

MATERIAL SAFETY DATA SHEET

Date Issued: 08/24/2012
MSDS No: URP 4103 A

IsoMold URP 4103 A (2140 Polyol Side A)

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: IsoMold URP 4103 A (2140 Polyol Side A)

MANUFACTURER

Isotec® International, Inc.
201 Longview St.
Canton, GA 30114
Service Number: 800-234-6300

24 HR. EMERGENCY TELEPHONE NUMBERS

CHEMTREC: 800-424-9300

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE: Dark liquid.

IMMEDIATE CONCERNS: Irritating to eyes and skin. Gastrointestinal discomfort if swallowed.

POTENTIAL HEALTH EFFECTS

EYES: Moderate eye irritant. Contact can cause stinging, burning, lachrymation or tearing.

SKIN: Moderate irritant. Repeated and/or prolonged contact may cause skin rash.

INGESTION: Ingestion may cause gastrointestinal discomfort.

INHALATION: Inhalation of vapors or mists at high concentrations can cause respiratory tract irritation. (nose, throat, lungs)

ROUTES OF ENTRY: Inhalation, skin contact, eye contact, ingestion.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt. %	CAS	EINECS
1-Hexadecanamine, N,N-dimethyl	2 - 3	112-69-6	203-997-2
2,2,4-Trimethyl-1,3-pentanediol Diisobutyrate	10 - 15	6846-50-0	229-934-9
Distillates, petroleum, hydrotreated heavy naphthenic	8 - 12	64742-52-5	265-155-0
Diethyltoluenediamine	4 - 6	68479-98-1	270-877-4
Oxirane, methyl-, polymer with oxirane, ether with 1,2,3 propanetriol (3:1)	65 - 75	9082-00-2	

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Seek medical attention if irritation persists.

SKIN: Immediately flush skin with plenty of water for at least 15 minutes. Seek medical attention if irritation persists.

INGESTION: Do not induce vomiting. If the individual is conscious, rinse mouth with water and give 1 to 2 cups of water to drink. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

INHALATION: Remove individual to fresh air. If respiratory irritation or other symptoms develop, seek medical attention.

5. FIRE FIGHTING MEASURES

IsoMold URP 4103 A (2140 Polyol Side A)**FLASH POINT AND METHOD:** > (200°F) Closed Cup**AUTOIGNITION TEMPERATURE:** Not Determined**FIRE FIGHTING PROCEDURES:** Isolate fuel supply from fire. Use water spray to cool fire-exposed surfaces and containers. Avoid spreading burning liquid with water used for cooling purposes. Fire fighters should wear self-contained breathing apparatus in addition to emergency fire fighting protective clothing.**6. ACCIDENTAL RELEASE MEASURES****SMALL SPILL:** Clean up spills wearing proper personal protective equipment. (See Section 8) Contain and absorb spill with sand, earth or other inert material. Wipe up residue and place in a suitable container for disposal.**LARGE SPILL:** Evacuate and ventilate the area. Create a dike or trench to contain materials. Prevent entry into waterways, sewers, basements or confined areas. Clean-up personnel should wear appropriate personal protection equipment. (See Section 8) May be a slipping hazard. Absorb with dry chemical absorbent, earth, sand, or any other inert material. Place in a chemical waste container. Wash residues from area with soap and water and rinse. Contaminated water should be retained and not allowed to flow into ground or surface water.**7. HANDLING AND STORAGE****HANDLING:** Wear proper personal protective equipment. Use in a well ventilated area. Avoid smoking, bare lights, or ignition sources. Keep containers securely sealed when not in use. Avoid physical damage to containers.**STORAGE:** Keep away from heat or ignition sources. Protect from atmospheric moisture. Keep containers sealed in order to avoid contamination. Do not reseal if contaminated. After container has been opened, blanket with nitrogen before resealing. Store indoors in a cool, well-ventilated area.**STORAGE TEMPERATURE:** (60°F) Minimum to (120°F) Maximum**8. EXPOSURE CONTROLS / PERSONAL PROTECTION****EXPOSURE GUIDELINES**

