



Revision Date: 04/24/2015

## SAFETY DATA SHEET

Prepared in accordance with OSHA 29 CFR 1910.1200

### 1. PRODUCT AND COMPANY IDENTIFICATION

**Product Name:** LPUR 12-6057

**Relevant Identified Uses of the substance and uses advised against**

**Identified Uses:** Liquid Polyurethane Adhesive

**Uses advised against:** NA

**Supplier:**

ECO-PUR Solutions, LLC  
694 Veterans Parkway, Suite F  
Bolingbrook, IL 60440  
Tel: (630) 226-2300  
Fax: (630) 226-5441

**Emergency Telephone Numbers:**

**Medical Emergency:** United States 1-800-222-1222

**Transportation Emergency:** United States 1-800-424-9300  
International +1-703-527-3887

### 2. HAZARDS IDENTIFICATION

**Classification of the substance or mixture**

**GHS Classification in accordance 29 CFR 1910.1200 (OSHA HCS)**

Irritant, Skin (Category 2)

Irritant, Eye (Category 2B)

STOT - Single Exposure (Category 3)

**OSHA / GHS Label Elements, including precautionary statements**

Pictograms:



Signal word:

**Warning**

**Hazard Statement(s)**

Causes skin irritation

Causes eye irritation

May cause drowsiness or dizziness

**Precautionary Statement(s)**

**Prevention:**

Avoid breathing dust, fume, gas, mist, vapors or spray.

Wash face, hands and any exposed skin thoroughly after handling.

Use only in a well-ventilated area.

Wear protective gloves, clothing, eye protection or face protection.

**Response:**

IF ON SKIN: Wash with plenty of soap and water.

If skin irritation occurs: Get medical advice/attention.

Take off contaminated clothing and wash before reuse.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

If eye irritation persists: Get medical advice attention.

IF INHALED: Remove victim to fresh air keep at rest in a position comfortable for breathing.

Call a POISON Center or doctor/physician if you feel unwell.

**Storage:**

Store in a well-ventilated place. Keep container tightly closed.  
Store locked up.

**Disposal:**

Dispose of contents/container in accordance with local/regional/national/international regulations

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	EINECS Number	Weight %	EU Classification*
4,4'-Diphenylmethane Diisocyanate	101-68-8	202-966-0	1-3	Carc. 2 Acute Tox. 4 * STOT RE 2 * Eye Irrit. 2 STOT SE 3 Skin Irrit. 2 Resp. Sens. 1 Skin Sens. 1

\*EU Classification is for pure concentrations of the individual materials only, and represents classification under EU regulations. It does not represent the mixture itself.

### 4. FIRST AID MEASURES

<b>Skin Contact:</b>	Remove contaminated clothing. Flush affected area with soap and plenty of water for at least 15 minutes. If irritation develops or persists, seek medical attention.
<b>Eye Contact:</b>	Flush eyes with warm water for at least 20 minutes. Hold eyelids apart to ensure complete irrigation of the eyes. Remove contact lenses. Seek immediate medical attention.
<b>Inhalation:</b>	Move to fresh air. If breathing is difficult provide oxygen. If not breathing, immediately begin rescue breathing. If heart has stopped, provide cardiopulmonary resuscitation (CPR). Seek immediate medical attention.
<b>Ingestion:</b>	Do not induce vomiting. If vomiting occurs spontaneously, place head lower than knees, or, if unconscious, in rescue position. Seek immediate medical attention.
<b>Notes to Physician:</b>	Maintain adequate ventilation and oxygenation of patient.

### 5. FIRE AND IGNITION INFORMATION

<b>Flash Point</b>	>400°F (>250°C) PMCC ASTM-D93
<b>Explosion Limits in Air – Upper (%)</b>	Not established for the product itself.
<b>Explosion Limits in Air – Lower (%)</b>	Not established for the product itself.
<b>OSHA Flammability Classification:</b>	Non-Combustible
<b>Auto-ignition Temperature:</b>	Not established for the product itself.
<b>Extinguishing Media:</b>	Water fog or fine spray. Dry chemical fire extinguishers. Carbon dioxide fire extinguishers. Foam. Do not use direct water stream. May spread fire.
<b>Special Protective Equipment for Firefighters:</b>	Fire fighters should wear full turn-out gear, including a NIOSH approved self-contained breathing apparatus operated in pressure-demand or other positive pressure when fighting fires.
<b>Specific Hazards:</b>	Not established for the product itself.
<b>Hazardous Decomposition and/or Combustion Products:</b>	During a fire, smoke may contain the original material in addition to combustion products of varying composition which may be toxic and/or irritating. Combustion products may include and are not limited to: Nitrogen oxides. Isocyanates. Hydrogen cyanide. Carbon monoxide. Carbon Dioxide.
<b>Risk of Dust Explosion:</b>	Not applicable.

