

# SAFETY DATA SHEET

Revision Date 23-Jun-2015

Version 3

## 1. IDENTIFICATION

### Product identifier

**Product Name** Urethane Hardener

### Other means of identification

**Product Code** TP12HP  
**SKU(s)** TP12HP, TP12P

### Recommended use of the chemical and restrictions on use

**Recommended Use** No information available.  
**Uses advised against** No information available

### Details of the supplier of the safety data sheet

#### **Supplier Address**

TISCO  
PO Box 82222  
Lincoln, NE 68501  
Phone: 402-476-6558  
Fax: 402-476-6749

### Emergency telephone number

**Emergency Telephone** Chemtrec 1-800-424-9300

## 2. HAZARDS IDENTIFICATION

### Classification

#### **OSHA Regulatory Status**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Respiratory sensitization	Category 1
Skin sensitization	Category 1
Germ cell mutagenicity	Category 1B
Carcinogenicity	Category 1B
Aspiration toxicity	Category 1
Flammable liquids	Category 3

### **Emergency Overview**

#### **Danger**

#### **Hazard statements**

May cause allergy or asthma symptoms or breathing difficulties if inhaled  
May cause an allergic skin reaction  
May cause genetic defects  
May cause cancer  
May be fatal if swallowed and enters airways  
Flammable liquid and vapor

**Appearance** No information available**Physical state** liquid**Odor** No information available**Precautionary Statements - Prevention**

Obtain special instructions before use  
 Do not handle until all safety precautions have been read and understood  
 Use personal protective equipment as required  
 Avoid breathing dust/fume/gas/mist/vapors/spray  
 In case of inadequate ventilation wear respiratory protection  
 Contaminated work clothing should not be allowed out of the workplace  
 Wear protective gloves  
 Keep away from heat/sparks/open flames/hot surfaces. - No smoking  
 Keep container tightly closed  
 Ground/bond container and receiving equipment  
 Use only non-sparking tools  
 Take precautionary measures against static discharge  
 Use explosion-proof electrical/ ventilating/ lighting/ equipment

**Precautionary Statements - Response**

IF exposed or concerned: Get medical advice/attention  
 If skin irritation or rash occurs: Get medical advice/attention  
 Wash contaminated clothing before reuse  
 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing  
 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician  
 IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician  
 Do NOT induce vomiting  
 In case of fire: Use CO<sub>2</sub>, dry chemical, or foam for extinction

**Precautionary Statements - Storage**

Store locked up  
 Store in a well-ventilated place. Keep cool

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)****Other Information**

- May be harmful in contact with skin
- Causes mild skin irritation
- Toxic to aquatic life with long lasting effects
- Toxic to aquatic life

Unknown acute toxicity 58.99% of the mixture consists of ingredient(s) of unknown toxicity

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight-%	Trade Secret
Polymeric IPDI	53880-05-0	30 - 60	*
Aromatic 100	64742-95-6	10 - 30	*
Butyl Acetate	123-86-4	5 - 10	*
1,2,4-Trimethylbenzene	95-63-6	1 - 5	*
Cumene	98-82-8	0.1 - 1	*

Isophorone Diisocyanate	4098-71-9	0.1 - 1	*
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\*The exact percentage (concentration) of composition has been withheld as a trade secret.

#### 4. FIRST AID MEASURES

##### Description of first aid measures

<b>General advice</b>	Immediate medical attention is required. In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible).
<b>Eye contact</b>	Immediately flush with plenty of water. After initial flushing, remove any contact lenses and continue flushing for at least 15 minutes. Keep eye wide open while rinsing. If symptoms persist, call a physician.
<b>Skin Contact</b>	Wash off immediately with plenty of water. In the case of skin irritation or allergic reactions see a physician. Wash contaminated clothing before reuse.
<b>Inhalation</b>	Remove to fresh air. Call a physician. If breathing is irregular or stopped, administer artificial respiration. Avoid direct contact with skin. Use barrier to give mouth-to-mouth resuscitation. May cause allergic respiratory reaction.
<b>Ingestion</b>	Do NOT induce vomiting. Rinse mouth. Drink plenty of water. If symptoms persist, call a physician.
<b>Self-protection of the first aider</b>	Remove all sources of ignition.

##### Most important symptoms and effects, both acute and delayed

<b>Symptoms</b>	May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction.
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##### Indication of any immediate medical attention and special treatment needed

<b>Note to physicians</b>	May cause sensitization by inhalation and skin contact. Treat symptomatically. Symptoms may be delayed.
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#### 5. FIRE-FIGHTING MEASURES

##### Suitable extinguishing media

Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**Unsuitable extinguishing media** CAUTION: Use of water spray when fighting fire may be inefficient.