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)					
		EXPOSURE LIMITS			
		OSHA PEL		ACGIH TLV	
Chemical Name		ppm	mg/m ³	ppm	mg/m ³
1-Hexadecanamine, N,N-dimethyl	TWA	NL ^[1]	NL ^[1]	NL	NL
2,2,4-Trimethyl-1,3-pentanediol Diisobutyrate	TWA	NE ^[2]	NE ^[2]	NE	NE
Distillates, petroleum, hydrotreated heavy naphthenic	TWA	NL	NL	NL	NL
Diethyltoluenediamine	TWA	NE ^[2]	NE ^[2]	NE	NE
Footnotes:					
1. NL = Not Listed					
2. NE = Not Established					

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.**PERSONAL PROTECTIVE EQUIPMENT****EYES AND FACE:** Wear safety glasses with side shields or goggles.**SKIN:** Wear impervious gloves and covering for exposed skin.**RESPIRATORY:** None required in normal use.**WORK HYGIENIC PRACTICES:** Follow good normal hygiene practices. Avoid contact with skin. Avoid eating, drinking, or

IsoMold URP 4103 A (2140 Polyol Side A)

smoking while using this product. Wash hands thoroughly after use.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

VAPOR DENSITY: Heavier than air

BOILING POINT: Not Established

FREEZING POINT: Not Established

FLASH POINT AND METHOD: > (200°F) Closed Cup

SOLUBILITY IN WATER: Negligible

10. STABILITY AND REACTIVITY

STABILITY: Stable.

POLYMERIZATION: Will not occur.

CONDITIONS TO AVOID: Temperature extremes. Open flame. Container contamination.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon dioxide and carbon monoxide.

INCOMPATIBLE MATERIALS: Strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION**ACUTE**

Chemical Name	ORAL LD ₅₀ (rat)	DERMAL LD ₅₀ (rabbit)	INHALATION LC ₅₀ (rat)
1-Hexadecanamine, N,N-dimethyl	1600 mg/kg	> 12000 mg/kg	> 16000 ppm/8h
2,2,4-Trimethyl-1,3-pentanediol Diisobutyrate	> 3200 mg/kg	> 20 mL/kg	453 ppm/6h
Diethyltoluenediamine	738 mg/kg	> 2000 mg/kg	

EYE EFFECTS: Moderate irritant.

SKIN EFFECTS: Moderate irritant.

CARCINOGENICITY

IARC: Not classified as a carcinogen.

NTP: Not classified as a carcinogen.

OSHA: Not classified as a carcinogen.

12. ECOLOGICAL INFORMATION

GENERAL COMMENTS: No testing for product as a whole.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Disposal should be in accordance with local, state, provincial or national regulations.

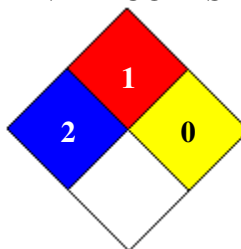
EMPTY CONTAINER: Empty containers should be passed to an approved drum recycler or destroyed.

RCRA/EPA WASTE INFORMATION: If discarded in its purchased form, this material is a hazardous waste under RCRA (40 CFR 261).

GENERAL COMMENTS: The generation of waste should be avoided or minimized whenever possible. Chemical waste, even small quantities, should never be poured down drains, sewers or waterways.

IsoMold URP 4103 A (2140 Polyol Side A)**14. TRANSPORT INFORMATION****DOT (DEPARTMENT OF TRANSPORTATION)****PROPER SHIPPING NAME:** Not regulated for transportation.**15. REGULATORY INFORMATION****UNITED STATES****SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)****311/312 HAZARD CATEGORIES:** Immediate health hazard. Delayed health hazard.**313 REPORTABLE INGREDIENTS:** This product does not contain chemicals that exceed their *de minimis* reporting levels.**CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)****CERCLA REGULATORY:** This product does not contain chemicals that are reportable under CERCLA.**RCRA STATUS:** Not hazardous if discarded in its purchased form.**16. OTHER INFORMATION****PREPARED BY:** L. Priest**HMIS RATING**

HEALTH	*	2
FLAMMABILITY		1
PHYSICAL HAZARD		0
PERSONAL PROTECTION		

NFPA CODES**NFPA STORAGE CLASSIFICATION:** Rating system: 0 = low hazard to 4 = high hazard**HMIS RATINGS NOTES:**

If present, the asterisk signifies a chronic health hazard.