**6. ACCIDENTAL RELEASE MEASURES**

<b>Personal Precautions:</b>	Only trained personnel should clean a spill. Evacuate all non-essential personnel. Ventilate spill area. Eliminate all ignition sources. Avoid breathing vapors, eye and skin contact. Wear appropriate personal protective equipment.
<b>Methods for Cleaning Up:</b>	Evacuate non-emergency personnel. Isolate the area and prevent access. Ensure adequate ventilation. Eliminate all ignition sources. Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust). Transfer to a waste container. Scrape-up/off dried materials. The waste can then be disposed of in accordance with all applicable local, state, and federal regulations. Ensure adequate ventilation.  See Section 7 for information on safe handling. See Section 8 for information on personal protection equipment. See Section 13 for disposal information.
<b>Environmental Precautions:</b>	Do not allow spilled material onto or into soil, drains, sewer, rivers or other water courses.

**7. HANDLING AND STORAGE**

<b>Precautions for Safe Handling:</b>	Avoid skin and eye contact. Wear appropriate personal protective equipment. Avoid breathing vapors. Work in a well-ventilated area. Do not ingest. Do not use near open flames and other ignition sources. Safety showers and eyewash stations should be available for use in the immediate work area. Wash hands after using this product, and before eating, drinking, smoking or using the lavatory.
<b>Conditions for Safe Storage:</b>	Store in well ventilated, cool, dry location, away from direct sunlight. Keep containers tightly closed when not in use. Ambient temperature should be between 50 -100°F (5-30°C).
<b>Incompatible Materials:</b>	Oxidizing materials, acids, bases, amines

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****EXPOSURE LIMITS**

**Exposure Limits for the Product itself have not been established.**

*Exposure limits for those components with limits are stated below.*

<b>4,4 – Methylenediphenyl diisocyanate,, CAS RN: 101-68-8</b>	OSHA – Ceiling: 0.02 ppm ACGIH – TLV: 0.005 ppm TWA
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<b>ENGINEERING CONTROLS:</b>	Use only with adequate ventilation. Ventilation must be adequate to maintain the ambient workplace atmosphere below the exposure limit(s) stated above. The use of both general dilution and local exhaust ventilation is recommended to control airborne exposures to mist, vapor, or spray. Do not use in a confined area or areas with little or no air movement.
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**PERSONAL PROTECTIVE EQUIPMENT**

<b>Respiratory Protection:</b>	When atmospheric levels exceed the exposure guidelines, use a NIOSH approved air-purifying respirator. Use a respirator that has been selected by an industrial hygienist or other technically qualified person for the specific work conditions. If respirators are used, OSHA requires compliance with its respirator program. For situations where atmospheric levels may exceed the level for which an air-purifying respirator is effective, use positive-pressure air-supplying respiratory (air-line or self-contained breathing apparatus).
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<b>Hand Protection:</b>	Use gloves chemically resistant to this material. Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment.
<b>Eye Protection:</b>	Wear safety glasses with side shields. Chemical safety goggles and face shield should be used if splash hazard exists. Eyewash fountain should be located in the immediate work area.
<b>Skin and Body Protection:</b>	Wear chemical resistant clothing suitable to the job. Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment.
<b>Other:</b>	A hazard assessment should be performed before using this material to determine the appropriate personal protective equipment for the task. Safety shower and eyewash stations should be available in the immediate work area. Do not smoke, eat or drink while using this material. Wash hands after using this material, before eating, drinking, smoking or using the lavatory.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

<b>Appearance:</b>	Opaque Solid
<b>Odor:</b>	Odorless
<b>pH</b>	Not applicable
<b>Odor Threshold:</b>	Not established for the product itself.
<b>Vapor Pressure:</b>	Not established for the product itself.
<b>Vapor Density:</b>	>400°F (>250°C) PMCC ASTM-D93
<b>Flash Point</b>	>392°F (>200°C) @ 5mm Hg
<b>Explosion Limits in Air – Upper (%)</b>	Not established for the product itself.
<b>Explosion Limits in Air – Lower (%)</b>	Not established for the product itself.
<b>OSHA Flammability Classification:</b>	Non-Combustible
<b>Auto-ignition Temperature:</b>	Not established for the product itself.
<b>Decomposition Temperature:</b>	Not established for the product itself.
<b>Initial Boiling Point /Range:</b>	Not established for the product itself.
<b>Melting Point:</b>	Not established for the product itself.
<b>Freezing Point:</b>	Not established for the product itself.
<b>Water Solubility:</b>	Insoluble
<b>Specific Gravity:</b>	Not established for the product itself.
<b>Relative Density:</b>	Not established for the product itself.
<b>% Volatile (by Volume):</b>	Not established for the product itself.
<b>Evaporation Rate:</b>	Not established for the product itself.
<b>Partition coefficient: n-octanol/water</b>	Not established for the product itself.
<b>Viscosity:</b>	~4,000 mPas @ 120°C