##### Specific hazards arising from the chemical

Flammable.

**Hazardous combustion products** Carbon monoxide. Carbon dioxide (CO<sub>2</sub>). Nitrogen oxides (NO<sub>x</sub>).

##### Explosion data

**Sensitivity to Mechanical Impact** None.

**Sensitivity to Static Discharge** None.

##### Protective equipment and precautions for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

#### 6. ACCIDENTAL RELEASE MEASURES

##### Personal precautions, protective equipment and emergency procedures

<b>Personal precautions</b>	Remove all sources of ignition. Evacuate personnel to safe areas. Ensure adequate ventilation, especially in confined areas. Use personal protective equipment as required.
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**Environmental precautions**

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Do not flush into surface water or sanitary sewer system. See Section 12 for additional ecological information.

**Methods and material for containment and cleaning up**

**Methods for containment** Prevent further leakage or spillage if safe to do so.

**Methods for cleaning up** Pick up and transfer to properly labeled containers. Dam up. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Soak up with inert absorbent material.

## 7. HANDLING AND STORAGE

**Precautions for safe handling**

**Advice on safe handling** Ensure adequate ventilation, especially in confined areas. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Take precautionary measures against static discharges. Use spark-proof tools and explosion-proof equipment. All equipment used when handling the product must be grounded.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep tightly closed in a dry and cool place. Keep in properly labeled containers. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity).

**Incompatible materials** Strong bases. Water. Alcohols. Amines. Copper.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Control parameters****Exposure Guidelines**

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Butyl Acetate 123-86-4	STEL: 200 ppm TWA: 150 ppm	TWA: 150 ppm TWA: 710 mg/m <sup>3</sup> (vacated) TWA: 150 ppm (vacated) TWA: 710 mg/m <sup>3</sup> (vacated) STEL: 200 ppm (vacated) STEL: 950 mg/m <sup>3</sup>	IDLH: 1700 ppm TWA: 150 ppm TWA: 710 mg/m <sup>3</sup> STEL: 200 ppm STEL: 950 mg/m <sup>3</sup>
1,2,4-Trimethylbenzene 95-63-6	-	-	TWA: 25 ppm TWA: 125 mg/m <sup>3</sup>
Cumene 98-82-8	TWA: 50 ppm	TWA: 50 ppm TWA: 245 mg/m <sup>3</sup> (vacated) TWA: 50 ppm (vacated) TWA: 245 mg/m <sup>3</sup> (vacated) S* S*	IDLH: 900 ppm TWA: 50 ppm TWA: 245 mg/m <sup>3</sup>
Isophorone Diisocyanate 4098-71-9	TWA: 0.005 ppm	(vacated) TWA: 0.005 ppm (vacated) STEL: 0.02 ppm (vacated) S*	TWA: 0.005 ppm TWA: 0.045 mg/m <sup>3</sup> STEL: 0.02 ppm STEL: 0.180 mg/m <sup>3</sup>

NIOSH IDLH *Immediately Dangerous to Life or Health*

**Other Information** Vacated limits revoked by the Court of Appeals decision in AFL-CIO v. OSHA, 965 F.2d 962 (11th Cir., 1992).

**Appropriate engineering controls**

**Engineering Controls**  
Showers  
Eyewash stations  
Ventilation systems.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection** Tight sealing safety goggles.  
**Skin and body protection** Wear protective gloves and protective clothing.  
**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.

**General Hygiene Considerations** When using do not eat, drink or smoke. Regular cleaning of equipment, work area and clothing is recommended.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

**Information on basic physical and chemical properties**

<b>Physical state</b>	liquid	<b>Odor</b>	No information available
<b>Appearance</b>	No information available	<b>Odor threshold</b>	No information available
<b>Color</b>	No information available		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
<b>pH</b>	No information available	
<b>Melting point/freezing point</b>	No information available	
<b>Boiling point / boiling range</b>	>= 118 °C / 244 °F	
<b>Flash point</b>	41 °C / 106 °F	
<b>Evaporation rate</b>	No information available	
<b>Flammability (solid, gas)</b>	No information available	
<b>Flammability Limit in Air</b>		
<b>Upper flammability limit:</b>	No information available	
<b>Lower flammability limit:</b>	No information available	
<b>Vapor pressure</b>	No information available	
<b>Vapor density</b>	No information available	
<b>Specific Gravity</b>	1.03	
<b>Water solubility</b>	No information available	
<b>Solubility in other solvents</b>	No information available	
<b>Partition coefficient</b>	No information available	
<b>Autoignition temperature</b>	No information available	
<b>Decomposition temperature</b>	No information available	
<b>Kinematic viscosity</b>	No information available	
<b>Dynamic viscosity</b>	No information available	
<b>Explosive properties</b>	No information available	
<b>Oxidizing properties</b>	No information available	

