1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: **LORD 322**
Product Use/Class: **Epoxy Adhesive, Part 2 of 2**

LORD Corporation
111 LORD Drive
Cary, NC 27511-7923

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: 04/21/2015

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATION:

Acute toxicity OralCategory 4 - 79.8% of the mixture consists of ingredient(s) of unknown toxicity.
Acute toxicity Inhalation - Dust and Mist Category 4 - 24.4% of the mixture consists of ingredient(s) of unknown toxicity.
Acute toxicity Inhalation - Vapours Category 4 - 24.4% of the mixture consists of ingredient(s) of unknown toxicity.
Serious eye damage/eye irritation Category 1
Skin sensitization Category 1
Respiratory sensitization Category 1
Germ cell mutagenicity Category 2
Carcinogenicity Category 1A
Reproductive toxicity Category 1B
Specific target organ systemic toxicity (single exposure) Category 1 Cardio-vascular system, Respiratory system, Kidney, Nervous system
Specific target organ systemic toxicity (repeated exposure) Category 2 Blood
Specific target organ systemic toxicity (repeated exposure) Category 1 Hematopoietic System, Cardio-vascular system, Central nervous system, Digestive organs, Kidney, Liver, spleen, thymus, Lungs
Hazardous to the aquatic environment - acute hazard Category 1
Hazardous to the aquatic environment - chronic hazard Category 1

GHS LABEL ELEMENTS:

Symbol(s)

Signal Word

DANGER

Hazard Statements

Harmful if swallowed.
Harmful if inhaled.
Causes serious eye damage.
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.
Causes damage to organs.(Cardio-vascular system, Respiratory system, Kidney, Nervous system)
May cause damage to organs through prolonged or repeated exposure if swallowed.(Blood)

Causes damage to organs through prolonged or repeated exposure.(Hematopoietic System, Cardio-vascular system, Central nervous system, Digestive organs, Kidney, Liver, spleen, thymus, Lungs)
Very toxic to aquatic life.
Very toxic to aquatic life with long lasting effects.

Precautionary Statements

Prevention

Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Wear protective gloves/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

Immediately 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: Wash with plenty of soap and water.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Rinse mouth.
Wash contaminated clothing before reuse.
Collect spillage.

Storage

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: May cause eye burns. May be absorbed through the skin in harmful amounts. A skin corrosivity study performed on this product or a similar product concludes that it is not corrosive to skin. 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 headache and nausea.

Chronic: May affect the gastrointestinal system. Prolonged or repeated contact may result in dermatitis.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Range
Polyamide resin	PROPRIETARY	15 - 20 %
Phenol	108-95-2	10 - 15 %
Amine compound	PROPRIETARY	5 - 10 %
Amine compound	PROPRIETARY	1 - 5 %
Amine compound	PROPRIETARY	1 - 5 %
Amine compound	PROPRIETARY	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

SPECIFIC HAZARDS POSSIBLY ARISING FROM THE CHEMICAL: 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 PROTECTIVE EQUIPMENT AND PRECAUTIONS FOR FIRE-FIGHTERS: Wear full firefighting protective clothing, including self-contained breathing apparatus (SCBA). If water is used, fog nozzles are preferable.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT, AND EMERGENCY PROCEDURES: 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. Scoop spilled material into an appropriate container for proper disposal. (If necessary, use inert absorbent material to aid in containing the spill).

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.

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

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
Polyamide resin	N.E.	N.E.	N.E.	N.E.	N.A.
Phenol	5 ppm	N.E.	19 mg/m3 5 ppm	N.E.	S
Amine compound	N.E.	N.E.	N.E.	N.E.	N.A.
Amine compound	1 ppm	N.E.	N.E.	N.E.	S

Amine compound	N.E.	N.E.	N.E.	N.E.	N.A.
Amine compound	N.E.	N.E.	N.E.	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.

PERSONAL PROTECTION MEASURES/EQUIPMENT:

RESPIRATORY PROTECTION: Use a NIOSH approved air-purifying organic vapor respirator 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: Remove and wash contaminated clothing before reuse.

HYGIENIC PRACTICES: Wash hands before eating, smoking, or using toilet facility. 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:	Amine	**VAPOR PRESSURE:**	N.D.
APPEARANCE:	Gray	**VAPOR DENSITY:**	Heavier than Air
PHYSICAL STATE:	Liquid	**LOWER EXPLOSIVE LIMIT:**	1.1 %(V)
FLASH POINT:	≥ 201 °F, 93 °C Setaflash Closed Cup	**UPPER EXPLOSIVE LIMIT:**	8.6 %(V)
BOILING RANGE:	N.A.	**EVAPORATION RATE:**	Not Applicable
AUTOIGNITION TEMPERATURE:	N.D.	**DENSITY:**	1.24 g/cm3 - 10.32 lb/gal
DECOMPOSITION TEMPERATURE:	N.D.	**VISCOSITY, DYNAMIC:**	≥450,000 mPa.s @ 25 °C
ODOR THRESHOLD:	N.D.	**VISCOSITY, KINEMATIC:**	≥362,903 mm2/s @ 25 °C
SOLUBILITY IN H2O:	Insoluble	**VOLATILE BY WEIGHT:**	0.00 %
pH:	N.A.	**VOLATILE BY VOLUME:**	0.00 %
FREEZE POINT:	N.D.	**VOC CALCULATED:**	0 lb/gal, 0 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.