## 10. STABILITY AND REACTIVITY

<b>Stability:</b>	Stable under recommended conditions. See section 7.
<b>Hazardous Polymerization:</b>	Will not occur.
<b>Mechanical Sensitivity (shock):</b>	Not applicable.
<b>Conditions to Avoid:</b>	Avoid heat, sparks, open flames, or other ignition sources.
<b>Hazardous Decomposition and/or Combustion Products:</b>	See section 5.
<b>Static Discharge Effects:</b>	Avoid static discharges

## 11. TOXICOLOGICAL INFORMATION

<b>Routes of Exposure:</b>	Inhalation, Skin Contact, Eye Contact
<b>Signs and Symptoms of Exposure:</b>	Contact with the skin can be indicated by redness and/or irritation at the sight of exposure. Contact with the eye(s) is indicated by irritation, redness and watering of the eye(s). Inhalation is indicated by drowsiness, dizziness, or CNS depression.

**Toxicological data has not been established for the product itself.**

*Components of this material that have associated toxicological data is provided below.*

**Acute Toxicity**

Oral LD50:	4,4 – Methylenediphenyl diisocyanate - > 10,000 mg/kg (rat)
Inhalation LC50:	4,4 – Methylenediphenyl diisocyanate – Aerosol, 490 mg/m <sup>3</sup> (rat)
Dermal LC50:	4,4 – Methylenediphenyl diisocyanate - > 2,000 mg/kg (rabbit)

**Serious Eye Damage/Eye Irritation:**

No data available on the product itself.

**Skin Corrosion/ Irritation:**

4, 4 – Methylenediphenyl diisocyanate – may cause irritation of the skin.

**Respiratory or Skin Sensitization:**

4, 4 – Methylenediphenyl diisocyanate – may cause Respiratory or Skin Sensitization.

**Germ Cell Mutagenicity:**

No data available on the product itself.  
4,4 – Methylenediphenyl diisocyanate – Genetic toxicity data on MDI are inconclusive,

**Carcinogenicity**

ACGIH: No component of this product is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by ACGIH.  
IARC: The MDI component of this product is present at levels greater than or equal to 0.1% is identified as unclassifiable as carcinogenetic in humans, IARC Group 3.  
NTP: No component of this product is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by NTP.  
OSHA: No component of this product is present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by OSHA.

**Reproductive Toxicity:**

No data available on the product itself.  
4,4 – Methylenediphenyl diisocyanate – in lab animals MDI did not cause birth defects

**Teratogenicity:**

No data available on the product itself.

**Specific Target Organ Toxicity – Single Exposure:**

4,4 – Methylenediphenyl diisocyanate when inhaled can cause respiratory irritation.

**Specific Target Organ Toxicity – Repeated Exposure:**

No data available on the product itself.

**Aspiration Hazard:**

No data available on the product itself.

**Synergistic Materials:**

No data available on the product itself.

**12. ECOLOGICAL INFORMATION**

*Information given is based on data on the components and the toxicology of similar products.*

**Aquatic Toxicity:**

Do not allow spilled material onto or into soil, drains, sewer, rivers or other water courses.

**Environmental Fate:**

Mobility:	No data available on the product itself.
Bioaccumulation:	No data available on the product itself.
Persistence/Degradability:	No data available on the product itself.
Distribution to Environmental Compartments:	No data available on the product itself.

### 13. DISPOSAL CONSIDERATIONS

#### Disposal:

Disposal of this product must be in accordance with all applicable local, state, and federal regulatory requirements. When disposing of waste materials contact and offer to only licensed professional waste disposal services. Do not dispose of used, unused, or wastes into sanitary sewage or storm water drains or systems.

#### RCRA Classification (40 CFR 261):

Dispose of in accordance with all applicable local, state and federal regulatory requirements.

#### Unused and Uncontaminated Product:

Dispose of in accordance with all applicable local, state, and federal regulatory requirements.

#### Disclaimer:

Information in this section pertains to the product as shipped in its intended composition as described in Section 2 of this MSDS. Contamination or processing may change waste characteristics and requirements. Regulations may also apply to empty containers, liners or rinsate. State/provincial and local regulations may be different from federal regulations.

