

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/07/2019

Reviewed on 06/07/2019

1 Identification

- **Product identifier**
 - **Trade name:** UR3010 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 Irrit. 2 H315 Causes skin irritation.
 - Eye Irrit. 2A H319 Causes serious eye irritation.
 - Resp. Sens. 1 H334 May cause allergy or asthma symptoms or breathing difficulties 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 product is classified and labeled according to the Globally Harmonized System (GHS).
 - **Hazard pictograms**



GHS07 GHS08

- **Signal word** Danger
- **Hazard statements**
 - H332 Harmful if inhaled.
 - H315 Causes skin irritation.
 - H319 Causes serious eye irritation.
 - H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 - H317 May cause an allergic skin reaction.
 - H335 May cause respiratory irritation.
- **Precautionary statements**
 - Avoid breathing dust/fume/gas/mist/vapors/spray
 - Wash thoroughly after handling.
 - Use only outdoors or in a well-ventilated area.
 - Contaminated work clothing must not be allowed out of the workplace.
 - Wear protective gloves / eye protection / face protection.
 - In case of inadequate ventilation wear respiratory protection.
 - If on skin: Wash with plenty of water.
 - If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.
 - If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 - If skin irritation or rash occurs: Get medical advice/attention.
 - If eye irritation persists: 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 = 0

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

- **HMS System**
 - **HMS-ratings (scale 0 - 4)**



Health = 2
Fire = 1
Reactivity = 0

- **Other hazards**
 - **Results of PBT and vPvB assessment**
 - **PBT:** Not applicable.

(Contd. on page 2)

Safety Data Sheet acc. to OSHA HCS

Printing date 06/07/2019

Reviewed on 06/07/2019

Trade name: UR3010 CLEAR B

· vPvB: Not applicable.

(Contd. of page 1)

3 Composition/information on ingredients

Chemical characterization: Mixtures
Dangerous components:

CAS: 101-68-8 EINECS: 202-966-0 Index number: 615-005-00-9 RTECS: NQ 9350000	4,4'-diisocyanatodiphenylmethane Resp. Sens. 1, H334; STOT RE 2, H373 Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; Skin Sens. 1, H317; STOT SE 3, H335	30-40%
CAS: 25686-28-6 NLP: 500-040-3	4,4 MDI Homopolymer Resp. Sens. 1, H334; STOT RE 2, H373 Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2A, H319; STOT SE 3, H335	≥5-<10%

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.

Move victim to fresh air. Get medical attention. Treatment is symptomatic for primary irritation or bronchospasm. If breathing is labored, oxygen should be administered.

In case of unconsciousness place patient stably in side position for transportation.

Move to an area free from further exposure. Persons with a preexisting, nonspecific bronchial hyperreactivity can respond to concentrations below the TLV or PEL with similar symptoms as well as asthma attack or asthma-like symptoms. Asthmatic symptoms may develop and may be immediate or delayed up to several hours. Diisocyanate vapors or mist at concentrations above the TLV or PEL can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) causing runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing obstruction). These symptoms can be delayed up to several hours after exposure. These effects are usually reversible.

After skin contact:

Immediately wash with water and soap and rinse thoroughly.

An MDI study has demonstrated that a polyglycol-based skin cleanser (such as D-Tam TM, PEG-400) or corn oil may be more effective than soap and water.

If skin rash or irritation occurs, seek medical advice.

Remove all contaminated clothing and wash before reuse.

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.

Rinse out mouth and then drink plenty of water.

After Exposure

Move to fresh air at once.

Get medical advice/attention.

· **Information for doctor:** Symptoms of exposure may be delayed after severe exposure, keep patient under review for 48 hours.

· **Most important symptoms and effects, both acute and delayed** No further relevant information available.

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

respiratory system tests

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.

Carbon dioxide

Alcohol resistant foam

Fire-extinguishing powder

For safety reasons unsuitable extinguishing agents:

Only use water spray if no other option is available. Use copious quantities as reaction with isocyanate may be vigorous.

Special hazards arising from the substance or mixture

Will not burn unless preheated.

In case of fire, the following can be released:

Hydrogen cyanide (HCN)

Nitrogen oxides (NOx)

Carbon dioxide (CO₂) and Carbon monoxide (CO)

Advice for firefighters
Protective equipment:

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.

