URA-BOND 24N-HV B

Safety Data Sheet

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

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SECTION 1: Identification

1.1. Identification

Product form : Mixture

Trade name : URA-BOND 24N-HV B

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

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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 2	H330	Fatal 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

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
H330 - Fatal if inhaled
H334 - May cause an allergy or asthma symptoms or breathing difficulties if inhaled

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.
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 or doctor.
P320 - Specific treatment is urgent (see supplemental first aid instruction on this label).
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

Other hazards which do not result in classification : Possible sensitizer, reacts with common materials such as water and alcohols releasing CO2.

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	%
capralactone polymer - Trade secret CAS		75 – 90
4,4'-methylenedi(cyclohexyl isocyanate)	(CAS-No.) 5124-30-1	10 – 30

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 physician immediately.

First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a doctor. If inhaled: Remove person to fresh air and keep comfortable for breathing. Asthmatic sensitization can occur from a single large inhalation exposure or from repeated lower inhalation exposures. Observe OELs. Symptoms may be delayed. The affected person must rest and be kept under medical observation 48 Hours. If experiencing respiratory symptoms, call a doctor.

First-aid measures after skin contact : If no corn oil or polyglycol-based skin cleanser available, Rinse immediately with plenty of water for 15 minutes. Rinse immediately with plenty of water for 15 minutes. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention. Thoroughly clean shoes before reuse. Wash clothing before reuse. Polyglycol based skin cleansers such as Tam D or PEG 400 or corn oil may be more effective than using soap and water.

First-aid measures after eye contact : Immediately rinse with plenty of water (for at least 15 minutes). Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention. Rinse cautiously with water for several minutes. If eye irritation persists: Get medical advice/attention.

First-aid measures after ingestion : Rinse mouth out with water. Do not induce vomiting. Call a physician immediately.

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.

4.3. Immediate medical attention and special treatment, if necessary

Treat symptomatically. 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 spray.

Unsuitable extinguishing media : Do not use a heavy water stream. Water may be used if no other available and then in copious quantities. Reaction between water and hot isocyanate may be vigorous.

5.2. Specific hazards arising from the chemical

Hazardous decomposition products in case of fire : Toxic fumes may be released,Carbon oxides (CO, CO2),Nitrogen oxides,Aldehydes,Organic acid,ammonia,Hydrogen cyanide,Isocyanates

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. Avoid contact with skin and eyes. Do not breathe dust/fume/gas/mist/vapors/spray. Only qualified personnel equipped with suitable protective equipment may intervene.

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 : Collect spillage.

Methods for cleaning up : Take up liquid spill into absorbent material. 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.

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 : Use only outdoors or in a well-ventilated area. Avoid contact with skin and eyes. Wear personal protective equipment. Do not breathe dust/fume/gas/mist/vapors/spray.

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 locked up. Store in a well-ventilated place. Keep container tightly closed. Keep cool. Protect from moisture.

Incompatible materials : Keep away from any possible contact with water, because of violent reaction and possible flash fire.

Storage area : Reacts on contact with water releasing carbon dioxide (CO_2).

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

4,4'-methylenedi(cyclohexyl isocyanate) (5124-30-1)		
ACGIH	Local name	Methylene bis(4-cyclohexylisocyanate)
ACGIH	ACGIH OEL TWA [ppm]	0.005 ppm
ACGIH	Remark (ACGIH)	TLV® Basis: Resp sens; LRT irr
ACGIH	Regulatory reference	ACGIH 2023

capralactone polymer - Trade secret CAS
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. Where exposure through inhalation may occur from use, respiratory protection equipment is recommended. When using a spray gun or other means to aerosolize the material, respiratory protection is recommended.

Personal protective equipment symbol(s):

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Color	:	Clear
Odor	:	odorless
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	:	> 93 °C
Relative evaporation rate (butyl acetate=1)	:	No data available
Flammability	:	Not applicable.
Vapor pressure	:	No data available
Relative vapor density at 20°C	:	No data available
Relative density	:	No data available
Density	:	1.09 g/cm³
Solubility	:	Reacts with water.
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

Contact with moisture or temperatures above 204.4 C may cause polymerization.

