPONENT EXPOSURE LIMIT

Chemical Name	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING	Skin
Silver	0.1 mg/m3	N.E.	0.01 mg/m3	N.E.	N.A.
Glycol ether solvent	20 ppm	N.E.	N.E.	N.E.	N.A.
N-Butyl acetate	150 ppm	200 ppm	710 mg/m3 150 ppm	N.E.	N.A.
1-Methoxy-2-propyl acetate	N.E.	N.E.	N.E.	N.E.	N.A.
Rosin, polymerized	N.E.	N.E.	N.E.	N.E.	N.A.
Amyl acetate	50 ppm	100 ppm	525 mg/m3 100 ppm	N.E.	N.A.

N.A. - Not Applicable, N.E. - Not Established, S - Skin Designation

**Engineering controls:** Sufficient ventilation in pattern and volume should be provided in order to maintain air contaminant levels below recommended exposure limits. Caution: Solvent vapors are heavier than air and collect in lower levels of the work area.

### PERSONAL PROTECTION MEASURES/EQUIPMENT:

**RESPIRATORY PROTECTION:** Use a NIOSH approved chemical/mechanical filter respirator designed to remove a combination of particulates and organic vapor if occupational limits are exceeded. For emergency situations, confined space use, or other conditions where exposure limits may be greatly exceeded, use an approved air-supplied respirator. For respirator use observe OSHA regulations (29CFR 1910.134) or use in accordance with applicable laws and regulations of your country or particular locality.

**SKIN PROTECTION:** Use neoprene, nitrile, or rubber gloves to prevent skin contact.

**EYE PROTECTION:** Use safety eyewear including safety glasses with side shields and chemical goggles where splashing may occur.

**OTHER PROTECTIVE EQUIPMENT:** Use disposable or impervious clothing if work clothing contamination is likely. Remove and wash contaminated clothing before reuse.

**HYGIENIC PRACTICES:** Wash hands before eating, smoking, or using toilet facility. Do not smoke in any chemical handling or storage area. Food or beverages should not be consumed anywhere this product is handled or stored. Wash thoroughly after handling.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Typical values, not to be used for specification purposes.

<b>ODOR:</b>	Organic	<b>VAPOR PRESSURE:</b>	N.D.
<b>APPEARANCE:</b>	Silver	<b>VAPOR DENSITY:</b>	Heavier than Air
<b>PHYSICAL STATE:</b>	Liquid	<b>LOWER EXPLOSIVE LIMIT:</b>	0.5 %(V)
<b>FLASH POINT:</b>	101 °F, 38 °C	<b>UPPER EXPLOSIVE LIMIT:</b>	13.1 %(V)
	Setaflash Closed Cup	<b>EVAPORATION RATE:</b>	Slower than n-butyl-acetate
<b>BOILING RANGE:</b>	126 - 195 °C	<b>DENSITY:</b>	1.53 g/cm3 (12.73 lb/gal)
<b>AUTOIGNITION TEMPERATURE:</b>	N.D.		

DECOMPOSITION TEMPERATURE:	N.D.	VISCOSITY, DYNAMIC:	N.D.
ODOR THRESHOLD:	N.D.	VISCOSITY, KINEMATIC:	N.D.
SOLUBILITY IN H <sub>2</sub> O:	Insoluble	VOLATILE BY WEIGHT:	51.20 %
pH:	N.A.	VOLATILE BY VOLUME:	84.69 %
FREEZE POINT:	N.D.	VOC CALCULATED:	6.52 lb/gal, 781 g/l
COEFFICIENT OF WATER/OIL DISTRIBUTION:	N.D.		

**LEGEND:** N.A. - Not Applicable, N.E. - Not Established, N.D. - Not Determined

## 10. STABILITY AND REACTIVITY

**HAZARDOUS POLYMERIZATION:** Hazardous polymerization will not occur under normal conditions.

**STABILITY:** Product is stable under normal storage conditions.

**CONDITIONS TO AVOID:** High temperatures. Sources of ignition.

**INCOMPATIBILITY:** Strong acids, bases, and strong oxidizers.

**HAZARDOUS DECOMPOSITION PRODUCTS:** Carbon monoxide, carbon dioxide, Silver fume

## 11. TOXICOLOGICAL INFORMATION

**EXPOSURE PATH:** Refer to section 2 of this SDS.

**SYMPTOMS:** Refer to section 2 of this SDS.

### TOXICITY MEASURES:

Chemical Name	LD50/LC50
Silver	Oral LD50: Rat > 5,000 mg/kg Dermal LD50: Rat > 2,000 mg/kg GHS LC50 (vapour): rat > 55 mg/l /4 h
Glycol ether solvent	Oral LD50: Rat 2,400 mg/kg Dermal LD50: Rabbit 1,500 mg/kg Inhalation LC50: Rat >400 ppm/4 h
N-Butyl acetate	Oral LD50: Rat 10,768 mg/kg Dermal LD50: Rabbit > 17,600 mg/kg Inhalation LC50: Rat 390 ppm/4 h Inhalation LC50: rat 22 mg/l /4 h
1-Methoxy-2-propyl acetate	Oral LD50: Rat 8,532 mg/kg Dermal LD50: Rabbit > 5 g/kg
Rosin, polymerized	N.D.
Amyl acetate	Oral LD50: Rat > 1,600 mg/kg Oral LD50: Rat 6,500 mg/kg

