

Safety Data Sheet acc. to OSHA HCS

Printing date 07/25/2018

Reviewed on 07/25/2018

1 Identification

- Product identifier

- Trade name: **UR6060 Clear B**
- Recommended use Isocyanates
- Restrictions on use For industrial use only

- Details of the supplier of the safety data sheet

- Manufacturer/Supplier:
ResinLab, LLC
N109 W13300 Ellsworth Drive
Germantown, WI 53022
1-877-259-1669
www.resinlab.com
- Information Department: Product Safety Department: msds@resinlab.com
- Emergency Telephone Number:
North America - Chemtrec: 1-800-424-9300 (24 hours)
International - Chemtrec: 01-703-527-3887 (24 hours)

2 Hazard(s) identification

- Classification of the substance or mixture

Acute Tox. 4 H332 Harmful if inhaled.
 Skin Sens. 1 H317 May cause an allergic skin reaction.
 STOT SE 3 H335 May cause respiratory irritation.

- Label elements

- GHS label elements The substance is classified and labeled according to the Globally Harmonized System (GHS).
- Hazard pictograms



GHS07

- Signal word Warning

- Hazard-determining components of labeling:

Hexamethylene diisocyanate homopolymer
 Hexamethylene Diisocyanate

- Hazard statements

H332 Harmful if inhaled.
 H317 May cause an allergic skin reaction.
 H335 May cause respiratory irritation.

- Precautionary statements

Do not breathe dust/fume/gas/mist/vapors/spray.
 Use only outdoors or in a well-ventilated area.
 Contaminated work clothing must not be allowed out of the workplace.
 Wear protective gloves/protective clothing/eye protection/face protection.
 [In case of inadequate ventilation] wear respiratory protection.
 IF ON SKIN: Gently wash with plenty of soap and water.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 If skin irritation or rash occurs: Get medical advice/attention.
 If experiencing respiratory symptoms: Call a poison center/doctor.
 Wash contaminated clothing before reuse.
 Store in a well-ventilated place. Keep container tightly closed.
 Store locked up.
 Dispose of contents/container in accordance with local/regional/national/international regulations.

- Classification system:

- NFPA System

- NFPA ratings (scale 0 - 4)



Health = 2
 Fire = 1
 Reactivity = 1

NFPA special hazards (water reactivity and oxidizing property): None

- HMIS System

- HMIS-ratings (scale 0 - 4)



Health = 2
 Fire = 1
 Reactivity = 1

- Other hazards

Possible sensitizer. Reacts with common materials including water, alcohols, bases and amines releasing large amounts of carbon dioxide. Asthmatic sensitization can occur from a single large inhalation exposure or from repeated lower inhalation exposures.

- Results of PBT and vPvB assessment

- PBT: Not applicable.
- vPvB: Not applicable.

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3 Composition/information on ingredients

· **Chemical characterization: Mixtures**

· **Dangerous components:**

CAS: 28182-81-2 NLP: 500-060-2	Hexamethylene diisocyanate homopolymer Acute Tox. 4, H332; Skin Sens. 1B, H317; STOT SE 3, H335	90-100%
CAS: 822-06-0 EINECS: 212-485-8 Index number: 615-011-00-1 RTECS: MO 1740000	Hexamethylene Diisocyanate Acute Tox. 1, H330 Skin Corr. 1B, H314 Acute Tox. 4, H302; Skin Sens. 1, H317; STOT SE 3, H335	0.1-1%

· **Additional information:**

If the chemical name/CAS number is proprietary and or weight percentage is listed as a range, the specific chemical identity and or percentage of composition has been withheld as a trade secret.

4 First-aid measures

· **Description of first aid measures**

· **General information:** Keep warm, position comfortably and cover well.

· **After inhalation:**

Remove victim from exposure to fresh air. Keep person at rest. Provide oxygen if person is not breathing. Supply fresh air and if symptoms occur call for a 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.

Remove all contaminated clothing and wash before reuse.

If skin rash or irritation occurs, seek medical advice.

· **After eye contact:**

Immediately flush opened eyes with water for 5 minutes, then remove contact lenses if present, continue flushing for at least another 15 minutes.

If symptoms develop seek medical attention.

· **After swallowing:**

If victim is unconscious; never give anything by mouth.

Do NOT induce vomiting.

If victim is conscious, rinse out mouth with water.

Get medical attention if you feel unwell.

· **Information for doctor:**

· **Most important symptoms and effects, both acute and delayed**

Skin contact may aggravate existing skin disease and inhalation of product may aggravate existing respiratory problems.

· **Indication of any immediate medical attention and special treatment needed**

Check section 11 Toxicological Information for further relevant information.

5 Fire-fighting measures

· **Extinguishing media**

· **Suitable extinguishing agents:**

Use fire fighting measures that suit the environment.

