

SECTION 1: Identification

1.1. Identification

Product form : Mixture
 Product name : UR3001HP2 Clear A

1.2. Recommended use and restrictions on use

Recommended use : Isocyanates
 Restrictions on use : Product for industrial use only

1.3. Supplier

ResinLab, LLC
 N109 W13300 Ellsworth Drive
 Germantown, WI 53022 - United States
 T 1-877-259-1669
msds@resinlab.com - www.resinlab.com

1.4. Emergency telephone number

Emergency number : CHEMTREC:1-800-424-9300 (USA); +1 703-527-3887 (International)

SECTION 2: Hazard(s) identification

2.1. Classification of the substance or mixture

GHS US classification

Acute toxicity (inhalation:dust,mist) Category 4	H332	Harmful if inhaled
Skin corrosion/irritation Category 2	H315	Causes skin irritation
Serious eye damage/eye irritation Category 2	H319	Causes serious eye irritation
Respiratory sensitization, Category 1	H334	May cause an allergy or asthma symptoms or breathing difficulties if inhaled
Skin sensitization, Category 1	H317	May cause an allergic skin reaction
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation	H335	May cause respiratory irritation
Specific target organ toxicity (repeated exposure) Category 2	H373	May cause damage to organs (respiratory system) through prolonged or repeated exposure (Inhalation)

Full text of H statements : see section 16

2.2. GHS Label elements, including precautionary statements

GHS US labeling

Hazard pictograms (GHS US) :



Signal word (GHS US) :

Danger

Hazard statements (GHS US) :

H315 - Causes skin irritation
 H317 - May cause an allergic skin reaction
 H319 - Causes serious eye irritation
 H332 - Harmful if inhaled
 H334 - May cause an allergy or asthma symptoms or breathing difficulties if inhaled
 H335 - May cause respiratory irritation
 H373 - May cause damage to organs (respiratory system) through prolonged or repeated exposure (Inhalation)

Precautionary statements (GHS US) :

P260 - Do not breathe dust/fume/gas/mist/vapors/spray.
 P261 - Avoid breathing dust/fume/gas/mist/vapors/spray.
 P264 - Wash hands, forearms and face 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.
 P280 - Wear protective gloves/protective clothing/eye protection/face protection.
 P284 - [In case of inadequate ventilation] wear respiratory protection.
 P302+P352 - If on skin: Wash with plenty of water.
 P304+P340 - If inhaled: Remove person to fresh air and keep comfortable for breathing.
 P304+P341 - If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

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P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 - Call a poison center or doctor if you feel unwell.
P314 - Get medical advice/attention if you feel unwell.
P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P342+P311 - If experiencing respiratory symptoms: Call a poison center or doctor.
P362+P364 - Take off contaminated clothing and wash it before reuse.
P403+P233 - Store in a well-ventilated place. Keep container tightly closed.
P405 - Store locked up.
P501 - Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.

2.3. Other hazards which do not result in classification

No additional information available

2.4. Unknown acute toxicity (GHS US)

Not applicable

SECTION 3: Composition/Information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	%	GHS US classification
4,4'-diisocyanatodiphenylmethane	(CAS-No.) 101-68-8	5 – 10	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335 STOT RE 2, H373
methylenediphenyl diisocyanate, isomer mixture	(CAS-No.) 26447-40-5	5 – 10	Acute Tox. 4 (Inhalation), H332 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Resp. Sens. 1, H334 Skin Sens. 1, H317 STOT SE 3, H335 STOT RE 2, H373
Diphenylmethane diisocyanate homopolymer (MDI homopolymer)	(CAS-No.) 39310-05-9	1 – 5	Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Skin Sens. 1, H317
A mixture of isomers of: C7-9-alkyl-3-(3,5-di-trans-butyl-4-hydroxyphenyl)propionate	(CAS-No.) 125643-61-0	1 – 5	Aquatic Chronic 4, H413

Full text of hazard classes and H-statements : see section 16

SECTION 4: First-aid measures

4.1. Description of first aid measures

- First-aid measures general : Call a poison center/doctor/physician if you feel unwell.
- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a poison center/doctor/physician if you feel unwell.
- First-aid measures after skin contact : If skin irritation or rash occurs: Get medical advice/attention. Polyglycol based skin cleansers such as Tam D or PEG 400 or corn oil may be more effective than using soap and water. Gently wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
- First-aid measures after ingestion : Get medical advice/attention. Rinse mouth out with water. Do not induce vomiting.