Rating system: 0 = low hazard to 4 = high hazard

COMMENTS:Key Legend Information:

ACGIH - American Conference of Governmental Industrial Hygienists

EPA - Environmental Protection Agency

IARC - International Agency for Research on Cancer

NTP - National Toxicology Program

OEL - Occupational Exposure Limit

OSHA - Occupational Safety and Health Administration

PEL - Permissible Exposure Limit

STEL - Short Term Exposure Limit

TLV - Threshold Limit Value

TWA - Time Weighted Average

MANUFACTURER DISCLAIMER: The information in this MSDS was obtained from sources that we believe are reliable. The information is provided without warranty, implied or expressed, concerning accuracy. The manufacturer or supplier assumes no legal responsibility for use or reliance on this information. This MSDS is provided solely for the purpose of conveying health, safety and environmental information. This MSDS is not a specification data sheet. Some of the information and conclusions may be derived from sources other than test data on the material itself.

MATERIAL SAFETY DATA SHEET

Date Issued: 08/24/2012

MSDS No: URP 4103 B

IsoMold URP 4103 "B" (2140 Iso Side B)

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: IsoMold URP 4103 "B" (2140 Iso Side B)

MANUFACTURER

Isotec® International, Inc.
201 Longview St.
Canton, GA 30114
Service Number: 800-234-6300

24 HR. EMERGENCY TELEPHONE NUMBERS

CHEMTREC: 800-424-9300

2. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE: Dark liquid.

IMMEDIATE CONCERNS: Irritating to eyes, respiratory system, and skin. Harmful if swallowed. The onset of respiratory symptoms may be delayed for several hours after exposure.

POTENTIAL HEALTH EFFECTS

EYES: Moderate eye irritant.

SKIN: Moderate skin irritant.

INGESTION: Harmful if swallowed.

INHALATION: Inhalation of vapors or mists at concentrations above the TLV can cause respiratory tract irritation. Repeated or prolonged exposure at levels above the OEL can result in sensitization.

ROUTES OF ENTRY: Inhalation, skin contact, eye contact, ingestion.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt. %	CAS	EINECS
Poly(oxy(methyl-2-ethane)), toluene diisocyanate polymer	65 - 75	9057-91-4	
Light Paraffinic Petroleum Oil Solvent Extract	5 - 10	64742-05-8	265-104-2
2,2,4-Trimethyl-1,3-pentanediol Diisobutyrate	15 - 20	6846-50-0	229-934-9
Toluenediisocyanate (mixed isomers)	< 1	26471-62-5	209-544-5

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Seek immediate medical attention.

SKIN: Remove contaminated clothing. Wash affected areas thoroughly with soap and water. Wash clothing thoroughly before reuse. For severe exposure, seek medical attention immediately. For lesser exposure, seek medical attention if swelling or redness occurs, or if irritation persists after being washed.

INGESTION: Aspiration hazard. If swallowed, vomiting may occur spontaneously, but do not induce. If vomiting occurs, keep head below hips to prevent aspiration into lungs. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

INHALATION: Remove individual to fresh air. If respiratory irritation or other symptoms develop, seek medical attention.

IsoMold URP 4103 "B" (2140 Iso Side B)**5. FIRE FIGHTING MEASURES**

FLASH POINT AND METHOD: > (200°F) Closed Cup

AUTOIGNITION TEMPERATURE: Not Determined

EXTINGUISHING MEDIA: Dry Chemical, Carbon Dioxide, Chemical Foam, Water Fog or Spray.

HAZARDOUS COMBUSTION PRODUCTS: Carbon Monoxide, Carbon Dioxide, Nitrous Oxide, Hydrogen Cyanide, other undetermined compounds.

FIRE FIGHTING PROCEDURES: Isolate fuel supply from fire. Use water spray to cool fire-exposed surfaces and containers. Fire fighters should wear self-contained breathing apparatus in addition to emergency fire fighting protective clothing.

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Clean up spills wearing proper personal protective equipment. (See Section 8) Absorb with dry chemical absorbent, earth, sand, or any other inert material. Place in a chemical waste container. Move to outside well-ventilated area. Treat with 10 parts decontamination solution to 1 part isocyanate. Mix well. Allow to stand uncovered 48 hours before disposal.

