

**1 Identification**

- **Product identifier**
- **Trade name:** URETHANE U100N-HV PART A
- **Article number:** URU100N-HV PT A
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**  
Resin Designs, LLC  
11 State Street  
WOBURN, MA 01801
- **Information department:** Product safety department
- **Emergency telephone number:**  
Within the U.S. call Chemtrec: +1 (800) 262-8200  
Outside the U.S. call Chemtrec: +1 (703) 741-5500

**2 Hazard(s) identification**

- **Classification of the substance or mixture**



GHS06 Skull and crossbones

Acute Tox. 2 H330 Fatal if inhaled.



GHS08 Health hazard

Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Repr. 2 H361 Suspected of damaging fertility or the unborn child.



GHS07

Skin Irrit. 2 H315 Causes skin irritation.

Skin Sens. 1 H317 May cause an allergic skin reaction.

STOT SE 3 H335 May cause respiratory irritation.

- **Label elements**

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

- **Hazard pictograms**



GHS06



GHS07



GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

4,4'-methylenedi(cyclohexyl isocyanate)

Hexanoic acid, 2-ethyl-, tin(2+) salt

- **Hazard statements**

H330 Fatal if inhaled.

H315 Causes skin irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

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H317 May cause an allergic skin reaction.

H361 Suspected of damaging fertility or the unborn child.

H335 May cause respiratory irritation.

**Precautionary statements**

- P260 Do not breathe dust/fume/gas/mist/vapors/spray.  
 P284 [In case of inadequate ventilation] wear respiratory protection.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P264 Wash thoroughly after handling.  
 P271 Use only outdoors or in a well-ventilated area.  
 P272 Contaminated work clothing must not be allowed out of the workplace.  
 P201 Obtain special instructions before use.  
 P202 Do not handle until all safety precautions have been read and understood.  
 P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P310 Immediately call a POISON CENTER/doctor.  
 P321 Specific treatment (see on this label).  
 P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.  
 P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.  
 P363 Wash contaminated clothing before reuse.  
 P308+P313 IF exposed or concerned: Get medical advice/attention.  
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.  
 P337+P313 If eye irritation persists: Get medical advice/attention.  
 P302+P352 IF ON SKIN: Wash with plenty of soap and water.  
 P362+P364 Take off contaminated clothing and wash it before reuse.  
 P405 Store locked up.  
 P403+P233 Store in a well-ventilated place. Keep container tightly closed.  
 P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

**Classification system:****NFPA ratings (scale 0 - 4)****HMIS-ratings (scale 0 - 4)****Other hazards****Results of PBT and vPvB assessment**· **PBT:** Not applicable.· **vPvB:** Not applicable.**3 Composition/information on ingredients****Chemical characterization: Mixtures**· **Description:** Mixture of the substances listed below with nonhazardous additions.**Dangerous components:**

5124-30-1	4,4'-methylenedi(cyclohexyl isocyanate)	50-100%
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301-10-0 Hexanoic acid, 2-ethyl-, tin(2+) salt

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≤ 2.5%

#### 4 First-aid measures

- **Description of first aid measures**
- **General information:**  
Immediately remove any clothing soiled by the product.  
Remove breathing apparatus only after contaminated clothing have been completely removed.  
In case of irregular breathing or respiratory arrest provide artificial respiration.
- **After inhalation:**  
Supply fresh air or oxygen; call for doctor.  
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed** No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**  
No further relevant information available.

#### 5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:** Use fire fighting measures that suit the environment.
- **Special hazards arising from the substance or mixture**  
During heating or in case of fire poisonous gases are produced.
- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

#### 6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Mount respiratory protective device.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**  
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).  
Dispose contaminated material as waste according to item 13.  
Ensure adequate ventilation.
- **Reference to other sections**  
See Section 7 for information on safe handling.  
See Section 8 for information on personal protection equipment.  
See Section 13 for disposal information.

#### 7 Handling and storage

- **Handling:**
- **Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
Prevent formation of aerosols.

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- **Information about protection against explosions and fires:** Keep respiratory protective device available.
- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

## 8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see item 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**  
The following constituent is the only constituent of the product which has a PEL, TLV or other recommended exposure limit.  
At this time, the remaining constituent has no known exposure limits.