**Germ cell mutagenicity:** No classification proposed

**Carcinogenicity:** No classification proposed

**Reproductive toxicity:** Category 2 - Suspected of damaging fertility or the unborn child.

Components contributing to classification: 2-Butoxyethanol.

## 12. ECOLOGICAL INFORMATION

### ECOTOXICITY:

Chemical Name	Ecotoxicity
Silver	N.D.
Glycol ether solvent	<u>Fish:</u> Oncorhynchus mykiss 20 - 40 mg/l/96 h <u>Invertebrates:</u> Daphnia magna 37 mg/l/48 h <u>Plants:</u> Desmodium subspicatus > 500 mg/l/72 h

N-Butyl acetate	<u>Fish:</u> Lepomis macrochirus 100 mg/196 h Static Pimephales promelas 17 - 19 mg/196 h flow-through <u>Plants:</u> Desmodemus subspicatus 674.7 mg/172 h
1-Methoxy-2-propyl acetate	<u>Fish:</u> Pimephales promelas 161 mg/196 h Static <u>Invertebrates:</u> Daphnia magna > 500 mg/148 h
Rosin, polymerized	N.D.
Amyl acetate	<u>Fish:</u> Lepomis macrochirus 650 mg/196 h Static

**PERSISTENCE AND DEGRADABILITY:** Not determined for this product.

**BIOACCUMULATIVE:** Not determined for this product.

**MOBILITY IN SOIL:** Not determined for this product.

**OTHER ADVERSE EFFECTS:** Not determined for this product.

### 13. DISPOSAL CONSIDERATIONS

**DISPOSAL METHOD:** Disposal should be done in accordance with Federal (40CFR Part 261), state and local environmental control regulations. If waste is determined to be hazardous, use licensed hazardous waste transporter and disposal facility.

### 14. TRANSPORT INFORMATION

#### US DOT Road

**Proper Shipping Name:** Paint  
**Hazard Class:** 3  
**SECONDARY HAZARD:** None  
**UN/NA Number:** 1263  
**Packing Group:** III  
**Emergency Response Guide Number:** 128

#### IATA Cargo

**PROPER SHIPPING NAME:** Paint  
**Hazard Class:** 3  
**HAZARD CLASS:** None  
**UN NUMBER:** 1263  
**PACKING GROUP:** III  
**EMS:** 3L

#### IMDG

**PROPER SHIPPING NAME:** Paint  
**Hazard Class:** 3  
**HAZARD CLASS:** None  
**UN NUMBER:** 1263  
**PACKING GROUP:** III  
**EMS:** F-E

The listed transportation classification applies to non-bulk shipments. It does not address regulatory variations due to changes in package size, mode of shipment or other regulatory descriptors. For the most accurate shipping information, refer to your transportation/compliance department.

### 15. REGULATORY INFORMATION

**U.S. FEDERAL REGULATIONS: AS FOLLOWS:**

**SARA SECTION 313**

This product contains the following substances subject to the reporting requirements of Section 313 of Title III of the Superfund Amendment and Reauthorization Act of 1986 and 40 CFR part 372.:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Weight % Less Than</u>
Silver	7440-22-4	45.0 %
Glycol ether solvent	PROPRIETARY	25.0 %

**TOXIC SUBSTANCES CONTROL ACT:****INVENTORY STATUS**

The chemical substances in this product are on the active TSCA Section 8 Inventory or exempt.

**EXPORT NOTIFICATION**

This product contains the following chemical substances subject to the reporting requirements of TSCA 12(B) if exported from the United States:

None

<b>16. OTHER INFORMATION</b>
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Under HazCom 2012 it is optional to continue using the HMIS rating system. It is important to ensure employees have been trained to recognize the different numeric ratings associated with the HazCom 2012 and HMIS schemes.

**HMIS RATINGS -** HEALTH: 2\* FLAMMABILITY: 2 PHYSICAL HAZARD: 0

\* - Indicates a chronic hazard; see Section 2

**Revision:** Section 2, Section 11

**Effective Date:** 07/13/2021

<b>DISCLAIMER</b>
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The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by use of this material. It is the responsibility of the user to comply with all applicable federal, state and local laws and regulations.