



MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: **LORD PCD40394HV**
Product Use/Class: **DIELECTRIC PASTE**

LORD CORPORATION
111 LORD DRIVE
CARY, NC 27511-7923

TRANSPORTATION EMERGENCY:
CHEMTREC 24 HR EMERGENCY NO.
800 424-9300
(Outside Continental U.S. 703 527-3887)

INFORMATION TELEPHONE:
814 868-0924

NON-TRANSPORTATION EMERGENCY:
814 763-2345

EFFECTIVE DATE: 07/20/2011

2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Weight % Less Than</u>	<u>ACGIH TLV- TWA</u>	<u>ACGIH TLV- STEL</u>	<u>OSHA PEL- TWA</u>	<u>OSHA PEL- CEILING</u>	<u>Skin</u>
Metal compound	PROPRIETARY	35.0 %	0.5 mg/m3	N.E.	0.5 mg/m3	N.E.	N.A.
Glycol ether	PROPRIETARY	20.0 %	N.E.	N.E.	N.E.	N.E.	N.A.
Titanium dioxide	13463-67-7	5.0 %	10 mg/m3	N.E.	15 mg/m3	N.E.	N.A.
Manganese dioxide	1313-13-9	5.0 %	0.2 mg/m3	N.E.	N.E.	5 mg/m3	N.A.
Formaldehyde	50-00-0	1.0 %	0.3 ppmCeiling	N.E.	0.75 ppm	N.E.	N.A.

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

3. HAZARDS IDENTIFICATION

***** EMERGENCY OVERVIEW ***:** Black Paste, with Characteristic odor. Harmful if inhaled or swallowed. Harmful if absorbed through skin. May cause skin and eye irritation. May cause respiratory tract irritation.

EFFECTS OF OVEREXPOSURE - EYE CONTACT: Causes eye irritation.

EFFECTS OF OVEREXPOSURE - SKIN CONTACT: May be absorbed through the skin in harmful amounts. Causes skin irritation. May cause skin sensitization. May cause dermatitis.

EFFECTS OF OVEREXPOSURE - INHALATION: 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. Prolonged or repeated overexposure to mist or vapor generated at high temperatures may result in the inhalation of harmful amounts of material. Inhalation of manganese fumes may cause headache, nausea, vomiting, diarrhea, chills, fever and aching muscles. Exposure to formaldehyde may cause dry, sore throat; itching and burning of the nose; nasal congestion; cough; chest tightness; and wheezing. May cause respiratory sensitization.

EFFECTS OF OVEREXPOSURE - INGESTION: Harmful if swallowed. Ingestion is not an expected route of entry in industrial or commercial uses.

EFFECTS OF OVEREXPOSURE - CHRONIC HAZARDS: Repeated or prolonged solvent overexposure may result in permanent central nervous system damage. Prolonged or repeated contact may result in dermatitis. Formaldehyde entrapped in this product may be released during heating and mixing. Formaldehyde has been identified

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by NTP and IARC as a known human carcinogen (IARC 1), and by OSHA as a potential human carcinogen. Workplace exposure to formaldehyde is regulated by OSHA Standard 29 CFR 1910.1048. May cause liver or kidney damage. This product contains methylpolysiloxanes which can generate formaldehyde at approximately 300 degrees F (150 C) and above, in atmospheres which contain oxygen. Formaldehyde is a skin and respiratory sensitizer, eye and throat irritant, acute toxicant, and known cancer hazard. Workplace exposure to formaldehyde is regulated by OSHA Standard 29 CFR 1910.1048. IARC has designated titanium dioxide (TiO₂) as Group 2B – possibly carcinogenic to humans in dust form. However, a number of long term animal studies and human epidemiology studies evaluating TiO₂ and workplace exposure show insufficient evidence for carcinogenic affects. EPA, NTP and OSHA do not designate TiO₂ as a carcinogen and ACGIH designates TiO₂ as A4 - not classifiable as a human carcinogen. TiO₂ is not present in this product as a dust and no airborne exposure is expected during application.

