USA SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: **CHEMLOK 250**
Product Use/Class: **Adhesive**

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: 06/03/2016

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION:

Flammable liquids Category 3
Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 2A
Skin sensitization Category 1
Respiratory sensitization Category 1
Germ cell mutagenicity Category 2
Carcinogenicity Category 1A
Reproductive toxicity Category 1A
Specific target organ systemic toxicity (single exposure) Category 1 Central nervous system, Kidney, Liver, Respiratory system
Specific target organ systemic toxicity (single exposure) Category 2 blood system
Specific target organ systemic toxicity (single exposure) Category 3
Specific target organ systemic toxicity (repeated exposure) Category 2 Ears, Liver, Kidney, blood system
Specific target organ systemic toxicity (repeated exposure) Category 1 Nervous system, Respiratory system, Central nervous system
Hazardous to the aquatic environment - acute hazard Category 2
Hazardous to the aquatic environment - chronic hazard Category 2

GHS LABEL ELEMENTS:

Symbol(s)

Signal Word

DANGER

Hazard Statements

Flammable liquid and vapor.
Causes skin irritation.
Causes serious eye irritation.
May cause an allergic skin reaction.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Suspected of causing genetic defects.
May cause cancer.
May damage fertility or the unborn child.
May cause harm to breast-fed children.
Causes damage to organs.(Central nervous system, Kidney, Liver, Respiratory system)

May cause damage to organs.(blood system)
May cause drowsiness or dizziness.
May cause respiratory irritation.
May cause damage to organs through prolonged or repeated exposure.(Ears, Liver, Kidney, blood system)
Causes damage to organs through prolonged or repeated exposure.(Nervous system, Respiratory system, Central nervous system)
Toxic to aquatic life.
Toxic 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.
In case of inadequate ventilation wear respiratory protection.
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 experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.
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.
Collect spillage.

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: Vapor harmful; may affect the brain or nervous system causing dizziness, headache or nausea. In elevated-temperature applications, product may release vapors that may produce cyanosis in the absence of sufficient ventilation or adequate respiratory protection. 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. Allergic conditions can occur in certain individuals with high sensitivity to isocyanates; this may result in asthma-like symptoms. Animal tests have indicated that respiratory sensitization can result from

skin contact with certain isocyanates. May cause lung damage.Harmful if swallowed. Ingestion is not an expected route of entry in industrial or commercial uses.

Chronic: May cause long-term lung damage. May affect the gastrointestinal system. Prolonged or repeated contact may result in dermatitis. Overexposure to lead in this product can damage the nervous, urinary, gastrointestinal, blood, blood-forming, and reproductive systems. Lead and lead compounds have been classified by IARC as probable human carcinogens (Group 2A), and by NTP as reasonably anticipated human carcinogens. The nitrogen substituted aromatic in this product gave positive results for mutagenicity in an Ames Assay study while two other mutagenicity studies proved negative. Trichloroethylene has been classified by IARC as a human carcinogen (Group 1) and by NTP as a reasonably anticipated human carcinogen. Ethylbenzene has been classified by IARC as a possible human carcinogen (Group 2B) and reported by NTP to show clear evidence for carcinogenicity in animals. IARC has designated carbon black as Group 2B - inadequate evidence for carcinogenicity in humans, but sufficient evidence in experimental animals. In 2006 IARC reaffirmed its 1995 finding that there is "inadequate evidence" from human health studies to assess whether carbon black causes cancer in humans. Further, epidemiological evidence from well-conducted investigations has shown no causative link between carbon black exposure and the risk of malignant or non-malignant respiratory disease in humans. 1,2 butylene oxide has been classified by IARC as a possible human carcinogen (Group 2B) and reported by NTP to show clear evidence for carcinogenicity in animals.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Range
Trichloroethylene	79-01-6	30 - 35 %
Xylene	1330-20-7	30 - 35 %
Ethyl benzene	100-41-4	5 - 10 %
Carbon black	1333-86-4	5 - 10 %
Nitrogen substituted aromatic	PROPRIETARY	5 - 10 %
Aromatic polyisocyanate	PROPRIETARY	1 - 5 %
4,4'-Diphenylmethane diisocyanate	101-68-8	0.1 - 0.9 %
Lead oxide phosphonate	12141-20-7	0.1 - 0.9 %
1,2-Butylene oxide	106-88-7	0.1 - 0.9 %
2,4-Diphenylmethane diisocyanate	5873-54-1	0.1 - 0.9 %

