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## SAFETY DATA SHEET

### SECTION 1 - Identification

#### 1.1 Product Identifier

Product Name • LDA-M200-31LC TAP X-30 Polyurethane Foam A  
 Synonyms • Aromatic Isocyanate

#### 1.2 Relevant Identified Uses of the Substance or Mixture and Uses Advised Against

Recommended Use • Component for polyurethane

#### 1.3 Details of the Supplier of the Safety Data Sheet

Manufacturer • Carpenter Co.  
 5016 Monument Ave.  
 Richmond, Virginia 23230  
 (804) 233-0606

#### 1.4 Emergency Telephone

Chemtrec • (800) 424-9300 (24-hr number)

### SECTION 2 - Hazards Identification

#### 2.1 Classification of the Substance or Mixture

Classification in accordance with 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200):

Respiratory Sensitization Category 1 – H334

Skin Sensitization Category 1 – H317

Acute Toxicity Inhalation Category 4 – H333

Eye Irritation Category 2A – H319

Skin Irritation Category 2 – H315

Specific Target Organ Single Exposure 3 (respiratory tract) – H335

Specific Target Organ Toxicity Repeated Exposure 2 (respiratory tract) – H373

#### 2.2 GHS Label Elements

Hazard Pictogram



Signal Word

**DANGER**

Hazard Statements

H332 – Harmful if inhaled.

H319 – Causes serious eye irritation.

H315 – Causes skin irritation.  
H317 – May cause an allergic skin reaction.  
H334 – May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H335 – May cause respiratory irritation.  
H373 – May cause damage to organs through prolonged or repeated exposure (lungs).

## Precautionary Statements

### Prevention

P260 - Do not breathe dust, gas, mist, or vapors.  
P270 - Do not eat, drink or smoke when using this product.  
P271 – Use only outdoors or in a well-ventilated area.  
P285 - In case of inadequate ventilation wear respiratory protection.  
P280 - Wear protective gloves/protective clothing/eye protection/face protection.  
P264 - Wash thoroughly after handling.  
P272 Contaminated work clothing should not be allowed out of the workplace.

### Response

P308+P311 – IF exposed or concerned: Call a physician.  
P312 – Call a physician if you feel unwell.  
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P337+P313 - If eye irritation persists: Get medical attention.  
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
P342+P311 - If experiencing respiratory symptoms: Call a physician.  
P302+P352 - IF ON SKIN: Wash with plenty of soap and water.  
P332+P313 - If skin irritation occurs: Get medical attention.  
P301+P330+P331 - IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.  
P362 + P364 – Take off contaminated clothing and wash before reuse.

### Storage/Disposal

P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.  
P405 - Store locked up.  
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.

## 2.3 Hazards Not Otherwise Classified

- Refer to Section 11 toxicological information for additional toxicity information.
- Refer to Section 16 Other Information for HMIS and NFPA Codes.

**SECTION 3 - Composition/Information on Ingredients****3.1 Substance**

Material does not meet the criteria of a substance according to United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

**3.2 Mixtures**

Name	Identifier	% (weight)
Polymeric MDI	CAS# 9016-87-9	50-60
4,4'- Diphenylmethane Diisocyanate (MDI)	CAS# 101-68-8	40-50

The specific chemical identity and/or exact percentage of component(s) have been withheld as a trade secret.

**SECTION 4 - First Aid Measures****4.1 Description of First Aid Measures**

- |                            |   |
|----------------------------|---|
| By route of inhalation     | <ul style="list-style-type: none"><li>• Remove victim to fresh air. If breathing is difficult, oxygen may be beneficial if administered by trained personnel. Seek medical attention immediately.</li></ul>   |
| By route of dermal contact | <ul style="list-style-type: none"><li>• Remove contaminated clothing and shoes. Wash thoroughly with soap and water. Seek medical attention if irritation develops.</li></ul>   |
| By route of eye contact    | <ul style="list-style-type: none"><li>• Flush with plenty of water for at least 15 minutes while holding the eyelid(s) open. Seek medical attention.</li></ul>  |
| By route of ingestion      | <ul style="list-style-type: none"><li>• DO NOT INDUCE VOMITING. If victim is conscious, wash out mouth with water. If vomiting occurs naturally, have victim lean forward to reduce risk of aspiration. Seek medical attention immediately.</li></ul> |

**4.2 Most Important Symptoms and Effects, Acute and Chronic**

- Exposure symptoms may include contact dermatitis (redness, itching, rash), respiratory tract irritation, cough, shortness of breath, wheezing, or chest tightness. Onset of symptoms may be delayed.

**4.3 Indication of Immediate Medical Attention and Special Treatment if Needed**

- Treatment should be supportive and based on the judgment of the physician in response to the reaction of the patient.