### 5124-30-1 4,4'-methylenedi(cyclohexyl isocyanate)

REL	Ceiling limit value: 0.11 mg/m <sup>3</sup> , 0.01 ppm
TLV	Long-term value: 0.054 mg/m <sup>3</sup> , 0.005 ppm

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing.  
Wash hands before breaks and at the end of work.  
Store protective clothing separately.  
Avoid contact with the skin.  
Avoid contact with the eyes and skin.
- **Breathing equipment:**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.
- **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

- **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

- **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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- **Eye protection:** Goggles recommended during refilling.

## 9 Physical and chemical properties

### · Information on basic physical and chemical properties

#### · General Information

#### · Appearance:

· **Form:** Fluid

· **Color:** Clear

· **Odor:** Characteristic

· **Odor threshold:** Not determined.

· **pH-value:** Not determined.

#### · Change in condition

· **Melting point/Melting range:** Undetermined.

· **Boiling point/Boiling range:** 251 °C (484 °F)

· **Flash point:** 200 °C (392 °F)

· **Flammability (solid, gaseous):** Not applicable.

· **Decomposition temperature:** Not determined.

· **Auto igniting:** Product is not selfigniting.

· **Danger of explosion:** Product does not present an explosion hazard.

#### · Explosion limits:

· **Lower:** 0.0 Vol %

· **Upper:** 0.0 Vol %

· **Vapor pressure:** Not determined.

· **Density at 25 °C (77 °F):** 1.14 g/cm<sup>3</sup> (9.513 lbs/gal)

· **Relative density:** Not determined.

· **Vapor density:** Not determined.

· **Evaporation rate:** Not determined.

#### · Solubility in / Miscibility with

· **Water:** Not miscible or difficult to mix.

· **Partition coefficient (n-octanol/water):** Not determined.

#### · Viscosity:

· **Dynamic:** Not determined.

· **Kinematic:** Not determined.

#### · Solvent content:

· **Organic solvents:** 0.0 %

· **VOC content:** 0.0 g/l / 0.00 lb/gal

· **Other information:** No further relevant information available.

## 10 Stability and reactivity

· **Reactivity:** No further relevant information available.

· **Chemical stability:**

· **Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

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- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

## 11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

**5124-30-1 4,4'-methylenedi(cyclohexyl isocyanate)**

Inhalative	LC50/4 h	0.464 mg/l (rat)
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- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** No irritating effect.
- **Sensitization:**  
Sensitization possible through inhalation.  
Sensitization possible through skin contact.

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Toxic

Harmful

Irritant

Very toxic

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

None of the ingredients is listed.

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

## 12 Ecological information

- **Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
- **Bioaccumulative potential** No further relevant information available.
- **Mobility in soil** No further relevant information available.
- **Additional ecological information:**

- **General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

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Trade name: **URETHANE U100N-HV PART A**· **Other adverse effects** No further relevant information available.

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**13 Disposal considerations**

- **Waste treatment methods**
- **Recommendation:**  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
- **Recommendation:** Disposal must be made according to official regulations.

**14 Transport information**

- |   |  |
|---|--|
| · <b>UN-Number</b>  |  |
| · <b>DOT</b>  | UN3082   |
| · <b>ADN, IMDG</b>  | not regulated  |
| · <b>IATA</b>   | UN3334   |
| · <b>UN proper shipping name</b>  |  |
| · <b>DOT</b>  | Environmentally hazardous substances, liquid, n.o.s. (4,4'-methylenedi(cyclohexyl isocyanate)) |
| · <b>ADN, IMDG</b>  | not regulated  |
| · <b>IATA</b>   | Aviation regulated liquid, n.o.s. (4,4'-methylenedi(cyclohexyl isocyanate))                    |
| · <b>Transport hazard class(es)</b>   |  |
| · <b>DOT, IATA</b>  |  |
|  |  |
| · <b>Class</b>  | 9 Miscellaneous dangerous substances and articles  |
| · <b>Label</b>  | 9  |
| · <b>ADN/R Class:</b>   | not regulated  |
| · <b>Packing group</b>  |  |
| · <b>DOT, IATA</b>  | III  |
| · <b>IMDG</b>   | not regulated  |
| · <b>Environmental hazards:</b>   |  |
| · <b>Marine pollutant:</b>  | No   |
| · <b>Special precautions for user</b>   | Not applicable.  |
| · <b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>    | Not applicable.  |
| · <b>UN "Model Regulation":</b>   | not regulated  |

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**15 Regulatory information**

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- Sara

· **Section 355 (extremely hazardous substances):**

None of the ingredients is listed.