INCOMPATIBILITY: Strong acids, bases, and strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, organic or inorganic nitrogen compounds including traces of hydrogen cyanide, Oxides of aluminum

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
Polyamide resin	N.D.
Phenol	Oral LD50: Rat 317 mg/kg Oral LD50: Rat 340 mg/kg Dermal LD50: Rabbit 630 mg/kg GHS LC50 (dust and mist): Acute toxicity point estimate 0.5 mg/l /
Amine compound	N.D.
Amine compound	Oral LD50: Rat 1,080 mg/kg Inhalation LC50: Rat 70 mg/l /4 h
Amine compound	Oral LD50: Rat 2,140 mg/kg Dermal LD50: Rabbit 880 µL/kg
Amine compound	Oral LD50: Rat 2,500 mg/kg GHS LD50: Acute toxicity point estimate 1,100 mg/kg

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

Carcinogenicity: Category 1A - May cause cancer.
Components contributing to classification: Aluminum powder.
Carcinogenicity: No classification proposed

Reproductive toxicity: Category 1B - May damage fertility or the unborn child.
Components contributing to classification: Phenol. Amine compound. Amine compound.

12. ECOLOGICAL INFORMATION

ECOTOXICITY:

Chemical Name	Ecotoxicity
Polyamide resin	N.D.
Phenol	Fish: Pimephales promelas 11.9 - 50.5 mg/l96 h flow-through Pimephales promelas 20.5 - 25.6 mg/l96 h Static Pimephales promelas 32 mg/l96 h Oncorhynchus mykiss 5.449 - 6.789 mg/l96 h flow-through Oncorhynchus mykiss 7.5 - 14 mg/l96 h Static Oncorhynchus mykiss 4.23 - 7.49 mg/l96 h semi-static Oncorhynchus mykiss 5.0 - 12.0 mg/l96 h Lepomis macrochirus 13.5 mg/l96 h Static Lepomis macrochirus 11.9 - 25.3 mg/l96 h flow-through Lepomis macrochirus 11.5 mg/l96 h semi-static Poecilia reticulata 34.09 - 47.64 mg/l96 h Static Poecilia reticulata 31 mg/l96 h semi-static Brachydanio rerio 27.8 mg/l96 h Cyprinus carpio 0.00175 mg/l96 h semi-static Oryzias latipes 33.9 - 43.3 mg/l96 h flow-through Oryzias latipes 23.4 - 36.6 mg/l96 h Static Invertebrates: Daphnia magna 4.24 - 10.7 mg/l48 h Static Daphnia magna 10.2 - 15.5 mg/l48 h Plants: Pseudokirchneriella subcapitata 46.42 mg/l96 h Pseudokirchneriella subcapitata 0.0188 - 0.1044 mg/l96 h Static Desmodesmus subspicatus 187 - 279 mg/l72 h Static
Amine compound	N.D.
Amine compound	Fish: Poecilia reticulata 248 mg/l96 h Static Poecilia reticulata 1,014 mg/l96 h semi-static Invertebrates: Daphnia magna 16 mg/l48 h Plants: Pseudokirchneriella subcapitata 1,164 mg/l72 h Pseudokirchneriella subcapitata 345.6 mg/l96 h Desmodesmus subspicatus 592 mg/l96 h
Amine compound	Fish: Pimephales promelas 1,950 - 2,460 mg/l96 h flow-through

	Poecilia reticulata > 1,000 mg/l96 h semi-static Oncorhynchus mykiss >= 100 mg/l96 h semi-static Invertebrates: Daphnia magna 32 mg/l48 h Plants: Pseudokirchneriella subcapitata 495 mg/l72 h
Amine compound	Fish: Poecilia reticulata 570 mg/l96 h semi-static Pimephales promelas 495 mg/l96 h Invertebrates: Daphnia magna 31.1 mg/l48 h Plants: Desmodesmus subspicatus 2.5 mg/l72 h Pseudokirchneriella subcapitata 20 mg/l72 h Pseudokirchneriella subcapitata 3.7 mg/l96 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: Dispose of contents/container in accordance with waste/disposal laws and regulations of your country or particular locality. 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:	Environmentally hazardous substances, liquid, n.o.s.
DOT Hazard Class:	9
SECONDARY HAZARD:	None
DOT UN/NA Number:	3082
Packing Group:	III
Emergency Response Guide Number:	171

For US DOT non-bulk road shipments this material may be classified as NOT REGULATED. For the most accurate shipping information, refer to your transportation/compliance department regarding changes in package size, mode of shipment or other regulatory descriptors.

IATA Cargo

PROPER SHIPPING NAME:	Environmentally hazardous substance, liquid, n.o.s.
DOT Hazard Class:	9
HAZARD CLASS:	None
UN-NUMBER:	3082
PACKING GROUP:	III
EMS:	9L

IMDG

PROPER SHIPPING NAME:	Environmentally hazardous substance, liquid, n.o.s.
DOT Hazard Class:	9
HAZARD CLASS:	None
UN-NUMBER:	3082
PACKING GROUP:	III
EMS:	F-A

The listed transportation classification applies to 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 your country or particular locality. 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
Phenol	108-95-2	15.0 %

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

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: 1 PHYSICAL HAZARD: 0
* - Indicates a chronic hazard; see Section 2

Revision: New GHS SDS Format

Effective Date: 04/21/2015

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.