### 14. TRANSPORTATION INFORMATION

#### DOT: Not Regulated

UN Identification Number:	NA
Proper Shipping Name:	NA
Hazard Class:	NA
Packing Group:	NA
Marine Pollutant:	NA
Poison Inhalation Hazard:	NA

#### DOT – Bulk Shipping: Regulated

UN Identification Number:	NA3077
Proper Shipping Name:	Other regulated substances, solid, n.o.s. ( Methylene diphenyl diisocyanate)
Hazard Class:	9
Packing Group:	III
Marine Pollutant:	5000 lbs.
Poison Inhalation Hazard:	NA

#### IATA: Not Regulated

UN Identification Number:	NA
Proper Shipping Name:	NA
Hazard Class:	NA
Packing Group:	NA

#### IMDG: Not Regulated

UN Identification Number:	NA
Proper Shipping Name:	NA
Hazard Class:	NA
Packing Group:	NA
Marine Pollutant:	NA

### 15. REGULATORY INFORMATION

#### Hazard Classification

**OSHA Classification: Hazardous**  
Irritant, Skin (Category 2)

Irritant, Eye (Category 2B)  
STOT - Single Exposure ( Category 3)

**International Inventories**

**All components of this product are listed on or exempt from the following inventories:**

- Yes - Australian Inventory of Chemical Substances (AICS)
- Yes - Domestic Substances List (DSL)
- Yes - Chinese Inventory
- Yes - European Inventory of Existing Commercial Substances (EINECS)
- Yes - Japanese Existing and New Chemical Substances (ENCS)
- Yes - Korean Existing Chemicals List (KECL)
- Yes - New Zealand Hazardous Substances and New Organisms Act (HSNO)
- Yes - Philippine Inventory of Chemicals and Chemical Substances (PICCS)
- Yes - United States Toxic Substances Control Act (TSCA) Inventory

A "Yes" indicates this product complies with the inventory requirements administered by the governing country(s).

A "No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

**U.S. Federal Regulations**

**TSCA 12(b) Export Notification:** None

**Clean Air Act amendments of 1990 (CAA, Section 11240: CFR 82):** No

Component	CAS #	Amount
NA	NA	NA

**Clean Water Act (CWA, 40 CFR 116):** No Priority Pollutants

**Comprehensive Environmental Response, Compensation and Liability Act (CERCLA, 40 CFR 302):** Yes

Component	CAS #	RQ
4,4 – Methylene-diphenyl diisocyanate	101-68-8	5000 lbs.

**Superfund Amendments and Reauthorization Act, Title III (SARA):**

**SARA Section 302 (40 CFR 355) Extremely Hazardous Substances:** No

Component	CAS #	Amount
NA	NA	NA

**SARA Section 311/312 (40 CFR 370) Hazard Category:** Acute

**SARA Section 313 (40 CFR 372) Toxics Release Inventory:** Yes

Component	CAS #	Amount
4,4 – Methylene-diphenyl diisocyanate	101-68-8	10-15%

**U.S. State Regulations**

**California Proposition 65:** This product does not contain chemicals known to the state of California to cause cancer, birth defects or other reproductive harm.

Component	CAS #	Amount
NA	NA	NA

## 16. OTHER INFORMATION

**HMIS Rating**

HMIS Index: \* - chronic, 0 – Minimal, 1 – slight, 2- moderate, 3 – serious, 4 –severe

Health: 1  
Flammability: 0  
Physical Hazard: 0

**Additional Contacts:**

Prepared by: ND Industries, Inc. – Safety, Health and Environmental Affairs  
Version: 3.2  
Revision Date: 04/24/2015  
Previous Revision Date: None

**Reasons for Revision:          Creation of SDS****Glossary**

ACGIH:	American Conference of Governmental Industrial Hygienists
CAS:	Chemical Abstract Service Number
Ceiling:	Absolute exposure limit that should not be exceeded at any time
CERCLA:	Comprehensive Environmental Response, Compensation, and Liability Act
GHS:	Globally Harmonized System
HCS:	U.S. Hazard Communications Standard
IARC:	International Agency for Research on Cancer
IATA:	International Air Transportation Association
IDLH:	Immediately Dangerous to Life and Health
IMDG:	International Maritime Dangerous Goods Code
DOT:	U.S. Department of Transportation
OSHA:	Occupational Safety and Health Administration
NTP:	U.S. National Toxicology Program
PEL:	Permissible Exposure Limit - An airborne concentration in which nearly all workers may be repeatedly exposed ... without adverse health effects. Establish by US OSHA
ppm:	Parts per million
RCRA:	Resource Conservation and Recovery Act
SARA:	Superfund Amendments and Reauthorization Act
STEL:	Short Term Exposure Limit - One time exposure for a duration of 15 minutes, that cannot be repeated more than 4 times per day
TSCA:	Toxic Substances Control Act
TLV:	Threshold Limit Value - An airborne concentration in which nearly all workers may be repeatedly exposed ... without adverse health effects. Established by US ACGIH
TWA:	Time Weighted Average - Average exposure on the basis of a 8h/day, 40h/week work schedule

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