(Contd. on page 3)

Safety Data Sheet acc. to OSHA HCS

Printing date 06/07/2019

Reviewed on 06/07/2019

Trade name: UR3010 CLEAR B

(Contd. of page 2)

6 Accidental release measures

- Personal precautions, protective equipment and emergency procedures**

- Wear protective clothing.

- 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 absorbent material in appropriate container.

- Ensure adequate ventilation.

- Non sparking tools should be used.

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

- Dispose contaminated material as waste according to item 13.

- Clean up any spill area with decontaminating solution made up of 50% isopropanol, 45% water and 5% concentrated ammonia solution (% by weight). The solution should cover the area for at least one hour. Absorb with an inert absorbent.

- Wash the spill site with large quantities of water. Attempt to neutralize by adding suitable decontaminant solution; Formulation 1: sodium carbonate 5 - 10%; liquid detergent 0.2 - 2%; water to make up to 100%, OR Formulation 2: concentrated ammonia solution 3 - 8%; liquid detergent 0.2 - 2%; water to make up to 100%. If ammonia is used, use good ventilation to prevent vapor exposure.

7 Handling and storage

- Handling:**

- Precautions for safe handling**

- Keep away from incompatible material(s).

- Avoid any release into the environment.

- Do not breathe vapors, mists, or dusts. Use adequate ventilation to keep airborne isocyanate levels below the exposure limits. Wear respiratory protection if material is heated, sprayed, used in a confined space, or if the exposure limit is exceeded. Warning properties (irritation of the eyes, nose and throat or odor) are not adequate to prevent overexposure from inhalation. This material can produce asthmatic sensitization upon either single inhalation exposure to a relatively high concentration or upon repeated inhalation exposures to lower concentrations. Individuals with lung or breathing problems or prior allergic reactions to isocyanates must not be exposed to vapor or spray mist. Avoid contact with skin and eyes. Wear appropriate eye and skin protection. Wash thoroughly after handling. Do not breathe the smoke and gases created by overheating or burning this material. Decomposition products can be highly toxic and irritating.

- Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected.

- 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:**

- 101-68-8 4,4'-diisocyanatodiphenylmethane**

- PEL Ceiling limit value: 0.2 mg/m³, 0.02 ppm

- REL Long-term value: 0.05 mg/m³, 0.005 ppm

- Ceiling limit value: 0.2* mg/m³, 0.02* ppm
*10-min

- TLV Long-term value: 0.051 mg/m³, 0.005 ppm

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

- Additional Information for the Limit Values**

- Due to the wetted form, limit values for the dust and/or aerosol form are not required.

- Local exhaust must be used to maintain airborne levels below recommended exposure limits where there are inadequately ventilated environments, and/or when the mixture is heated, sprayed, or aerosolized.

- Exposure controls**

- If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

- 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.

- Avoid contact with the eyes and skin.

- Personal Protective Equipment (PPE)**

- Breathing equipment:**

- Use suitable respiratory protective device when high concentrations are present.

- 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.

- Airborne MDI concentrations greater than the ACGIH TLV-TWA (TLV) or OSHA PEL-C (PEL) can occur in inadequately ventilated environments when MDI is sprayed, aerosolized, or heated. Local exhaust should be used to maintain levels below the TLV whenever MDI is heated, sprayed, or aerosolized. Standard reference sources regarding industrial ventilation (e.g., ACGIH Industrial Ventilation Manual) should be consulted for guidance about adequate ventilation. To ensure that published

(Contd. on page 4)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/07/2019

Reviewed on 06/07/2019

Trade name: UR3010 CLEAR B

(Contd. of page 3)

exposure limits have not been exceeded, monitoring for airborne diisocyanate should become part of the overall employee exposure characterization program.

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.

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· **Form:** Liquid

· **Color:** Various colors

· **Odor:** Slightly musty

· **Odor threshold:** Not determined.

· **pH-value:**

Not determined.
Not determined.

· **Change in condition**

· **Melting point/Melting range:**

Undetermined.

· **Boiling point/Boiling range:**

Undetermined.

· **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):**

1.06 g/cm³ (9.18 lbs/

· **Relative density**

gal) 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** May polymerize when heated.

· **Thermal decomposition / conditions to be avoided:**

To avoid thermal decomposition do not overheat.

No decomposition if used and stored according to specifications.

· **Possibility of hazardous reactions** Decomposes with water, acids and alkalis.