· **Section 313 (Specific toxic chemical listings):**

5124-30-1 | 4,4'-methylenedi(cyclohexyl isocyanate)

· **TSCA (Toxic Substances Control Act):**

All ingredients are listed.

· **Proposition 65**· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**· **EPA (Environmental Protection Agency)**

None of the ingredients is listed.

· **TLV (Threshold Limit Value established by ACGIH)**

None of the ingredients is listed.

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **Protective Action Criteria for Chemicals**· **PAC-1:**

5124-30-1	4,4'-methylenedi(cyclohexyl isocyanate)	0.015 ppm
301-10-0	Hexanoic acid, 2-ethyl-, tin(2+) salt	0.68 mg/m3

· **PAC-2:**

5124-30-1	4,4'-methylenedi(cyclohexyl isocyanate)	0.29 ppm
301-10-0	Hexanoic acid, 2-ethyl-, tin(2+) salt	110 mg/m3

· **PAC-3:**

5124-30-1	4,4'-methylenedi(cyclohexyl isocyanate)	1.7 ppm
301-10-0	Hexanoic acid, 2-ethyl-, tin(2+) salt	670 mg/m3

- **GHS label elements** The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**

GHS06

GHS07

GHS08

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· **Signal word** Danger· **Hazard-determining components of labeling:**

4,4'-methylenedi(cyclohexyl isocyanate)

Hexanoic acid, 2-ethyl-, tin(2+) salt

· **Hazard statements**

H330 Fatal if inhaled.

H315 Causes skin irritation.

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

H317 May cause an allergic skin reaction.

H361 Suspected of damaging fertility or the unborn child.

H335 May cause respiratory irritation.

· **Precautionary statements**

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P284 [In case of inadequate ventilation] wear respiratory protection.

P280 Wear protective gloves/protective clothing/eye protection/face protection.

P264 Wash thoroughly after handling.

P271 Use only outdoors or in a well-ventilated area.

P272 Contaminated work clothing must not be allowed out of the workplace.

P201 Obtain special instructions before use.

P202 Do not handle until all safety precautions have been read and understood.

P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P310 Immediately call a POISON CENTER/doctor.

P321 Specific treatment (see on this label).

P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER/doctor.

P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.

P363 Wash contaminated clothing before reuse.

P308+P313 IF exposed or concerned: Get medical advice/attention.

P333+P313 If skin irritation or rash occurs: Get medical advice/attention.

P337+P313 If eye irritation persists: Get medical advice/attention.

P302+P352 IF ON SKIN: Wash with plenty of soap and water.

P362+P364 Take off contaminated clothing and wash it before reuse.

P405 Store locked up.

P403+P233 Store in a well-ventilated place. Keep container tightly closed.

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

· **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.**16 Other information**

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

· **Department issuing SDS:** Environment protection department.· **Contact:** Mr. Edward Poznysz, VP of Technologies: epoznysz@resindesigns.com· **Date of preparation / last revision** 01/05/2017 / 2· **Abbreviations and acronyms:**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

DOT: US Department of Transportation

IATA: International Air Transport Association

ACGIH: American Conference of Governmental Industrial Hygienists

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

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Reviewed on 01/05/2017

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NFPA: National Fire Protection Association (USA)  
HMIS: Hazardous Materials Identification System (USA)  
VOC: Volatile Organic Compounds (USA, EU)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
vPvB: very Persistent and very Bioaccumulative  
NIOSH: National Institute for Occupational Safety  
OSHA: Occupational Safety & Health  
TLV: Threshold Limit Value  
PEL: Permissible Exposure Limit  
REL: Recommended Exposure Limit  
Acute Tox. 2: Acute toxicity – Category 2  
Skin Irrit. 2: Skin corrosion/irritation – Category 2  
Resp. Sens. 1: Respiratory sensitisation – Category 1  
Skin Sens. 1: Skin sensitisation – Category 1  
Repr. 2: Reproductive toxicity – Category 2  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

US