Alcohol resistant foam

Carbon dioxide

dry chemical

Fire-extinguishing powder

· **For safety reasons unsuitable extinguishing agents:** No relevant information.

· **Special hazards arising from the substance or mixture**

Will not burn unless preheated.

In case of fire, the following can be released:

Nitrogen oxides (NOx)

Carbon dioxide (CO₂) and Carbon monoxide (CO)

· **Advice for firefighters**

· **Protective equipment:**

Mouth respiratory protective device.

If employees are expected to fight fires, they must be trained and equipped as stated in the OSHA fire brigades standard (29 CFR 1910.156).

As with any fire, wear positive-pressure self-contained breathing apparatus and full protective gear that are NIOSH approved.

6 Accidental release measures

· **Personal precautions, protective equipment and emergency procedures**

Wear protective clothing.

Mount respiratory protective device.

Do not breathe gas, vapors, dusts or mists if their inhalable particles occur during use.

· **Environmental precautions:** Inform respective authorities in case of seepage into water course or sewage system.

· **Methods and material for containment and cleaning up:**

For large spills: provide diking or containment to minimize spreading. If possible pump and store material in appropriate container.

For small spills: Ventilate and wash area. Collect spills and absorbant material in appropriate container.

Ensure adequate ventilation.

Use an open container to allow for CO₂ escape.

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Dispose contaminated material as waste according to item 13.

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do not approach from downwind.

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7 Handling and storage

- **Handling:**

- **Precautions for safe handling**

- Ensure good ventilation/exhaustion at the workplace.
- Prevent formation of aerosols.
- Keep away from incompatible material(s).
- Avoid any release into the environment.
- Store in original container.
- Do not breathe dust/fumes/mist/vapor/spray.
- Avoid contact with eyes, skin and clothing.
- Keep away from heat, sparks, flames and ignition sources.
- Observe all the personal protection requirements in Section 8.

- **Conditions for safe storage, including any incompatibilities**

- **Storage:**

- **Requirements to be met by storerooms and receptacles:**

- Provide ventilation for receptacles.
- Keep stored in accordance with local, regional, national, and international regulations.

8 Exposure controls/personal protection

- **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.

822-06-0 Hexamethylene Diisocyanate

REL	Long-term value: 0.035 mg/m ³ , 0.005 ppm Ceiling limit value: 0.14* mg/m ³ , 0.02* ppm *10-min
TLV	Long-term value: 0.034 mg/m ³ , 0.005 ppm BEI

- **Additional Occupational Exposure Limit Values for possible hazards during processing:** None.

- **Exposure controls**

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.

- **Personal protective equipment:**

- **General protective and hygienic measures:**

- Be sure to clean skin thoroughly after work and before breaks.
- Keep away from foodstuffs, beverages and feed.
- Immediately remove all soiled and contaminated clothing.
- Wash hands before breaks and at the end of work.

- **Personal Protective Equipment (PPE)**

- **Breathing equipment:**

Sufficient ventilation in pattern and volume should be provided in order to maintain air contaminant levels below recommended exposure limits.

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. Observe OSHA regulations (29CFR 1910.134) for respirator use.

When using a spray gun wear a self contained breathing apparatus.

- **Protection of hands:**

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

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

- **Material of gloves**



Chemical resistant gloves

- **Eye protection:**



Safety Glasses with side shields

- **Body protection:** Appropriate chemical resistant clothing.

- **Limitation and supervision of exposure into the environment**

The Engineering measures or controls, and PPE recommendations are only guidelines and may not apply to every situation. For additional information, please consult the corresponding requirements under OSHA 29 CFR 1910.94-95, and 29 CFR 1910.132-138.

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9 Physical and chemical properties

Information on basic physical and chemical properties
General Information
Appearance:
Form:

Liquid

Color:

Light yellow

Odor:

Odorless

Odor threshold:

Not determined.

pH-value:

Not determined.

Change in condition
Melting point/Melting range:

<-20 °C (<-4 °F)

Boiling point/Boiling range:

>200 °C (>392 °F)

Flash point:

>200 °C (>392 °F)

Flammability (solid, gaseous):

Not applicable.

Ignition temperature:

Not determined.

Decomposition temperature:

Not determined.

Auto igniting:

Product is not selfigniting.

Danger of explosion:

Product does not present an explosion hazard.

Explosion limits:
Lower:

Not determined.

Upper:

Not determined.

Vapor pressure:

Not determined.

Vapor Density:

not determined

Density at 20 °C (68 °F):
1.13 g/cm³ (9.43 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 available.

Kinematic:

Not available.

VOC content:

0.00 %

0.0 g/l / 0.00 lb/gal

10 Stability and reactivity

Reactivity Not a regulated physical hazard under GHS.