4.2. Most important symptoms and effects (acute and delayed)

- Symptoms/effects after inhalation : May cause an allergy or asthma symptoms or breathing difficulties if inhaled.
- Symptoms/effects after skin contact : Irritation. May cause an allergic skin reaction.
- Symptoms/effects after eye contact : Eye irritation.
- Most Important Symptoms/Effects : Contains diisocyanate. Skin contact may aggravate existing condition, inhalation of aerosol or vapor above or at OEL may aggravate existing respiratory condition.

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4.3. Immediate medical attention and special treatment, if necessary

Diisocyanate vapors or mist concentrations above the PEL or TLV can irritate the respiratory tract causing runny nose, sore throat, coughing, chest discomfort, shortness of breath. Persons with pre-existing non specific bronchial hyperactivity can respond to concentrations below the OEL. These symptoms can be delayed to several hours after exposure and are reversible.

SECTION 5: Fire-fighting measures

5.1. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media : Dry powder. Foam. Carbon dioxide. Water fog.
Unsuitable extinguishing media : Do not use a heavy water stream.

5.2. Specific hazards arising from the chemical

- Hazardous decomposition products in case of fire : Toxic fumes may be released

5.3. Special protective equipment and precautions for fire-fighters

- Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

- Emergency procedures : Ventilate spillage area. Do not breathe dust/fume/gas/mist/vapors/spray. Avoid contact with skin and eyes.

6.1.2. For emergency responders

- Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

- For containment : Ventilate and remove ignition sources. Cover spill area with suitable absorbant material. Shovel into vented container. Repeat if necessary. Decontaminate spill area with a mixture of 90% water and 10% non ionic surfactant such as Tergitol.
Methods for cleaning up : Take up liquid spill into absorbent material.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

- Precautions for safe handling : Do not breathe dust/fume/gas/mist/vapors/spray. Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes. Wear personal protective equipment.
Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

- Storage conditions : Store in a well-ventilated place. Keep cool.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

4,4'-diisocyanatodiphenylmethane (101-68-8)		
ACGIH	Local name	Methylene bisphenyl isocyanate (MDI)
ACGIH	ACGIH OEL TWA [ppm]	0.005 ppm
ACGIH	Remark (ACGIH)	TLV® Basis: Resp sens
ACGIH	Regulatory reference	ACGIH 2020

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4,4'-diisocyanatodiphenylmethane (101-68-8)		
OSHA	OSHA PEL (Ceiling)	0.2 mg/m ³
OSHA	OSHA PEL C [ppm]	0.02 ppm
OSHA	Regulatory reference (US-OSHA)	OSHA Annotated Table Z-1
methylenediphenyl diisocyanate, isomer mixture (26447-40-5)		
Not applicable		
Diphenylmethane diisocyanate homopolymer (MDI homopolymer) (39310-05-9)		
Not applicable		
A mixture of isomers of: C7-9-alkyl-3-(3,5-di-trans-butyl-4-hydroxyphenyl)propionate (125643-61-0)		
Not applicable		

8.2. Appropriate engineering controls

- Appropriate engineering controls : Ensure good ventilation of the work station, ventilate curing ovens to prevent emissions in the workplace.
- Environmental exposure controls : Avoid release to the environment.

8.3. Individual protection measures/Personal protective equipment

Hand protection:

Protective gloves

Eye protection:

Safety glasses with side shields

Skin and body protection:

Wear suitable protective clothing

Respiratory protection:

In case of inadequate ventilation, wear respiratory protection.

Personal protective equipment symbol(s):



SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Color	: Colorless to yellow
Odor	: mild
Odor threshold	: No data available
pH	: No data available
Melting point	: Not applicable
Freezing point	: No data available
Boiling point	: No data available
Flash point	: > 200 °C
Relative evaporation rate (butyl acetate=1)	: No data available
Flammability (solid, gas)	: Not applicable.
Vapor pressure	: No data available
Relative vapor density at 20 °C	: No data available
Relative density	: No data available
Density	: 0.99 g/ml

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Solubility	: No data available
Partition coefficient n-octanol/water (Log Pow)	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Viscosity, dynamic	: No data available
Explosion limits	: No data available
Explosive properties	: No data available
Oxidizing properties	: No data available
VOC content	No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

Acids. alcohols. Amines. Water. Metals.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Nitrogen oxides. Hydrogen cyanide. Carbon oxides (CO, CO₂).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Harmful if inhaled.