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: Flammable liquid and vapor. 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. During a fire, irritating and/or toxic gases and particulate may be generated by thermal decomposition or combustion.

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. Before attempting cleanup, refer to hazard caution information in other sections of the SDS form. Contain and remove with inert absorbent material and non-sparking tools.

7. HANDLING AND STORAGE

HANDLING: Keep closure tight and container upright to prevent leakage. Ground and bond containers when transferring material. 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. Avoid breathing sanding dust from this product. Avoid using pressurizable equipment which has aluminum or zinc parts; this product contains chlorinated solvents. 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. This product contains inorganic lead; potential lead exposure exists when applying or sanding this product. Use of this product should comply with the OSHA Lead Standard (29 CFR 1910.1025) or where applicable the OSHA Construction Standard for lead (29 CFR 1926.62). Do not smoke where this product is used or stored.

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

INCOMPATIBILITY: Amines, acids, water, hydroxyl, or active hydrogen compounds.; Aluminum, zinc, caustics, halogens.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

COMPONENT EXPOSURE LIMIT

Chemical Name	ACGIH TLV-TWA	ACGIH TLV-STEL	OSHA PEL-TWA	OSHA PEL-CEILING	Skin
Trichloroethylene	10 ppm	25 ppm	100 ppm	200 ppm	N.A.
Xylene	100 ppm	150 ppm	435 mg/m3 100 ppm	N.E.	N.A.
Ethyl benzene	20 ppm	N.E.	435 mg/m3 100 ppm	N.E.	N.A.
Carbon black	3 mg/m3	N.E.	3.5 mg/m3	N.E.	N.A.
Nitrogen substituted aromatic	N.E.	N.E.	N.E.	N.E.	N.A.
Aromatic polyisocyanate	N.E.	N.E.	N.E.	N.E.	N.A.
4,4'-Diphenylmethane diisocyanate	0.005 ppm	N.E.	N.E.	0.2 mg/m3 0.02 ppm	N.A.
Lead oxide phosphonate	0.05 mg/m3	N.E.	0.05 mg/m3	N.E.	N.A.

1,2-Butylene oxide	N.E.	N.E.	N.E.	N.E.	N.A.
2,4-Diphenylmethane diisocyanate	N.E.	N.E.	N.E.	0.2 mg/m3 0.02 ppm	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. Sufficient ventilation (using explosion-proof equipment) should be provided to prevent flammable vapor/air mixtures from accumulating.

PERSONAL PROTECTION MEASURES/EQUIPMENT:

RESPIRATORY PROTECTION: This product contains isocyanates which have poor odor warning properties. If occupational exposure limits are exceeded, a NIOSH approved supplied-air respirator is required. Observe OSHA regulations (29CFR 1910.134) for respirator use.

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.