**SECTION 5 - Firefighting Measures****5.1 Extinguishing Media**

- |                                |  |
|--------------------------------|--|
| Suitable Extinguishing Media   | <ul style="list-style-type: none"><li>• Dry chemical, foam, carbon dioxide, water fog or fine spray.</li></ul> |
| Unsuitable Extinguishing Media | <ul style="list-style-type: none"><li>• Do not use direct water spray. May spread fire.</li></ul>              |

## 5.2 Special Hazards Arising From the Substance or Mixture

- May produce oxides of carbon and nitrogen, and traces of HCN on combustion.

## 5.3 Special Protective Actions for Firefighters

- Responding personnel must wear positive-pressure, self-contained breathing apparatus (SCBA) and protective firefighting clothing.

# SECTION 6 - Accidental Release Measures

## 6.1. Personal Precautions, Protective Equipment, and Emergency Procedures

Avoid any skin contact and avoid breathing vapors, mists or dusts. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Don protective equipment appropriate for the size of the spill. Keep unauthorized personnel away. Stay upwind. Do not walk through spilled material. Spilled material may be slippery. Ensure adequate ventilation and eliminate all ignition sources (no smoking, flares, sparks or flames in immediate area). Stop leak if you can do it without risk.

## 6.2 Environmental Precautions

- Prevent from entering into soil, ditches, sewers, waterways and/or groundwater.

## 6.3 Methods and Materials for Containment and Clean Up

### Methods

- Stop leak and dam spill.
- Cover spill with absorbent and neutralize with decontaminant.
- Transfer waste into open-top drums and keep drum lid loose for about 48hrs to allow escape of carbon dioxide.
- Clean spill area additionally with decontaminant. Allow solution to stand for at least 10 minutes.
- LARGE SPILLS: Dike spillage. A blanket of protein foam may be placed over the spill. Pump or vacuum material into containers.

### Materials

- Absorbent, neutralizing agent (90% water, 8% ammonia, 2% liquid detergent), and a drum with lid (to collect waste).
- Inert absorbent (sand, earth or similar).
- Use appropriate Personal Protective Equipment (PPE).

## 6.4 Reference to Other Sections

- Refer to Section 8 for exposure control and personal protective equipment information.
- Refer to Section 12 for ecological information.

# SECTION 7: Handling and Storage

## 7.1 Precautions for Safe Handling

- Protect against moisture.
- Do not breathe (dust, vapor or spray mist).

- Wear respiratory protection when spraying.
- Ensure thorough ventilation of storage and work areas.
- Avoid generating mist to prevent the release of aerosols.

## 7.2 Conditions for Safe Storage, Including any Incompatibilities

- Storage
- Store materials in a cool (60-80°F), well ventilated, dry place. Keep containers tightly closed when not in use. MDI reacts with water producing CO<sub>2</sub> gas, a hazardous build-up of pressure could result if contaminated containers are re-sealed. Closed containers may develop pressure and rupture on prolonged exposure to heat or if contaminated with water.
- Incompatibilities
- Keep away from water, amines, strong bases and acids, alcohols, and copper alloys.

## SECTION 8: Exposure Controls/ Personal Protection

### 8.1 Control Parameters

#### Exposure Limits/Guidelines

Ingredient	OSHA PEL(ppm)	ACGIH TLV (ppm)
4,4'- Diphenylmethane Diisocyanate (MDI)	0.02 Ceiling	0.005 TWA

### 8.2 Exposure Controls

- Engineering Controls
- Adequate ventilation systems as needed to control concentrations of airborne contaminants below applicable threshold limit values. Good general ventilation should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.
- Eye/Face Protection
- Chemical goggles or depending on the splash risk, chemical goggles with a face shield may be needed
- Respiratory Protection
- If exposure concentrations may exceed applicable exposure limits or are unknown, use an appropriate NIOSH/MSHS approved respirator. Respirators should be selected in accordance with OSHA 1910.134.
- Skin Protection
- Wear suitable working clothes.
  - Wear chemical resistant gloves appropriate for the intended use. Consult glove manufacturers for assistance in choosing appropriate gloves.

Additional Protection Measures

• Use near eyewash station and safety shower.

**SECTION 9: Physical and Chemical Properties****9.1 Information on Physical and Chemical Properties**

<b>Material Description</b>			
Physical Form	• Liquid	Odor	• Slight musty odor
Appearance/Color	• Dark brown	Odor Threshold	• No data available
<b>General Properties</b>			
Boiling Point	• 200 °C @ 5 mmHg	Melting Point	• No data available
Decomposition Temperature	• No data available	pH	• No data available
Density	• No data available	Water Solubility	• Low
Solvent Solubility	• No data available	Viscosity	• No data available
Explosive Properties	• No data available	Specific Gravity/Relative Density	• 1.22-1.25 (H <sub>2</sub> O=1)
<b>Volatility</b>			
Vapor Pressure	• <.0001 mmHg	Vapor Density	• No data available
Evaporation Rate	• No data available	VOC (Vol.)	• No data available
Volatiles (Vol.)	• No data available		
<b>Flammability</b>			
Flash Point	• >200°F (PMCC)	LEL	• No data available
UEL	• No data available	Flammability (solid, gas)	• No data available
Auto-ignition Temperature	• No data available		
<b>Environmental</b>			
Octanol/Water Partition Coefficient	• No data available		

**9.2. Other Information**

No additional information available.