ATE US (dust, mist)	4.249 mg/l/4h
4,4'-diisocyanatodiphenylmethane (101-68-8)	
LD50 oral rat	> 7616 mg/kg (Equivalent or similar to OECD 401, Rat, Female, Read-across, Oral)
LD50 dermal rabbit	> 9400 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Read-across, Dermal)
LC50 Inhalation - Rat	0.49 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Read-across, Inhalation (aerosol))
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h
methylenediphenyl diisocyanate, isomer mixture (26447-40-5)	
LD50 oral rat	> 2000 mg/kg body weight (Other, Rat, Male / female, Experimental value, Oral)
LD50 dermal rabbit	> 9400 mg/kg body weight (Equivalent or similar to OECD 402, 24 h, Rabbit, Male / female, Read-across, Skin)
LC50 Inhalation - Rat	0.49 mg/l air (Equivalent or similar to OECD 403, 4 h, Rat, Male / female, Read-across, Inhalation (aerosol))
ATE US (gases)	4500 ppmV/4h
ATE US (vapors)	11 mg/l/4h
ATE US (dust, mist)	1.5 mg/l/4h
Diphenylmethane diisocyanate homopolymer (MDI homopolymer) (39310-05-9)	
LD50 oral rat	> 5000 mg/kg
LD50 dermal rat	> 9400 mg/kg
LC50 Inhalation - Rat	0.49 mg/l

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Diphenylmethane diisocyanate homopolymer (MDI homopolymer) (39310-05-9)	
ATE US (vapors)	0.49 mg/l/4h
ATE US (dust, mist)	0.49 mg/l/4h

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye irritation.
Respiratory or skin sensitization	: May cause an allergy or asthma symptoms or breathing difficulties if inhaled. May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified.

4,4'-diisocyanatodiphenylmethane (101-68-8)	
IARC group	3 - Not classifiable

Reproductive toxicity	: Not classified
STOT-single exposure	: May cause respiratory irritation.

4,4'-diisocyanatodiphenylmethane (101-68-8)	
STOT-single exposure	May cause respiratory irritation.

methylenediphenyl diisocyanate, isomer mixture (26447-40-5)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure	: May cause damage to organs (respiratory system) through prolonged or repeated exposure (Inhalation).
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4,4'-diisocyanatodiphenylmethane (101-68-8)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

methylenediphenyl diisocyanate, isomer mixture (26447-40-5)	
STOT-repeated exposure	May cause damage to organs through prolonged or repeated exposure.

Aspiration hazard	: Not classified
Symptoms/effects after inhalation	: May cause an allergy or asthma symptoms or breathing difficulties if inhaled.
Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Eye irritation.
Most Important Symptoms/Effects	: Contains diisocyanate. Skin contact may aggravate existing condition, inhalation of aerosol or vapor above or at OEL may aggravate existing respiratory condition.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: The product is not considered harmful to aquatic organisms or to cause long-term adverse effects in the environment.
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4,4'-diisocyanatodiphenylmethane (101-68-8)	
LC50 - Fish [1]	> 1000 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Danio rerio, Static system, Fresh water, Read-across, Nominal concentration)
EC50 - Crustacea [1]	129.7 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 24 h, Daphnia magna, Static system, Fresh water, Read-across, Locomotor effect)

methylenediphenyl diisocyanate, isomer mixture (26447-40-5)	
LC50 - Fish [1]	> 1000 mg/l (OECD 203: Fish, Acute Toxicity Test, 96 h, Brachydanio rerio, Static system, Fresh water, Read-across, Lethal)
EC50 - Crustacea [1]	> 1000 mg/l (OECD 202: Daphnia sp. Acute Immobilisation Test, 24 h, Daphnia magna, Static system, Fresh water, Read-across)

12.2. Persistence and degradability

4,4'-diisocyanatodiphenylmethane (101-68-8)	
Persistence and degradability	Not readily biodegradable in water.

methylenediphenyl diisocyanate, isomer mixture (26447-40-5)	
Persistence and degradability	Contains non readily biodegradable component(s).