ODOR:	Solvent	**VAPOR PRESSURE:**	N.D.
APPEARANCE:	Black	**VAPOR DENSITY:**	Heavier than Air
PHYSICAL STATE:	Liquid	**LOWER EXPLOSIVE LIMIT:**	1 %(V)
FLASH POINT:	92 °F, 33 °C Setaflash Closed Cup	**UPPER EXPLOSIVE LIMIT:**	44.8 %(V)
BOILING RANGE:	87 - 141 °C	**EVAPORATION RATE:**	Slower than n-butyl-acetate
AUTOIGNITION TEMPERATURE:	N.D.	**DENSITY:**	1.12 g/cm3 - 9.34 lb/gal
DECOMPOSITION TEMPERATURE:	N.D.	**VISCOSITY, DYNAMIC:**	≥200 mPa.s @ 25 °C
ODOR THRESHOLD:	N.D.	**VISCOSITY, KINEMATIC:**	≥179 mm2/s @ 25 °C
SOLUBILITY IN H2O:	Insoluble	**VOLATILE BY WEIGHT:**	74.54 %
pH:	N.A.	**VOLATILE BY VOLUME:**	79.32 %
FREEZE POINT:	N.D.	**VOC CALCULATED:**	6.96 lb/gal, 834 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.; Aluminum or galvanized parts in a closed system.

INCOMPATIBILITY: Amines, acids, water, hydroxyl, or active hydrogen compounds.; Aluminum, zinc, caustics, halogens.

HAZARDOUS DECOMPOSITION PRODUCTS: Monomeric isocyanate, traces of hydrogen cyanide, nitrogen dioxide, Carbon dioxide, carbon monoxide, chlorine, hydrogen chloride, Phosgene, Lead fume, Oxides of nitrogen

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
Trichloroethylene	Oral LD50: Rat 4,920 mg/kg Dermal LD50: Rabbit 29,000 mg/kg Inhalation LC50: Rat 26 mg/l /4 h
Xylene	Oral LD50: Rat 3,500 mg/kg Dermal LD50: Rabbit > 4,350 mg/kg Inhalation LC50: Rat 29.08 mg/l /4 h
Ethyl benzene	Oral LD50: Rat 3,500 mg/kg Dermal LD50: Rabbit 15,400 mg/kg Inhalation LC50: Rat 17.2 mg/l /4 h
Carbon black	Oral LD50: Rat > 15,400 mg/kg Dermal LD50: Rabbit > 3 g/kg GHS LC50 (vapour): Acute toxicity point estimate 55 mg/l
Nitrogen substituted aromatic	Oral LD50: rat 1,100 mg/kg
Aromatic polyisocyanate	Oral LD50: Rat 49 g/kg Dermal LD50: Rabbit > 9,400 mg/kg GHS LC50 (vapour): Acute toxicity point estimate 11 mg/l GHS LC50 (dust and mist): Acute toxicity point estimate 1.5 mg/l
4,4'-Diphenylmethane diisocyanate	Oral LD50: Rat 31,600 mg/kg Dermal LD50: rabbit > 5,000 mg/kg GHS LC50 (vapour): Acute toxicity point estimate 11 mg/l /4 h GHS LC50 (dust and mist): Acute toxicity point estimate 1.5 mg/l /4 h
Lead oxide phosphonate	GHS LC50 (vapour): Acute toxicity point estimate 55 mg/l
1,2-Butylene oxide	Oral LD50: Rat 500 mg/kg Dermal LD50: Rabbit 1,757 mg/kg Inhalation LC50: Rat 6,300 mg/m3 /4 h
2,4-Diphenylmethane diisocyanate	N.D.

Germ cell mutagenicity: Category 2 - Suspected of causing genetic defects.
Components contributing to classification: Trichloroethylene.

Carcinogenicity: Category 1A - May cause cancer.
Components contributing to classification: Trichloroethylene. Ethyl benzene. Lead oxide phosphonate. 1,2-Butylene oxide.

Reproductive toxicity: Category 1A - May damage fertility or the unborn child. May cause harm to breast-fed children.
Components contributing to classification: Trichloroethylene. Xylene. Ethyl benzene. Lead oxide phosphonate. Toluene. 1,2-Butylene oxide.