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

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/07/2019

Reviewed on 06/07/2019

Trade name: UR3010 CLEAR B

(Contd. of page 4)

Incompatible materials:

Moisture.
 Water
 Hydrides
 Mercaptans
 Aldehydes
 Acids
 Strong oxidizing agent
 Bases (Alkalis)

Hazardous decomposition products:

Possible in traces.
 Refer to section 5.

11 Toxicological information

Information on toxicological effects**Acute toxicity:****LD/LC50 values that are relevant for classification:****3648-20-2 Diundecyl phthalate (DUP)**

Oral	LD50	>15,800 mg/kg (rat) (No mortality found) The substance was not classified as an acute oral hazard. Reference: ECHA (2011).
Dermal	LD50	mg/kg (rat) (LD0(OECD TG 402) ≥2000 mg/kg; No mortality found) No mortality or any health effects found in males or females; the substance was not classified as an acute dermal hazard. Reference: ECHA (2011).
Inhalative	LC50/4 h	mg/l (rat) (No mortality found at the saturated concentration) LC0/6 hours (150 °C) > 1.8 mg/L No mortality was observed up to the saturated vapor concentration of 1.8 mg/L; the substance was not classified as an acute inhalative hazard. Reference: ECHA (2011).

101-68-8 4,4'-diisocyanatodiphenylmethane

Oral	LD50	2,200 mg/kg (mouse)
Dermal	LD50	>9,400 mg/kg (rabbit) (OECD TG 402)
Inhalative	LC50/4 h	0.49 mg/l (rat) (no test detail available) Based on expert judgment and the weight of the evidence, a modified classification for acute inhalation toxicity is justified.

59675-67-1 Ethoxylated propoxylated glycerol-MDI copolymer

Oral	LD50	mg/kg (No data available)
Dermal	LD50	mg/kg (No data available)
Inhalative	LC50/4 h	mg/l (No data available)

25686-28-6 4,4 MDI Homopolymer

Oral	LD50	>2,000 mg/kg (rat) Reference: ECHA (2012).
Dermal	LD50	>9,400 mg/kg (rabbit) (OECD TG 402) Reference: ECHA (2012).
Inhalative	LC50/4 h	0.49 mg/l (rat)

- **Primary irritant effect:** Harmful if inhaled.
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** 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:

Harmful
 Irritant

Carcinogenic categories**IARC (International Agency for Research on Cancer)**

101-68-8 4,4'-diisocyanatodiphenylmethane	3
---	---

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.

No further relevant information 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:

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

(Contd. on page 6)

Safety Data Sheet

acc. to OSHA HCS

Printing date 06/07/2019

Reviewed on 06/07/2019

Trade name: UR3010 CLEAR B


(Contd. of page 5)

- 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:** 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 NA3082
 - ADN, IMDG, IATA not regulated
 - **UN proper shipping name**
 - DOT Other regulated substances, liquid, n.o.s.
(Diisocyanatodiphenylmethane (MDI), 4,4 MDI Homopolymer)
not regulated
 - ADN, IMDG, IATA
 - **Transport hazard class(es)**
 - DOT
- 
- **Class** 9 Miscellaneous dangerous substances and articles
 - **Label** 9
 - **ADN/R Class:** not regulated
- **Packing group**
 - DOT III
 - 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.
 - **Transport/Additional information:**
 - DOT
 - **Quantity limitations** On passenger aircraft/rail: No limit
On cargo aircraft only: No limit
Single containers less than 5000 lbs are not regulated.
 - **Remarks:**
 - **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.

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

101-68-8 4,4'-diisocyanatodiphenylmethane

30-40%

- **Section 311/312 (Hazardous Chemical Inventory reporting)**

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

101-68-8 4,4'-diisocyanatodiphenylmethane

A, C 30-40%

- **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 components have the value ACTIVE.

- **Hazardous Air Pollutants**

101-68-8 4,4'-diisocyanatodiphenylmethane

(Contd. on page 7)

Safety Data Sheet
acc. to OSHA HCS

Printing date 06/07/2019

Reviewed on 06/07/2019

Trade name: UR3010 CLEAR B

(Contd. of page 6)

· **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)**

101-68-8 | 4,4'-diisocyanatodiphenylmethane

D, CBD

· **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** 06/07/2019 / 5

· *** Data compared to the previous version altered.**