PRIMARY ROUTE(S) OF ENTRY: Skin Contact, Inhalation, Ingestion, Eye Contact

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. Give victim one or two glasses of water or milk. 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

FLASH POINT: 201 °F, 93 °C
Pensky-Martens Closed Cup

LOWER EXPLOSIVE LIMIT (%): Not Applicable
UPPER EXPLOSIVE LIMIT (%): Not Applicable

AUTOIGNITION TEMPERATURE: N.D.

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

UNUSUAL FIRE AND EXPLOSION HAZARDS: Keep containers tightly closed. Closed containers may rupture when exposed to extreme heat. Use water spray to keep fire exposed containers cool. During a fire, irritating and/or toxic gases and particulate may be generated by thermal decomposition or combustion.

SPECIAL FIREFIGHTING PROCEDURES: 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

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Avoid breathing vapors. Use self-contained breathing equipment. Notify appropriate authorities if necessary. Contain and remove with inert absorbent material. Avoid contact. Keep non-essential personnel away from spill area. Before attempting cleanup, refer to hazard caution information in other sections of the MSDS form.

7. HANDLING AND STORAGE

HANDLING: Keep closure tight and container upright to prevent leakage. Wash thoroughly after handling. Avoid breathing of vapor or spray mists. Use with adequate ventilation.

STORAGE: Store only in well-ventilated areas. Keep container closed when not in use.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS: Sufficient ventilation in pattern and volume should be provided in order to maintain air contaminant levels below recommended exposure limits.

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. Observe OSHA regulations (29CFR 1910.134) for respirator use. Note: If the exposure limit for formaldehyde is exceeded, a formaldehyde-specific, formaldehyde/organic vapor combination, or airline respirator may be required.

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

ODOR:	Characteristic	BOILING RANGE:	100 - 227 °C
APPEARANCE:	Black	VAPOR PRESSURE:	N.D.
PHYSICAL STATE:	Paste	VAPOR DENSITY:	Heavier than Air
ODOR THRESHOLD:	N.D.	EVAPORATION RATE:	Slower than n-butyl-acetate
SOLUBILITY IN H2O:	Insoluble	DENSITY, LB/GL:	15.4 lb/gal
pH:	N.A.	VOLATILE BY WEIGHT:	17.83 %
FREEZE POINT:	N.D.	VOLATILE BY VOLUME:	34.51 %
COEFFICIENT OF WATER/OIL DISTRIBUTION:	N.D.		

(See section 16 for abbreviation legend)

10. STABILITY AND REACTIVITY

CONDITIONS TO AVOID: High temperatures.

INCOMPATIBILITY: Strong acids, bases, and strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide., Formaldehyde.

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

STABILITY: Product is stable under normal storage conditions.

11. TOXICOLOGICAL INFORMATION

PRODUCT LD50	(ORAL)	No Data
	(DERMAL)	No Data
PRODUCT LC50		No Data

12. ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION: No Information

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

This product is NOT REGULATED for non-bulk road shipments. For the most accurate shipping information, refer to your transportation/compliance department regarding changes in package size, mode of shipment or other regulatory descriptors.

15. REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS: AS FOLLOWS -

This product is considered hazardous as defined by 29 CFR 1910.1200 (OSHA HazCom Standard.)

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>
Metal compound	PROPRIETARY	35.0 %
Glycol ether	PROPRIETARY	20.0 %
Manganese dioxide	1313-13-9	5.0 %
Formaldehyde	50-00-0	1.0 %

TOXIC SUBSTANCES CONTROL ACT:

INVENTORY STATUS

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

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

16. OTHER INFORMATION

HMS RATINGS - HEALTH: 2* **FLAMMABILITY:** 1 **PHYSICAL HAZARD:** 0

* - Indicates a chronic hazard; see Section 3

VOLATILE ORGANIC COMPOUNDS

Calculated: 2.71 lb/gal, 324 g/l

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

DISCLAIMER

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.