

Printing date 05/23/2018

Reviewed on 05/28/2015

1 Identification

- **Product identifier**
- **Trade name:** UR3560 Part A Isocyanate
- **Article number:** 1025483
- **Application of the substance / the mixture** Polyurethane resin
- **Details of the supplier of the safety data sheet** SikaAxson US - EHS Department
- **Manufacturer/Supplier:**
Company Name: Axson Technologies US, Inc.-SikaAxson

Headquarters:
 31200 Stephenson Hwy
 Madison Heights, MI 48071
 USA

Manufacturing Site:
 1611 Hults Drive
 Eaton Rapids, MI 48827
 USA
 ehs-us@axson.com

- **Information department:** Product safety department
- **Emergency telephone number:**
 During normal opening times: +1 (248) 588-2270
 CHEMTREC 24-hour Emergency: +1 (800) 424-9300

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS08 Health hazard

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

Repr. 1A H360 May damage fertility or the unborn child.



GHS07

Acute Tox. 4 H332 Harmful if inhaled.

Skin Irrit. 2 H315 Causes skin irritation.

Eye Irrit. 2A H319 Causes serious eye 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).

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· Hazard pictograms



GHS07 GHS08

· Signal word *Danger*

· Hazard-determining components of labeling:

4,4'-methylenedi(cyclohexyl isocyanate)

N-methyl-2-pyrrolidone

· Hazard statements

*Harmful if inhaled.**Causes skin irritation.**Causes serious eye irritation.**May cause allergy or asthma symptoms or breathing difficulties if inhaled.**May cause an allergic skin reaction.**May damage fertility or the unborn child.**May cause respiratory irritation.*

· Precautionary statements

*Avoid breathing dust/fume/gas/mist/vapors/spray**Avoid breathing dust/fume/gas/mist/vapors/spray**Wear protective gloves/protective clothing/eye protection/face protection.**[In case of inadequate ventilation] wear respiratory protection.**IF INHALED: 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.**Call a poison center/doctor if you feel unwell.**If experiencing respiratory symptoms: Call a poison center/doctor.**Wash contaminated clothing before reuse.**Store locked up.**Dispose of contents/container in accordance with local/regional/national/international regulations.*

· Classification system:

· NFPA ratings (scale 0 - 4)



Health = 2

Fire = 1

Reactivity = 0

· HMIS-ratings (scale 0 - 4)



Health = *2

Fire = 1

Reactivity = 0

· Other hazards

· Results of PBT and vPvB assessment

· PBT: Not applicable.

· vPvB: Not applicable.

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3 Composition/information on ingredients

- **Chemical characterization:** Mixtures
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

CAS: 5124-30-1 EINECS: 225-863-2	4,4'-methylenedi(cyclohexyl isocyanate)	20-50%
CAS: 872-50-4 EINECS: 212-828-1	N-methyl-2-pyrrolidone	0.1-1%

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Supply fresh air and to be sure 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.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, 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**
Nitrogen oxides (NO_x)
Hydrogen cyanide (HCN)
- **Advice for firefighters**
- **Protective equipment:**
Mouth respiratory protective device.
Wear self-contained respiratory protective device.
- **Additional information**
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures** Not required.
- **Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

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· **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.

· **Protective Action Criteria for Chemicals**

· **PAC-1:**

5124-30-1	4,4'-methylenedi(cyclohexyl isocyanate)	0.015 ppm
872-50-4	N-methyl-2-pyrrolidone	30 ppm
78-83-1	butanol	150 ppm
98-82-8	cumene	50 ppm
95-63-6	1,2,4-trimethylbenzene	140 ppm
1330-20-7	xylene	130 ppm
100-41-4	ethylbenzene	33 ppm
84-74-2	dibutyl phthalate	15 mg/m ³
108-65-6	2-methoxy-1-methylethyl acetate	50 ppm

· **PAC-2:**

5124-30-1	4,4'-methylenedi(cyclohexyl isocyanate)	0.29 ppm
872-50-4	N-methyl-2-pyrrolidone	32 ppm
78-83-1	butanol	1,300 ppm
98-82-8	cumene	300 ppm
95-63-6	1,2,4-trimethylbenzene	360 ppm
1330-20-7	xylene	920* ppm
100-41-4	ethylbenzene	1100* ppm
84-74-2	dibutyl phthalate	1,600 mg/m ³
108-65-6	2-methoxy-1-methylethyl acetate	1,000 ppm

· **PAC-3:**

5124-30-1	4,4'-methylenedi(cyclohexyl isocyanate)	1.7 ppm
872-50-4	N-methyl-2-pyrrolidone	190 ppm
78-83-1	butanol	8000* ppm
98-82-8	cumene	730 ppm
95-63-6	1,2,4-trimethylbenzene	480 ppm
1330-20-7	xylene	2500* ppm
100-41-4	ethylbenzene	1800* ppm
84-74-2	dibutyl phthalate	9300* mg/m ³
108-65-6	2-methoxy-1-methylethyl acetate	5000* ppm

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7 Handling and storage

- **Handling:**
- **Precautions for safe handling** Ensure good ventilation/exhaustion at the workplace.
- **Information about protection against explosions and fires:** No special measures required.
- **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:**

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

REL Ceiling limit value: 0.11 mg/m³, 0.01 ppm

TLV Long-term value: 0.054 mg/m³, 0.005 ppm

872-50-4 N-methyl-2-pyrrolidone

WEEL Long-term value: 10 ppm
Skin

- **Ingredients with biological limit values:**

872-50-4 N-methyl-2-pyrrolidone

BEI 100 mg/L
Medium: urine
Time: end of shift
Parameter: 5-Hydroxy-N-methyl-2-pyrrolidone

- **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.
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

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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.

