

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: **CHEMLOK Y-4310**
Product Use/Class: **Adhesive**

LORD Corporation
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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: 06/07/2016

2. HAZARDS IDENTIFICATION**GHS CLASSIFICATION:**

Flammable liquids Category 2
Acute toxicity Inhalation - Vapours Category 4 - 11.1% of the mixture consists of ingredient(s) of unknown toxicity.
Acute toxicity Inhalation - Dust and Mist Category 4 - 11.1% of the mixture consists of ingredient(s) of unknown toxicity.
Serious eye damage/eye irritation Category 2A
Carcinogenicity Category 2
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, retina, Systemic toxicity
Specific target organ systemic toxicity (repeated exposure) Category 1 Liver, Central nervous system, retina, Eyes
Specific target organ systemic toxicity (repeated exposure) Category 2 Nervous system
Aspiration hazard Category 1
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

Highly flammable liquid and vapor.
Harmful if inhaled.
Causes serious eye irritation.
Suspected of causing cancer.
Suspected of damaging fertility or the unborn child.
May cause harm to breast-fed children.
May cause respiratory irritation.
May cause drowsiness or dizziness.
Causes damage to organs.(Central nervous system, retina, Systemic toxicity)
Causes damage to organs through prolonged or repeated exposure.(Liver, Central nervous system, retina, Eyes)
May cause damage to organs through prolonged or repeated exposure.(Nervous system)
May be fatal if swallowed and enters airways.

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.
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.
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 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.
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: Harmful if inhaled or absorbed through skin. Vapor harmful; may affect the brain or nervous system causing dizziness, headache or nausea. 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 skin irritation. The silane material in this product can hydrolyze to form ethanol. Ethanol can cause moderate skin irritation; and can be absorbed through the skin causing headache, nausea and general discomfort. Contains methanol; may be harmful or fatal if swallowed; ingestion of methanol may cause blindness or permanent eye damage. Cannot be made non-poisonous. Ingestion is not an expected route of entry in industrial or commercial uses.

Chronic: This material contains methanol. Ingestion of methanol may cause permanent eye damage or blindness. May cause kidney damage. May affect the gastrointestinal system. Prolonged or repeated contact may result in dermatitis. IARC has designated Methyl isobutyl ketone to be in Group 2B - possibly carcinogenic to humans. ACGIH considers Ethyl alcohol to be an A3 carcinogen (confirmed animal carcinogen with unknown relevance in humans).

3. COMPOSITION/INFORMATION ON INGREDIENTS
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Chemical Name	CAS Number	Range
Ethyl alcohol	64-17-5	70 - 75 %
Methanol	67-56-1	10 - 15 %
Methyl isobutyl ketone	108-10-1	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.

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. 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. Cannot be made non-poisonous.

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: Strong acids, bases, and strong oxidizers.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

COMPONENT EXPOSURE LIMIT

<u>Chemical Name</u>	<u>ACGIH TLV-TWA</u>	<u>ACGIH TLV-STEL</u>	<u>OSHA PEL-TWA</u>	<u>OSHA PEL-CEILING</u>	<u>Skin</u>
Ethyl alcohol	N.E.	1,000 ppm	1,900 mg/m3 1,000 ppm	N.E.	N.A.
Methanol	200 ppm	250 ppm	260 mg/m3 200 ppm	N.E.	S
Methyl isobutyl ketone	50 ppm	75 ppm	410 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. Sufficient ventilation (using explosion-proof equipment) should be provided to prevent flammable vapor/air mixtures from accumulating.

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. 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:	Clear	VAPOR DENSITY:	Heavier than Air
PHYSICAL STATE:	Liquid	LOWER EXPLOSIVE LIMIT:	4.3 %(V)
FLASH POINT:	56 °F, 13 °C Setaflash	UPPER EXPLOSIVE LIMIT:	36.5 %(V)
	Closed Cup		
BOILING RANGE:	64 - 100 °C	EVAPORATION RATE:	Faster than n-butyl-acetate.
AUTOIGNITION TEMPERATURE:	N.D.	DENSITY:	0.81 g/cm ³ - 6.76 lb/gal
DECOMPOSITION TEMPERATURE:	N.D.	VISCOSITY, DYNAMIC:	≥0.8 mPa.s @ 25 °C
ODOR THRESHOLD:	N.D.	VISCOSITY, KINEMATIC:	≥1 mm ² /s @ 25 °C
SOLUBILITY IN H₂O:	Insoluble	VOLATILE BY WEIGHT:	90.58 %
pH:	N.A.	VOLATILE BY VOLUME:	92.92 %
FREEZE POINT:	N.D.	VOC CALCULATED:	6.12 lb/gal, 733 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, Oxides of silicon, 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:

<u>Chemical Name</u>	<u>LD50/LC50</u>
Ethyl alcohol	Oral LD50: Rat 7,060 mg/kg Inhalation LC50: Rat 124.7 mg/l /4 h
Methanol	Oral LD50: Rat 6,200 mg/kg Dermal LD50: Rabbit 15,800 mg/kg Inhalation LC50: Rat 22500 ppm/8 h
Methyl isobutyl ketone	Oral LD50: Rat 2,080 mg/kg Dermal LD50: Rabbit 3,000 mg/kg Inhalation LC50: Rat 8.2 mg/l /4 h

Germ cell mutagenicity: No classification proposed

Carcinogenicity: Category 2 - Suspected of causing cancer.
Components contributing to classification: Methyl isobutyl ketone.

Reproductive toxicity: Category 2 - Suspected of damaging fertility or the unborn child. May cause harm to breast-fed children.
Components contributing to classification: Methanol. Toluene. 2-Butoxyethanol.

12. ECOLOGICAL INFORMATION

ECOTOXICITY:

<u>Chemical Name</u>	<u>Ecotoxicity</u>
Ethyl alcohol	<u>Fish:</u> Pimephales promelas > 100 mg/196 h Static Pimephales promelas 13,400 - 15,100 mg/196 h flow-through <u>Invertebrates:</u> Daphnia magna 9,268 - 14,221 mg/148 h Daphnia magna 2 mg/148 h Static
Methanol	<u>Fish:</u> Pimephales promelas 28,200 mg/196 h flow-through Pimephales promelas > 100 mg/196 h Static Oncorhynchus mykiss 19,500 - 20,700 mg/196 h flow-through Lepomis macrochirus 13,500 - 17,600 mg/196 h flow-through
Methyl isobutyl ketone	<u>Fish:</u> Pimephales promelas 496 - 514 mg/196 h flow-through <u>Invertebrates:</u> Daphnia magna 170 mg/148 h <u>Plants:</u> Pseudokirchneriella subcapitata 400 mg/196 h

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: II
Emergency Response Guide Number: 128

IATA Cargo

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

IMDG

PROPER SHIPPING NAME: Adhesives
DOT Hazard Class: 3
HAZARD CLASS: None
UN-NUMBER: 1133
PACKING GROUP: II
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.:

<u>Chemical Name</u>	<u>CAS Number</u>	<u>Weight % Less Than</u>
Methanol	67-56-1	15.0 %
Methyl isobutyl ketone	108-10-1	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:

NONE

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: New GHS SDS Format

Effective Date: 06/07/2016

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.