12. ECOLOGICAL INFORMATION

ECOTOXICITY:

Chemical Name	Ecotoxicity
Trichloroethylene	Fish: Pimephales promelas 31.4 - 71.8 mg/l96 h flow-through Lepomis macrochirus 39 - 54 mg/l96 h Static Invertebrates: Daphnia magna 2.2 mg/l48 h Plants: Desmodesmus subspicatus 450 mg/l96 h Pseudokirchneriella subcapitata 175 mg/l96 h
Xylene	Fish: Pimephales promelas 13.4 mg/l96 h flow-through Oncorhynchus mykiss 2.661 - 4.093 mg/l96 h Static Oncorhynchus mykiss 13.5 - 17.3 mg/l96 h Lepomis macrochirus 13.1 - 16.5 mg/l96 h flow-through

	Lepomis macrochirus 19 mg/l96 h Lepomis macrochirus 7.711 - 9.591 mg/l96 h Static Pimephales promelas 23.53 - 29.97 mg/l96 h Static Cyprinus carpio 780 mg/l96 h semi-static Cyprinus carpio > 780 mg/l96 h Poecilia reticulata 30.26 - 40.75 mg/l96 h Static Invertebrates: water flea 3.82 mg/l48 h Gammarus lacustris 0.6 mg/l48 h
Ethyl benzene	Fish: Oncorhynchus mykiss 11.0 - 18.0 mg/l96 h Static Oncorhynchus mykiss 4.2 mg/l96 h semi-static Pimephales promelas 7.55 - 11 mg/l96 h flow-through Lepomis macrochirus 32 mg/l96 h Static Pimephales promelas 9.1 - 15.6 mg/l96 h Static Poecilia reticulata 9.6 mg/l96 h Static Invertebrates: Daphnia magna 1.8 - 2.4 mg/l48 h Plants: Pseudokirchneriella subcapitata 4.6 mg/l72 h Pseudokirchneriella subcapitata > 438 mg/l96 h Pseudokirchneriella subcapitata 2.6 - 11.3 mg/l72 h Static Pseudokirchneriella subcapitata 1.7 - 7.6 mg/l96 h Static
Carbon black	N.D.
Nitrogen substituted aromatic	N.D.
Aromatic polyisocyanate	N.D.
4,4'-Diphenylmethane diisocyanate	Fish: Species > 1,000 mg/l96 h Invertebrates: Daphnia magna > 1,000 mg/l48 h
Lead oxide phosphonate	N.D.
1,2-Butylene oxide	Invertebrates: Daphnia magna 69.8 mg/l48 h Plants: Desmodesmus subspicatus > 500 mg/l72 h
2,4-Diphenylmethane diisocyanate	N.D.

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

DOT Proper Shipping Name:	Adhesives
DOT Hazard Class:	3
SECONDARY HAZARD:	None
DOT UN/NA Number:	1133
Packing Group:	III
Emergency Response Guide Number:	128

IATA Cargo

PROPER SHIPPING NAME:	Adhesives
DOT Hazard Class:	3
HAZARD CLASS:	None
UN-NUMBER:	1133
PACKING GROUP:	III
EMS:	3L

IMDG

PROPER SHIPPING NAME:	Adhesives
DOT Hazard Class:	3
HAZARD CLASS:	None
UN-NUMBER:	1133
PACKING GROUP:	III
EMS:	F-E

The listed transportation classification applies to US DOT Road, IATA Cargo, and IMDG 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.:

Chemical Name	CAS Number	Weight % Less Than
Trichloroethylene	79-01-6	35.0 %
Xylene	1330-20-7	35.0 %
Ethyl benzene	100-41-4	10.0 %
Aromatic polyisocyanate	PROPRIETARY	5.0 %
4,4'-Diphenylmethane diisocyanate	101-68-8	0.9 %
Lead oxide phosphonate	12141-20-7	0.9 %
1,2-Butylene oxide	106-88-7	0.9 %
2,4-Diphenylmethane diisocyanate	5873-54-1	0.9 %

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:

Chemical Name	CAS Number
Trichloroethylene	79-01-6

16. OTHER INFORMATION

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: 3 PHYSICAL HAZARD: 0

* - Indicates a chronic hazard; see Section 2

Revision: Section 2

Effective Date: 06/03/2016

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.