- **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

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

- **General Information**

- **Appearance:**

· Form:	Liquid
· Color:	Light yellow
· Odor:	Characteristic
· Odor threshold:	Not determined.

- **pH-value:** Not determined.

- **Change in condition**

· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	251 °C (483.8 °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:	Not determined.
· Upper:	Not determined.

- **Vapor pressure:** Not determined.

- **Density at 20 °C (68 °F):** 1.06 g/cm³ (8.85 lbs/gal)

- **Relative density** Not determined.

- **Vapor density** Not determined.

- **Evaporation rate** Not determined.

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· 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:	0.3 %
VOC content:	0.32 %
	3.4 g/l / 0.03 lb/gl
Solids content:	0.0 %
· 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.
- **Possibility of hazardous reactions**
Violent reactions with -NH_x, -OH and -SH- groups.
In the presence of water or humidity gas (CO₂) is produced and/or uncontrolled polymerization, possibly leading to internal pressure rises and consequent risk of container breach.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:**
?
Nitrogen oxides
Carbon monoxide and carbon dioxide
(possible HCN)

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **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

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· Carcinogenic categories

· IARC (International Agency for Research on Cancer)

98-82-8	cumene	2B
1330-20-7	xylene	3
100-41-4	ethylbenzene	2B

· NTP (National Toxicology Program)

98-82-8	cumene	R
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· 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.

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

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

· UN-Number

· **DOT, ADN, IMDG, IATA** not regulated

· UN proper shipping name

· **DOT, ADN, IMDG, IATA** not regulated

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- **Transport hazard class(es)**
- **DOT, ADN, IMDG, IATA**
- **Class** not regulated
- **Packing group**
- **DOT, IMDG, IATA** not regulated
- **Environmental hazards:**
- **Marine pollutant:** No
- **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.

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

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

872-50-4 N-methyl-2-pyrrolidone

· **TSCA (Toxic Substances Control Act) (Substances not listed):**

All ingredients are listed.

· **Chemicals regulated by TSCA Section 12(b)**

None of the ingredients is listed.

· **Chemical regulated by TSCA 5(a)(2)rule:**

None of the ingredients is listed.

· **Proposition 65**

· **Chemicals known to cause cancer:**

98-82-8 cumene

100-41-4 ethylbenzene

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

84-74-2 dibutyl phthalate

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

84-74-2 dibutyl phthalate

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

872-50-4 N-methyl-2-pyrrolidone

84-74-2 dibutyl phthalate

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· **Carcinogenic categories**

· **EPA (Environmental Protection Agency)**

98-82-8	cumene	D, CBD
95-63-6	1,2,4-trimethylbenzene	II
1330-20-7	xylene	I
100-41-4	ethylbenzene	D
84-74-2	dibutyl phthalate	D

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

1330-20-7	xylene	A4
100-41-4	ethylbenzene	A3

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

None of the ingredients is listed.

· **Listed in CWC Regulations**

None of the ingredients is listed.

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

· **Hazard pictograms**



GHS07 GHS08

· **Signal word** Danger

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

4,4'-methylenedi(cyclohexyl isocyanate)

N-methyl-2-pyrrolidone

· **Hazard statements**

Harmful if inhaled.

Causes skin irritation.

Causes serious eye irritation.

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

May cause an allergic skin reaction.

May damage fertility or the unborn child.

May cause respiratory irritation.

· **Precautionary statements**

Avoid breathing dust/fume/gas/mist/vapors/spray

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

[In case of inadequate ventilation] wear respiratory protection.

IF INHALED: 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.

Call a poison center/doctor if you feel unwell.

If experiencing respiratory symptoms: Call a poison center/doctor.

Wash contaminated clothing before reuse.

Store locked up.

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

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· **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.

· **Date of preparation / last revision** 05/23/2018 / 1

· **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)

NFPA: National Fire Protection Association (USA)

HMIS: Hazardous Materials Identification System (USA)

VOC: Volatile Organic Compounds (USA, EU)

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

BEI: Biological Exposure Limit

Acute Tox. 4: Acute toxicity – Category 4

Skin Irrit. 2: Skin corrosion/irritation – Category 2

Eye Irrit. 2A: Serious eye damage/eye irritation – Category 2A

Resp. Sens. 1: Respiratory sensitisation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

Repr. 1A: Reproductive toxicity – Category 1A

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3