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12.3. Bioaccumulative potential

4,4'-diisocyanatodiphenylmethane (101-68-8)	
BCF - Fish [1]	92 – 200 (OECD 305: Bioconcentration: Flow-Through Fish Test, 4 week(s), Cyprinus carpio, Flow-through system, Fresh water, Experimental value, GLP)
Partition coefficient n-octanol/water (Log Pow)	4.51 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 22 °C)
Bioaccumulative potential	Low potential for bioaccumulation (BCF < 500).

methylenediphenyl diisocyanate, isomer mixture (26447-40-5)	
BCF - Fish [1]	92 (OECD 305: Bioconcentration: Flow-Through Fish Test, 28 day(s), Cyprinus carpio, Flow-through system, Fresh water, Read-across, GLP)
Partition coefficient n-octanol/water (Log Pow)	4.51 (Experimental value, OECD 117: Partition Coefficient (n-octanol/water), HPLC method, 22 °C)
Bioaccumulative potential	Does not contain bioaccumulative component(s).

12.4. Mobility in soil

4,4'-diisocyanatodiphenylmethane (101-68-8)	
Surface tension	Data waiving
Ecology - soil	No (test)data on mobility of the substance available.

methylenediphenyl diisocyanate, isomer mixture (26447-40-5)	
Ecology - soil	No (test)data on mobility of the components available.

12.5. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Disposal methods

Waste treatment methods : Dispose of contents/container in accordance with licensed collector's sorting instructions.

SECTION 14: Transport information

Department of Transportation (DOT)

In accordance with DOT

Not regulated

Transportation of Dangerous Goods

Not applicable

Transport by sea

Not regulated

Air transport

Not regulated

SECTION 15: Regulatory information

15.1. US Federal regulations

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All components of this product are listed as Active, or excluded from listing, on the United States Environmental Protection Agency Toxic Substances Control Act (TSCA) inventory

4,4'-diisocyanatodiphenylmethane	CAS-No. 101-68-8	5 – 10%
methylenediphenyl diisocyanate, isomer mixture	CAS-No. 26447-40-5	5 – 10%
Diphenylmethane diisocyanate homopolymer (MDI homopolymer)	CAS-No. 39310-05-9	1 – 5%
A mixture of isomers of: C7-9-alkyl-3-(3,5-di-trans-butyl-4-hydroxyphenyl)propionate	CAS-No. 125643-61-0	1 – 5%

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372.

4,4'-diisocyanatodiphenylmethane	CAS-No. 101-68-8	5 – 10%
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4,4'-diisocyanatodiphenylmethane (101-68-8)

Listed on EPA Hazardous Air Pollutant (HAPS)

CERCLA RQ 5000 lb

Diphenylmethane diisocyanate homopolymer (MDI homopolymer) (39310-05-9)

EPA TSCA Regulatory Flag

XU - XU - indicates a substance exempt from reporting under the Chemical Data Reporting Rule, (40 CFR 711).

A mixture of isomers of: C7-9-alkyl-3-(3,5-di-trans-butyl-4-hydroxyphenyl)propionate (125643-61-0)

EPA TSCA Regulatory Flag

PMN - PMN - indicates a commenced PMN substance.

15.2. International regulations

CANADA

4,4'-diisocyanatodiphenylmethane (101-68-8)

Listed on the Canadian DSL (Domestic Substances List)

methylenediphenyl diisocyanate, isomer mixture (26447-40-5)

Listed on the Canadian DSL (Domestic Substances List)

Diphenylmethane diisocyanate homopolymer (MDI homopolymer) (39310-05-9)

Listed on the Canadian DSL (Domestic Substances List)

A mixture of isomers of: C7-9-alkyl-3-(3,5-di-trans-butyl-4-hydroxyphenyl)propionate (125643-61-0)

Listed on the Canadian DSL (Domestic Substances List)

EU-Regulations

Contains no REACH candidate substance

National regulations

No additional information available

15.3. US State regulations

California Proposition 65 - This product does not contain any substances known to the state of California to cause cancer, developmental and/or reproductive harm

Component	State or local regulations
4,4'-diisocyanatodiphenylmethane(101-68-8)	U.S. - Massachusetts - Right To Know List; U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

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Full text of H-phrases:

H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H332	Harmful if inhaled
H334	May cause an 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
H413	May cause long lasting harmful effects to aquatic life

SDS US - ResinLab

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.