LARGE SPILL: Evacuate and ventilate the area. Create a dike or trench to contain materials. Prevent entry into waterways, sewers, basements or confined areas. Clean-up personnel should wear appropriate personal protection equipment. (See Section 8) Absorb with dry chemical absorbent, earth, sand, or any other inert material. Place in a chemical waste container. Move to outside well-ventilated area. Treat with 10 parts decontamination solution to 1 part isocyanate. Mix well. Allow to stand uncovered 48 hours before disposal. Clean spill area with decontamination solution and allow to stand for 15 minutes before removal.

GENERAL PROCEDURES: Decontamination solution: Concentrated ammonia (5%), detergent (2%), and water (93%)

7. HANDLING AND STORAGE

HANDLING: Wear proper personal protective equipment. Use in a well ventilated area. Keep containers securely sealed when not in use. Avoid physical damage to containers.

STORAGE: Minimize exposure to high heat. Protect from atmospheric moisture. Keep containers sealed in order to avoid contamination. Do not reseal if contaminated. After container has been opened, blanket with nitrogen before resealing. Store indoors in a cool, well-ventilated area.

STORAGE TEMPERATURE: (60°F) Minimum to (120°F) Maximum

8. EXPOSURE CONTROLS / PERSONAL PROTECTION**EXPOSURE GUIDELINES**

OSHA HAZARDOUS COMPONENTS (29 CFR1910.1200)					
		EXPOSURE LIMITS			
		OSHA PEL		ACGIH TLV	
Chemical Name		ppm	mg/m ³	ppm	mg/m ³
Poly(oxy(methyl-2-ethane)), toluene diisocyanate polymer	TWA	NE	NE	NE	NE
Light Paraffinic Petroleum Oil Solvent Extract	TWA	300		300	
2,2,4-Trimethyl-1,3-pentanediol Diisobutyrate	TWA	NE ^[1]	NE ^[1]	NE	NE
Toluenediisocyanate (mixed isomers)	TWA			0.005	
	STEL	0.02* ^[2]	0.14* ^[2]	0.02	
Footnotes:					
1. NE = Not Established					
2. * = Ceiling					

IsoMold URP 4103 "B" (2140 Iso Side B)

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Wear safety glasses with side shields or goggles.

SKIN: Wear impervious gloves and covering for exposed skin.

RESPIRATORY: If the exposure limit is exceeded and engineering controls are not feasible, a half-face organic vapor respirator may be worn for up to 10 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full-face piece organic vapor respirator may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. All respirators used should follow the OSHA Respiratory Standard 29 CFR 1910.134.

WORK HYGIENIC PRACTICES: Follow good normal hygiene practices. Avoid contact with skin. Avoid eating, drinking, or smoking while using this product. Wash hands thoroughly after use.

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Liquid

VAPOR DENSITY: Heavier than air

BOILING POINT: Not Established

FREEZING POINT: Not Established

FLASH POINT AND METHOD: > (200°F) Closed Cup

SOLUBILITY IN WATER: Reactive with water

SPECIFIC GRAVITY: 1.100

10. STABILITY AND REACTIVITY

STABILITY: Stable under recommended storage conditions.

POLYMERIZATION: Can occur at temperatures over 400 °F.

CONDITIONS TO AVOID: High temperatures. Ignition sources (heat, sparks, open flame). Container contamination. Moisture.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon Monoxide, Carbon Dioxide, Nitrous Oxide, Hydrogen Cyanide, and other undetermined compounds.

INCOMPATIBLE MATERIALS: Water, amines, strong bases, alcohols, copper alloys

11. TOXICOLOGICAL INFORMATION**ACUTE**

Chemical Name	ORAL LD ₅₀ (rat)	DERMAL LD ₅₀ (rabbit)	INHALATION LC ₅₀ (rat)
Light Paraffinic Petroleum Oil Solvent Extract	> 5000 mg/kg	> 2000 mg/kg	
2,2,4-Trimethyl-1,3-pentanediol Diisobutyrate	> 3200 mg/kg	> 20 mL/kg	453 ppm/6h
Toluenediisocyanate (mixed isomers)	5800 mg/kg	> 16000 mg/kg	100 to 360 mg/m ³ /4h

EYE EFFECTS: Moderate eye irritant.

SKIN EFFECTS: Moderate skin irritant.

CARCINOGENICITY

IARC: Toluene Diisocyanate is listed in Group 2B as a substance that is possibly carcinogenic to humans.