10.4. Conditions to avoid

Water, humidity. Heat. Ignition sources. Moisture.

10.5. Incompatible materials

alcohols. Water. Amines. Strong acids. Strong bases. metals.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral) : Not classified

Acute toxicity (dermal) : Not classified

Acute toxicity (inhalation) : Inhalation of diisocyanate at concentrations above the TLV can irritate mucous membranes in the respiratory tract. Persons with preexisting bronchial conditions and reactivity can respond to concentrations below the TLV. Symptoms can be delayed up to several hours after exposure. Sensitized individuals can react to levels well below the TLV.

ATE US (dust, mist)	0.23 mg/l/4h

4,4'-methylenedi(cyclohexyl isocyanate) (5124-30-1)	
LD50 dermal rat	> 7000 mg/kg body weight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)
ATE US (gases)	100 ppmV/4h
ATE US (vapors)	0.5 mg/l/4h
ATE US (dust, mist)	0.05 mg/l/4h

capralactone polymer - Trade secret CAS	
LC50 Inhalation - Rat	0.5 mg/l
ATE US (vapors)	0.5 mg/l/4h
ATE US (dust, mist)	0.5 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.

Can cause allergic skin reaction. Reaction may be swelling, rash, scaling or blistering. Sensitized individuals may develop symptoms from liquid or vapor exposure. Skin reactions can occur from inhalative exposure. Respiratory sensitization can also result from skin contact.

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

Reproductive toxicity : Not classified

STOT-single exposure : Not classified

4,4'-methylenedi(cyclohexyl isocyanate) (5124-30-1)	
STOT-single exposure	May cause respiratory irritation.

STOT-repeated exposure : Not classified

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. Harmful to aquatic life.

12.2. Persistence and degradability

4,4'-methylenedi(cyclohexyl isocyanate) (5124-30-1)	
Persistence and degradability	Not readily biodegradable in water.

12.3. Bioaccumulative potential

4,4'-methylenedi(cyclohexyl isocyanate) (5124-30-1)	
Bioaccumulative potential	No bioaccumulation data available.

12.4. Mobility in soil

No additional information 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

Transport document description (DOT) : UN2206 Isocyanates, toxic, n.o.s. (4,4'-methylenedi(cyclohexyl isocyanate)), 6.1, II

UN-No.(DOT) : UN2206

Proper Shipping Name (DOT) : Isocyanates, toxic, n.o.s.
4,4'-methylenedi(cyclohexyl isocyanate)

Class (DOT) : 6.1 - Class 6.1 - Poisonous materials 49 CFR 173.132

Packing group (DOT) : II - Medium Danger

Hazard labels (DOT) : 6.1 - Poison

DOT Packaging Non Bulk (49 CFR 173.xxx) : 202

DOT Packaging Bulk (49 CFR 173.xxx) : 243

DOT Symbols : G - Identifies PSN requiring a technical name

DOT Special Provisions (49 CFR 172.102)	:	IB2 - Authorized IBCs: Metal (31A, 31B and 31N); Rigid plastics (31H1 and 31H2); Composite (31HZ1). Additional Requirement: Only liquids with a vapor pressure less than or equal to 110 kPa at 50 C (1.1 bar at 122 F), or 130 kPa at 55 C (1.3 bar at 131 F) are authorized. T11 - 6 178.274(d)(2) Normal..... 178.275(d)(3) TP2 - a. The maximum degree of filling must not exceed the degree of filling determined by the following: (image) Where: tr is the maximum mean bulk temperature during transport, tf is the temperature in degrees celsius of the liquid during filling, and a is the mean coefficient of cubical expansion of the liquid between the mean temperature of the liquid during filling (tf) and the maximum mean bulk temperature during transportation (tr) both in degrees celsius. b. For liquids transported under ambient conditions may be calculated using the formula: (image) Where: d15 and d50 are the densities (in units of mass per unit volume) of the liquid at 15 C (59 F) and 50 C (122 F), respectively. TP13 - Self-contained breathing apparatus must be provided when this hazardous material is transported by sea. TP27 - A portable tank having a minimum test pressure of 4 bar (400 kPa) may be used provided the calculated test pressure is 4 bar or less based on the MAWP of the hazardous material, as defined in 178.275 of this subchapter, where the test pressure is 1.5 times the MAWP.
DOT Packaging Exceptions (49 CFR 173.xxx)	:	153
DOT Quantity Limitations Passenger aircraft/rail (49 CFR 173.27)	:	5 L
DOT Quantity Limitations Cargo aircraft only (49 CFR 175.75)	:	60 L
DOT Vessel Stowage Location	:	E - The material may be stowed ‘‘on deck’’ or ‘‘under deck’’ on a cargo vessel and on a passenger vessel carrying a number of passengers limited to not more than the larger of 25 passengers, or one passenger per each 3 m of overall vessel length, but is prohibited from carriage on passenger vessels in which the limiting number of passengers is exceeded.
DOT Vessel Stowage Other	:	25 - Protected from sources of heat,40 - Stow ‘‘clear of living quarters’’
Emergency Response Guide (ERG) Number	:	155
Other information	:	No supplementary information available.