Hazardous Reactivity and Chemical Stability

reacts with water, alcohols, amines, bases, protic solvents, strong acids, strong oxidizers. With a great release of CO₂, and hence a risk of a pressure build-up in confined areas, and forms and insoluble solid precipitate.

May decompose, condense, or self-react under conditions of high temperature and/or pressure; but there is little or no potential for heat generation or explosion, or readily undergo hazardous polymerization in the absence of inhibitors.

Thermal decomposition / conditions to be avoided:

To avoid thermal decomposition do not overheat.

Avoid exposure to water vapor.

No decomposition if used and stored according to specifications.

Possibility of hazardous reactions In contact with incompatible materials.

Conditions to avoid Keep away from heat, sparks, flame and any other ignition sources.

Incompatible materials:

Water

Alcohols

protic solvents

Bases (Alkalis)

Hazardous decomposition products:

Possible in traces.

Refer to section 5.

Additional information:

As long as the prescribed application concentrations are maintained there is no danger that stable emulsions will form.

11 Toxicological information

Information on toxicological effects
Acute toxicity:
LD/LC50 values that are relevant for classification:

Oral	LD50	>5,000 mg/kg (read across from 101-68-8) Data for homopolymer of hexamethylene diisocyanate.
Dermal	LD50	>2,000 mg/kg (rabbit) Data for homopolymer of hexamethylene diisocyanate. Source: Vendor SDS
Inhalative	LC50/4 h	2.18 mg/l (read across from 101-68-8) Data for homopolymer hexamethylene diisocyanate (aerosol)

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28182-81-2 Hexamethylene diisocyanate homopolymer

Oral	LD50	mg/kg (No data available)
Dermal	LD50	mg/kg (rabbit) (> 5000 mg/kg) Reference: Bayer (M)SDS (2011).
Inhalative	LC50/4 h	0.402 mg/l (rat) (LC50/4 hour) The test atmosphere generated in the animal study is not representative of workplace environments, how the substance is placed on the market, and how it can reasonably be expected to be used. Therefore the test result cannot be directly applied for the purpose of assessing hazard.

- **Primary irritant effect:**
 - **on the skin:** No irritant effect.
 - **on the eye:** No irritating effect.
- **Sensitization:** Sensitization possible through skin contact.

- **Additional toxicological information:**

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

Harmful
Irritant

- **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

- **Persistence and degradability** No further relevant information available.
- **Behavior in environmental systems:**
 - **Bioaccumulative potential** No data available.
 - **Mobility in soil** No further relevant information available.
- **Additional ecological information:** The product is non-rapid degradable, and low or not highly bioaccumulative.
 - **General notes:** Generally not hazardous for water
- **Results of PBT and vPvB assessment**
 - **PBT:** None of the ingredients is listed.
 - **vPvB:** None of the ingredients is listed.
- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**
 - **Recommendation:**
Must be specially treated adhering to official regulations.
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packagings:**
 - **Recommendation:** Dispose of according to your local waste regulations.

14 Transport information

- | | |
|--|-----------------|
| · UN-Number | |
| · DOT, ADN, IMDG, IATA | not regulated |
| · UN proper shipping name | |
| · DOT, ADN, IMDG, IATA | not regulated |
| · Transport hazard class(es) | |
| · DOT, ADN, IMDG, IATA | |
| · Class | not regulated |
| · Packing group | |
| · DOT, IMDG, IATA | not regulated |
| · Environmental hazards: | Not applicable. |
| · Special precautions for user | Not applicable. |
| · Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code | Not applicable. |
| · UN "Model Regulation": | not regulated |

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.

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

822-06-0 Hexamethylene Diisocyanate	0.1%
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· **Section 311/312 (Hazardous Chemical Inventory reporting)**

· **SARA Section 311/312 (Hazardous Chemical Inventory Reporting)**

28182-81-2 Hexamethylene diisocyanate homopolymer	A, C, R	90-100%
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· **Hazard Abbreviations for SARA 311/312**

- A - Acute Health Hazard
- C - Chronic Health Hazard
- F - Fire Hazard
- R - Reactive Hazard
- S - Sudden Release of Pressure Hazard

· **TSCA 8 (b) Inventory:**

All ingredients are listed.

· **TSCA new (21st Century Act)**

28182-81-2 Hexamethylene diisocyanate homopolymer	ACTIVE/EXEMPT
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822-06-0 Hexamethylene Diisocyanate	ACTIVE/EXEMPT
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· **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.

· **International Regulation Lists**

· **GHS label elements** GHS label elements

· **REACH - Substances of Very High Concern (SVHC) List:**

None of the ingredients is listed.

· **Restriction of Hazardous Substances Directive (RoHS) list:**

None of the ingredients is listed.

· **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 (M)SDS:** Product Development Department
- **Contact:** msds@resinlab.com
- **Date of preparation / last revision** 07/25/2018 / 5
- *** Data compared to the previous version altered.**