

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product name: **THERMOSET ME-455**
Product Use/Class: **Encapsulant**

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: 08/20/2020

2. HAZARDS IDENTIFICATION**GHS CLASSIFICATION:**

Skin corrosion/irritation Category 2
Serious eye damage/eye irritation Category 1
Skin sensitization Category 1
Respiratory sensitization Category 1
Carcinogenicity Category 2
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

Causes skin irritation.
Causes serious eye damage.
May cause an allergic skin reaction.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Suspected of causing cancer.
Harmful to aquatic life.
Harmful 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.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Wash thoroughly after handling.
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: If breathing is difficult, 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.
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: May cause respiratory tract irritation. Hot vapor can cause nose and throat irritation. Hot vapor can cause eye irritation. May be harmful if swallowed. Ingestion is not an expected route of entry in industrial or commercial uses.

Chronic: Contains an epoxy resin which is a possible mutagen, based on animal data. Prolonged exposure to the silica-containing sanding dust of this product could cause long-term lung damage. Crystalline silica is classified by IARC and NTP as a known human carcinogen as a respirable dust. The silica in LORD products is not in a form that can be inhaled and presents no risk to the end user. No exposure is expected during normal use of this product. Sanding or abrading the cured materials is not recommended. Wear appropriate respiratory protection if exposure to dusts is possible.

3. COMPOSITION/INFORMATION ON INGREDIENTS

| <u>Chemical Name</u> | <u>CAS Number</u> | <u>Range</u> |
|-----------------------------|-------------------|--------------|
| Epoxy resin | PROPRIETARY | 10 - 15 % |
| Hexahydrophthalic anhydride | 85-42-7 | 10 - 15 % |
| Carboxylic acid anhydride | 19438-60-9 | 1 - 5 % |
| Epoxy resin | PROPRIETARY | 1 - 5 % |
| Epoxy resin | PROPRIETARY | 1 - 5 % |
| Epoxy resin | PROPRIETARY | 0.1 - 0.9 % |
| Crystalline silica | 14808-60-7 | 0.1 - 0.9 % |
| Proprietary surfactant | 9036-19-5 | 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 breathing vapors. Avoid contact. Use appropriate respiratory protection for large spills or spills in confined area.

ENVIRONMENTAL PRECAUTIONS: Do not contaminate bodies of water, waterways, or ditches, with chemical or used container.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANUP: Notify appropriate authorities if necessary. Avoid contact. Keep non-essential personnel away from spill area. 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. 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. Avoid excessive heat. Avoid moisture contamination. Product should be stored frozen for best shelf life. See LORD Technical Datasheet for product specific storage instructions.

INCOMPATIBILITY: Strong acids and bases.

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> |
|-----------------------------|------------------------------------|-----------------------|---------------------|-------------------------|-------------|
| Epoxy resin | N.E. | N.E. | N.E. | N.E. | N.A. |
| Hexahydrophthalic anhydride | 0.005 mg/m ³ Ceiling | N.E. | N.E. | N.E. | N.A. |
| Carboxylic acid anhydride | N.E. | N.E. | N.E. | N.E. | N.A. |
| Epoxy resin | N.E. | N.E. | N.E. | N.E. | N.A. |
| Epoxy resin | N.E. | N.E. | N.E. | N.E. | N.A. |
| Epoxy resin | N.E. | N.E. | N.E. | N.E. | N.A. |
| Crystalline silica | 0.05 mg/m ³ | N.E. | N.E. | N.E. | N.A. |
| Proprietary surfactant | 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. 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: 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. 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: | Musty | VAPOR PRESSURE: | N.D. |
| APPEARANCE: | Black | VAPOR DENSITY: | Heavier than Air |
| PHYSICAL STATE: | Viscous liquid | LOWER EXPLOSIVE LIMIT: | Not Applicable |
| FLASH POINT: | ≥ 201 °F, 93 °C | UPPER EXPLOSIVE LIMIT: | Not Applicable |
| | Setaflash Closed Cup | | |
| BOILING RANGE: | N.A. | EVAPORATION RATE: | Not Applicable |
| AUTOIGNITION TEMPERATURE: | N.D. | DENSITY: | 1.69 g/cm ³ (14.04 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: Moisture.; High temperatures.; Storage temperatures above 40F will cause the material to react and solidify.

INCOMPATIBILITY: Strong acids and bases.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide, oxides of nitrogen, Organic acid vapors, Aldehydes

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> |
|-----------------------------|--|
| Epoxy resin | Oral LD50: Rat > 2 g/kg |
| Hexahydrophthalic anhydride | Oral LD50: Rat 3,307 mg/kg Dermal LD50: Rabbit > 2,000 mg/kg GHS LC50 (vapour): Acute toxicity point estimate 22 mg/l GHS LC50 |

| | |
|---------------------------|--|
| | (dust and mist): Acute toxicity point estimate 10 mg/l |
| Carboxylic acid anhydride | N.D. |
| Epoxy resin | N.D. |
| Epoxy resin | N.D. |
| Epoxy resin | Oral LD50: Rat 11,400 mg/kg |
| Crystalline silica | N.D. |
| Proprietary surfactant | Oral LD50: Rat 4,190 mg/kg Oral LD50: Rat 1,700 mg/kg |

Germ cell mutagenicity: No classification proposed

Carcinogenicity: Category 2 - Suspected of causing cancer.
Components contributing to classification: Epoxy resin.

Reproductive toxicity: No classification proposed

12. ECOLOGICAL INFORMATION

ECOTOXICITY:

| Chemical Name | Ecotoxicity |
|-----------------------------|---|
| Epoxy resin | N.D. |
| Hexahydrophthalic anhydride | Fish: Danio rerio > 1,000 mg/196 h Static Plants: Desmodemus subspicatus 95.6 mg/172 h |
| Carboxylic acid anhydride | N.D. |
| Epoxy resin | N.D. |
| Epoxy resin | N.D. |
| Epoxy resin | Invertebrates: Daphnia magna 1.7 mg/148 h |
| Crystalline silica | N.D. |
| Proprietary surfactant | 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:

Chemical Name

Epoxy resin

CAS Number

PROPRIETARY

| |
|------------------------------|
| 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: 1

* - Indicates a chronic hazard; see Section 2

Revision: Company Logo

Effective Date: 08/20/2020

| |
|-------------------|
| 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.