**SECTION 10: Stability and Reactivity****10.1 Reactivity**

No dangerous reaction known under conditions of normal use.

**10.2 Chemical Stability**

Stable under normal temperatures and pressures.

**10.3 Possibility of Hazardous Reactions**

Reacts with water, with formation of carbon dioxide (risk of container bursting). Reacts with alcohols, acids, alkalis, and amines. Risk of exothermic reaction. Risk of polymerization. Contact with certain rubbers and plastics can cause brittleness of the substance/product with subsequent loss in strength.

**10.4 Conditions to Avoid**

Avoid moisture.

**10.5 Incompatible Materials**

Acids, amines, alcohols, water, alkalines, strong bases, substances/products that react with isocyanates.

### 10.6 Hazardous Decomposition Products

Hazardous decomposition products: carbon monoxide, carbon dioxide, nitrogen oxide, hydrogen cyanide, nitrogen oxides, aromatic isocyanates, gases/vapors.

## SECTION 11: Toxicological Information

### 11.1 Information on Toxicological Effects

Most likely routes of exposure are skin, eye and inhalation.

#### Acute Toxicity

<u>Chemical</u>	<u>CAS #</u>	<u>LD<sub>50</sub> oral rat</u>	<u>LD<sub>50</sub> dermal rabbit</u>	<u>LC<sub>50</sub> inhalation rat</u>
Polymeric MDI	9016-87-9	>2,000 mg/kg	> 9,400 mg/kg	0.49 mg/l, 4hr
4,4'- Diphenylmethane Diisocyanate (MDI)	101-68-8	> 7,000 mg/kg	>9,400 mg/kg	0.368 mg/l, 4hr

#### Skin Corrosion/Irritation

- Skin Irritation Category 2 – Causes skin irritation
- MDI - Species: rabbit. Result: Irritating. Method: Draize test

#### Serious Eye Damage/Irritation

- Eye Irritation Category 2A – Causes serious eye irritation
- MDI - Species: rabbit. Result: Irritating. Method: Draize test

#### Respiratory or Skin Sensitization

- Skin Sensitization Category 1 - May cause an allergic skin reaction
- Respiratory Sensitization Category 1 – May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- MDI - Species: guinea pig. Result: sensitizing. Method: Buehler test.

#### Germ Cell Mutagenicity

- Available studies have not indicated this material to be a mutagen.

#### Carcinogenicity

- This product does not contain any component that is considered a human carcinogen by IARC, ACGIH, OSHA, or NTP.

#### Reproductive Toxicity

- No data available

#### Specific Target Organ Toxicity (single exposure) (STOT-SE)

- STOT-RE Category 3 (respiratory tract) – May cause respiratory irritation.

#### Specific Target Organ Toxicity (repeated exposure) (STOT-RE)

- STOT-RE Category 2 (respiratory tract) – May cause damage to organs through prolonged or repeated exposure (respiratory tract)

#### Aspiration Hazard

- No data available

## 11.2 Potential Health Effects

### Inhalation

- |         |  |
|---------|--|
| Acute   | <ul style="list-style-type: none"><li>• Can irritate the mucous membranes in the respiratory tract causing runny nose, sore throat, coughing, chest discomfort, and shortness of breath.</li></ul>   |
| Chronic | <ul style="list-style-type: none"><li>• Repeated overexposure or a single large dose may cause sensitization (asthma or asthma-like symptoms) that may cause some individuals to react later to diisocyanate exposure at levels well below the TLV or PEL.</li></ul> |

### Skin

- |         |   |
|---------|---|
| Acute   | <ul style="list-style-type: none"><li>• Can cause irritation with symptoms of reddening, itching and swelling.</li></ul>                        |
| Chronic | <ul style="list-style-type: none"><li>• Prolonged contact can cause reddening, swelling, rash, and in some cases, skin sensitization.</li></ul> |

### Eye

- |         |   |
|---------|---|
| Acute   | <ul style="list-style-type: none"><li>• Can cause irritation with symptoms of reddening, tearing, stinging, and swelling.</li></ul> |
| Chronic | <ul style="list-style-type: none"><li>• Prolonged vapor contact may cause conjunctivitis.</li></ul>                                 |

### Ingestion

- |         |   |
|---------|---|
| Acute   | <ul style="list-style-type: none"><li>• May cause gastrointestinal discomfort, including abdominal pain, nausea, vomiting and diarrhea. Corrosion of the mouth, throat, and digestive tract may also occur.</li></ul> |
| Chronic | <ul style="list-style-type: none"><li>• None known.</li></ul>   |

### Other Information

- Symptoms of exposure can range from having a cold to a possible asthma attack.
- Sensitized individuals react to very low levels of MDI.
- Skin exposure may aggravate existing dermatitis conditions.
- There are reports that chronic exposure to diisocyanates by inhalation may result in a permanent decrease in lung function.