Transportation of Dangerous Goods

Not applicable

Transport by sea

Transport document description (IMDG)	:	UN 2206 ISOCYANATES, TOXIC, N.O.S. (4,4'-methylenedi(cyclohexyl isocyanate)), 6.1, II
UN-No. (IMDG)	:	2206
		ISOCYANATES, TOXIC, N.O.S.
		4,4'-methylenedi(cyclohexyl isocyanate)
Class (IMDG)	:	6.1 - Toxic substances
Packing group (IMDG)	:	II - substances presenting medium danger

Air transport

Transport document description (IATA)	:	UN 2206 Isocyanates, toxic, n.o.s. (4,4'-methylenedi(cyclohexyl isocyanate)), 6.1, II
UN-No. (IATA)	:	2206
Proper Shipping Name (IATA)	:	Isocyanates, toxic, n.o.s.
		4,4'-methylenedi(cyclohexyl isocyanate)
Class (IATA)	:	6.1 - Toxic Substances
Packing group (IATA)	:	II - Medium danger

SECTION 15: Regulatory information

15.1. US Federal regulations

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'-methylenedi(cyclohexyl isocyanate)	CAS-No. 5124-30-1	10 – 30%

4,4'-methylenedi(cyclohexyl isocyanate) (5124-30-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory Subject to reporting requirements of United States SARA Section 313

capralactone polymer - Trade secret CAS
Not listed on the United States TSCA (Toxic Substances Control Act) inventory

15.2. International regulations

CANADA

4,4'-methylenedi(cyclohexyl isocyanate) (5124-30-1)
Listed on the Canadian DSL (Domestic Substances List)

capralactone polymer - Trade secret CAS
Not listed on the Canadian DSL (Domestic Substances List)/NDSL (Non-Domestic Substances List)

EU-Regulations

Contains no REACH candidate substance

4,4'-methylenedi(cyclohexyl isocyanate) (5124-30-1)
Listed on the EEC inventory EINECS (European Inventory of Existing Commercial Chemical Substances)

National regulations

4,4'-methylenedi(cyclohexyl isocyanate) (5124-30-1)
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active Listed on IECSC (Inventory of Existing Chemical Substances Produced or Imported in China) Listed on KECL/KECI (Korean Existing Chemicals Inventory) Listed on NZIoC (New Zealand Inventory of Chemicals) Listed on INSQ (Mexican National Inventory of Chemical Substances) Listed introduction on Australian Industrial Chemicals Introduction Scheme (AICIS Inventory)

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'-methylenedi(cyclohexyl isocyanate)(5124-30-1)	U.S. - New Jersey - Right to Know Hazardous Substance List; U.S. - Pennsylvania - RTK (Right to Know) List

SECTION 16: Other information

according to Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules and Regulations

Revision date : 10/30/2023

Full text of H-phrases:

H315	Causes skin irritation
H317	May cause an allergic skin reaction
H319	Causes serious eye irritation
H330	Fatal if inhaled
H334	May cause an allergy or asthma symptoms or breathing difficulties if inhaled
H402	Harmful 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.