

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: **THERMOSET 4189 B**
Product Use/Class: **Adhesive, Part B**

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: 11/15/2018

2. HAZARDS IDENTIFICATION**GHS CLASSIFICATION:**

Acute toxicity Oral Category 4 - 52.7% of the mixture consists of ingredient(s) of unknown toxicity.
Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 1
Skin sensitization Category 1
Specific target organ systemic toxicity (single exposure) Category 2 Nervous system
Specific target organ systemic toxicity (single exposure) Category 1 Eyes
Specific target organ systemic toxicity (repeated exposure) Category 1 Kidney, Liver, Skin, Respiratory Tract, Lungs
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

Harmful if swallowed.
Causes skin irritation.
Causes serious eye damage.
May cause an allergic skin reaction.
May cause damage to organs.(Nervous system)
Causes damage to organs.(Eyes)
Causes damage to organs through prolonged or repeated exposure.(Kidney, Liver, Skin, Respiratory Tract, Lungs)
Harmful to aquatic life.
Harmful to aquatic life with long lasting effects.

Precautionary Statements**Prevention**

Wear protective gloves/eye protection/face protection.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wash thoroughly after handling.
Do not eat, drink or smoke when using this product.
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 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.
Take off contaminated clothing and wash before reuse.

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: Harmful if inhaled or absorbed through skin. May cause lung damage. Causes respiratory tract irritation. May cause allergic respiratory reaction. Overexposure to vapor may cause headache, dizziness, unconsciousness and/or breathing difficulty.

Chronic: This product contains 2 proprietary polyethylenepolyamines. One of them has been found to be a direct acting mutagen in the Ames Assay. This component has also been shown to be fetotoxic and teratogenic when fed to lab animals. The other polyethylenepolyamine has been found to be positive in the unscheduled DNA mutagenicity assay, while in vitro gene mutation assays tested negative. 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.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Range
Polyamide resin	PROPRIETARY	50 - 55 %
Propoxylated polyethylene polyamine	PROPRIETARY	30 - 35 %
Amine compound	PROPRIETARY	1 - 5 %
Polyethylene polyamine	PROPRIETARY	1 - 5 %
Polyethylene polyamine	PROPRIETARY	1 - 5 %
Carbon black	1333-86-4	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: 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.; Nitrous acid and other nitrosating agents; Nitric acid

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>
Polyamide resin	N.E.	N.E.	N.E.	N.E.	N.A.
Propoxylated polyethylene polyamine	N.E.	N.E.	N.E.	N.E.	N.A.
Amine compound	N.E.	N.E.	N.E.	N.E.	N.A.
Polyethylene polyamine	4.2 mg/m3 1 ppm	N.E.	N.E.	N.E.	N.A.
Polyethylene polyamine	N.E.	N.E.	N.E.	N.E.	S
Carbon black	3 mg/m3	N.E.	3.5 mg/m3	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. 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: 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:	Ammonia	VAPOR PRESSURE:	N.D.
APPEARANCE:	Black	VAPOR DENSITY:	Heavier than Air
PHYSICAL STATE:	Paste	LOWER EXPLOSIVE LIMIT:	1.1 %(V)
FLASH POINT:	≥ 201 °F, 93 °C	UPPER EXPLOSIVE LIMIT:	6.4 %(V)
	Setaflash Closed Cup		
BOILING RANGE:	N.A.	EVAPORATION RATE:	Slower than n-butyl-acetate
AUTOIGNITION TEMPERATURE:	N.D.	DENSITY:	1.03 g/cm ³ - 8.60 lb/gal
DECOMPOSITION TEMPERATURE:	N.D.	VISCOSITY, DYNAMIC:	N.D.
ODOR THRESHOLD:	N.D.	VISCOSITY, KINEMATIC:	N.D.
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.; Nitrous acid and other nitrosating agents; Nitric acid

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, organic or inorganic nitrogen compounds including traces of hydrogen cyanide, Nitric acid, Nitrosamine, Nitrogen oxides (NO_x)

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.
Propoxylated polyethylene polyamine	Oral LD50: Mouse 38.5 mg/kg Oral LD50: rat 1,080 mg/kg Oral LD50: rabbit 5,500 mg/kg
Amine compound	Oral LD50: Rat 2,500 mg/kg GHS LD50: Acute toxicity point estimate 1,100 mg/kg

Polyethylene polyamine	Oral LD50: rat 2,500 mg/kg
Polyethylene polyamine	Oral LD50: rat 1,080 mg/kg Oral LD50: Mouse 38.5 mg/kg Oral LD50: rabbit 5,500 mg/kg
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

Germ cell mutagenicity: No classification proposed

Carcinogenicity: No classification proposed

Reproductive toxicity: No classification proposed

12. ECOLOGICAL INFORMATION

ECOTOXICITY:

Chemical Name	Ecotoxicity
Polyamide resin	N.D.
Propoxylated polyethylene polyamine	N.D.
Amine compound	<u>Fish:</u> Poecilia reticulata 570 mg/196 h semi-static Pimephales promelas 495 mg/196 h <u>Invertebrates:</u> Daphnia magna 31.1 mg/148 h <u>Plants:</u> Desmodemus subspicatus 2.5 mg/172 h Pseudokirchneriella subcapitata 20 mg/172 h Pseudokirchneriella subcapitata 3.7 mg/196 h
Polyethylene polyamine	<u>Invertebrates:</u> Species 1,014 mg/196 h water flea 33.9 mg/148 h <u>Plants:</u> freshwater algae 3.7 mg/196 h
Polyethylene polyamine	<u>Invertebrates:</u> Daphnia 16 mg/148 h water flea 53.5 mg/148 h <u>Plants:</u> freshwater algae 1,164 mg/172 h freshwater algae 345.6 mg/196 h
Carbon black	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

This product is NOT REGULATED for non-bulk 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:

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.:

None

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: 3* **FLAMMABILITY:** 1 **PHYSICAL HAZARD:** 0

* - Indicates a chronic hazard; see Section 2

Revision: Section 2

Effective Date: 11/15/2018

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.