NTP: Toluene Diisocyanate is listed as a substance that may reasonably be anticipated to be a carcinogen.

IsoMold URP 4103 "B" (2140 Iso Side B)

OSHA: No component in this product is regulated as a carcinogen.

SENSITIZATION: This material is a respiratory sensitizer and irritant. Repeated and/or prolonged contact may cause skin sensitization and irritation.

12. ECOLOGICAL INFORMATION**ECOTOXICOLOGICAL INFORMATION:**TDI:

LC₅₀ (Zebra Fish) (24 hour) >500mg/L

EC₅₀ (Daphnia magna) (24 hour) ~750 mg/L

GENERAL COMMENTS: No testing for product as a whole.

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Disposal should be in accordance with local, state, provincial or national regulations.

EMPTY CONTAINER: Empty containers should be decontaminated and either passed to an approved drum recycler or destroyed.

RCRA/EPA WASTE INFORMATION: If discarded in its purchased form, this material is not a hazardous waste under RCRA (40 CFR 261).

GENERAL COMMENTS: The generation of waste should be avoided or minimized whenever possible. Chemical waste, even small quantities, should never be poured down drains, sewers or waterways.

14. TRANSPORT INFORMATION**DOT (DEPARTMENT OF TRANSPORTATION)**

PROPER SHIPPING NAME: Not regulated when shipped below RQ.

REPORTABLE QUANTITY (RQ) UNDER CERCLA: 10000 lbs

15. REGULATORY INFORMATION**UNITED STATES****SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)**

311/312 HAZARD CATEGORIES: Immediate health hazard. Delayed health hazard.

EPCRA SECTION 313 SUPPLIER NOTIFICATION

Chemical Name	Wt. %	CAS
Toluenediisocyanate (mixed isomers)	< 1	26471-62-5

CERCLA (COMPREHENSIVE RESPONSE, COMPENSATION, AND LIABILITY ACT)

Chemical Name	Wt. %	CERCLA RQ
Toluenediisocyanate (mixed isomers)	< 1	100 lbs

REPORTABLE SPILL QUANTITY: 10000 lbs

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA REGULATORY: All components are on TSCA inventory.

RCRA STATUS: Not hazardous if discarded in its purchased form. However, under RCRA, it is the responsibility of the product user to determine at the time of disposal whether a material containing the product or derived from the product should be classified as a hazardous waste.

OSHA HAZARD COMM. RULE: This product is classified as a hazardous material under the criteria outlined in the OSHA

IsoMold URP 4103 "B" (2140 Iso Side B)

Hazard Communication Standard 29 CFR 1910.1200.

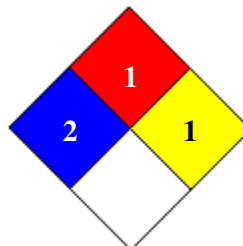
NATIONAL RESPONSE CENTER: Any spill or release above the RQ must be reported to the National Response Center (800-424-8802).

16. OTHER INFORMATION

PREPARED BY: L. Priest

HMIS RATING

HEALTH	*	2
FLAMMABILITY		1
PHYSICAL HAZARD		1
PERSONAL PROTECTION		

NFPA CODES

NFPA STORAGE CLASSIFICATION: Rating system: 0 = low hazard to 4 = high hazard

HMIS RATINGS NOTES:

If present, the asterisk signifies a chronic health hazard.

Rating system: 0 = low hazard to 4 = high hazard

COMMENTS:Key Legend Information:

ACGIH - American Conference of Governmental Industrial Hygienists

EPA - Environmental Protection Agency

IARC - International Agency for Research on Cancer

NTP - National Toxicology Program

OEL - Occupational Exposure Limit

OSHA - Occupational Safety and Health Administration

PEL - Permissible Exposure Limit

STEL - Short Term Exposure Limit

TLV - Threshold Limit Value

TWA - Time Weighted Average

MANUFACTURER DISCLAIMER: The information in this MSDS was obtained from sources that we believe are reliable. The information is provided without warranty, implied or expressed, concerning accuracy. The manufacturer or supplier assumes no legal responsibility for use or reliance on this information. This MSDS is provided solely for the purpose of conveying health, safety and environmental information. This MSDS is not a specification data sheet. Some of the information and conclusions may be derived from sources other than test data on the material itself.