## SECTION 12: Ecological Information

### 12.1 Ecotoxicity

Toxicity to fish: LC50 (24 h) > 500 mg/l, *Brachydanio rerio* (static)

Aquatic invertebrates: EC50 (24 h) > 500 mg/l, *Daphnia magna*

Aquatic plants: EC0 (72 h) 1,640 mg/l (growth rate), *Scenedesmus subspicatus* (OECD Guideline 201, static)

### 12.2 Persistence and Degradability

This mixture is not readily biodegradable.

0 % BOD of the ThOD (28 d) (OECD Guideline 302 C) (aerobic, activated sludge)

### 12.3 Bioaccumulative Potential



Significant accumulation in organisms is not to be expected.

#### 12.4 Mobility in Soil

The substance will not evaporate into the atmosphere from the water surface. Adsorption to solid soil phase is not expected.

#### 12.5 Other Adverse Effects

No data available.

### SECTION 13: Disposal Considerations

#### 13.1 Waste Disposal Method

##### Product Waste

- Do not dump into any sewers, on the ground, or into any body of water.
- All disposal methods must be in compliance with Federal, State/Provincial, and local regulations.
- Store material for disposal as indicated in Section 7 Handling and Storage.

##### Packaging Waste

- Steel drums must be emptied and can be sent to a licensed drum reconditioner for reuse, a scrap metal dealer or an approved landfill.
- Do not attempt to refill or clean containers since residue is difficult to remove.
- Under no circumstances should empty drums be burned or cut open with gas or electric torch as toxic decomposition products may be liberated.

### SECTION 14: Transport Information

#### US DOT:

Single containers with less than 5,000 lbs of 4,4'-MDI are not regulated.

Single containers with 5,000 lbs or more of 4,4'-MDI are regulated as: UN3082 Environmentally hazardous substances, liquid, n.o.s., 9, III, RQ (Methylene diphenyl diisocyanate).

### SECTION 15: Regulatory Information

#### 15.1 Regulatory Status

##### **CERCLA Hazardous Substances (40 CFR 302):**

Methylene Diphenyl Diisocyanate (CAS# 101-68-8) RQ = 5,000 lbs

**SARA 311/312:** Acute health hazard. Chronic health hazard.

##### **SARA 313:**

Methylene Diphenyl Diisocyanate (CAS# 101-68-8)  
Polymeric MDI (CAS# 9016-87-9)

#### 15.2 US State Regulations

STATE RIGHT-TO-KNOW: To the best of our knowledge, this product does not contain any of the listed chemical known to the State of California to cause cancer, birth defects, or other reproductive harm. (California Health and Safety Code Section 25249.6).

### 15.3 Canadian Regulations

**DSL:** All components of this product are listed on, or exempt from the DSL.

**WHMIS Information:** D2B - Toxic material that causes other toxic effects.

### 15.4 International Inventories\*

**United States:** All components of this product are listed on the TSCA inventory.

\*=Although a chemical may be listed on a country's inventory, it may not indicate a hazard or regulatory control for use.

## SECTION 16: Other Information

### 16.1 HMIS and NFPA RATINGS

#### HMIS Classification

Health: 2\*

Flammability: 1

Reactivity: 1

\*= Chronic

#### NFPA Ratings

Health: 2

Flammability: 1

Instability: 1

Special: None

### 16.2 EU CLP Relevant Phrases

Available on request.

### 16.3 Preparation By

I.H. Department

### 16.4 Preparation Date

September 10, 2013

### 16.5 Last Revision Date

April 2, 2015

### 16.6 Disclaimer/Statement of Liability

The data in this Safety Data Sheet is offered for your consideration, investigation and verification. The data is presented in good faith and was obtained from sources Carpenter believes to be reliable. Carpenter, however, makes no representation as to the completeness or accuracy. Carpenter makes no warranty, express or implied, with respect to the data contained herein. Carpenter cannot anticipate all conditions under which this data and the product may be used. The conditions of handling, storage, use, and disposal of the product are beyond Carpenter's control. Thus, we expressly disclaim responsibility or liability for any loss, damage or expense arising out of reliance on the information contained herein. You are advised to make your own determination as to safety, suitability and appropriate manner of handling, storage, use and disposal.