**Other Information**

<b>Softening point</b>	No information available
<b>Molecular weight</b>	No information available
<b>VOC Content (%)</b>	No information available
<b>Density</b>	8.60 lbs/gal
<b>Bulk density</b>	No information available
<b>Percent solids by weight</b>	59.2%
<b>Percent volatile by weight</b>	40.8%
<b>Percent solids by volume</b>	52.3%
<b>Actual VOC (lbs/gal)</b>	3.5
<b>Actual VOC (grams/liter)</b>	420.5
<b>EPA VOC (lbs/gal)</b>	3.5
<b>EPA VOC (grams/liter)</b>	420.5
<b>EPA VOC (lb/gal solids)</b>	6.7

## 10. STABILITY AND REACTIVITY

**Reactivity**

No data available

**Chemical stability**

Stable under recommended storage conditions.

**Possibility of Hazardous Reactions**

None under normal processing.

**Conditions to avoid**

Heat, flames and sparks.

**Incompatible materials**

Strong bases. Water. Alcohols. Amines. Copper.

**Hazardous Decomposition Products**

None known based on information supplied.

## 11. TOXICOLOGICAL INFORMATION

**Information on likely routes of exposure**

<b>Product Information</b>	No data available
<b>Inhalation</b>	May cause sensitization by inhalation.
<b>Eye contact</b>	May cause irritation.
<b>Skin Contact</b>	May cause irritation. May cause sensitization by skin contact.
<b>Ingestion</b>	No data available.

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Aromatic 100 64742-95-6	= 8400 mg/kg ( Rat )	> 2000 mg/kg ( Rabbit )	= 3400 ppm ( Rat ) 4 h
Butyl Acetate 123-86-4	= 10768 mg/kg ( Rat )	> 17600 mg/kg ( Rabbit )	= 390 ppm ( Rat ) 4 h
1,2,4-Trimethylbenzene 95-63-6	= 3280 mg/kg ( Rat )	> 3160 mg/kg ( Rabbit )	= 18 g/m <sup>3</sup> ( Rat ) 4 h
Cumene 98-82-8	= 1400 mg/kg ( Rat )	= 12300 µL/kg ( Rabbit )	= 39000 mg/m <sup>3</sup> ( Rat ) 4 h > 3577 ppm ( Rat ) 6 h
Isophorone Diisocyanate 4098-71-9	= 1097 mg/kg ( Rat )	1060 - 4780 mg/kg ( Rabbit )	= 0.135 mg/L ( Rat ) 4 h

**Information on toxicological effects**

**Symptoms** No information available.

**Delayed and immediate effects as well as chronic effects from short and long-term exposure**

**Sensitization** May cause sensitization by inhalation and skin contact.

**Germ cell mutagenicity** No information available.

**Carcinogenicity** No information available.

Chemical Name	ACGIH	IARC	NTP	OSHA
Cumene 98-82-8	-	Group 2B	Reasonably Anticipated	X

*IARC (International Agency for Research on Cancer)*

*Group 2B - Possibly Carcinogenic to Humans*

*Group 3 - Not classifiable as a human carcinogen*

*NTP (National Toxicology Program)*

*Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen*

OSHA (Occupational Safety and Health Administration of the US Department of Labor)

X - Present

<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	No information available.
<b>STOT - repeated exposure</b>	No information available.
<b>Chronic toxicity</b>	May cause adverse effects on the bone marrow and blood-forming system.
<b>Target Organ Effects</b>	blood, Central nervous system, Eyes, Respiratory system, Skin.
<b>Aspiration hazard</b>	No information available.

#### Numerical measures of toxicity - Product Information

The following values are calculated based on chapter 3.1 of the GHS document mg/kg mg/l

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

Toxic to aquatic life with long lasting effects

58.99% of the mixture consists of component(s) of unknown hazards to the aquatic environment

Chemical Name	Algae/aquatic plants	Fish	Crustacea
Aromatic 100 64742-95-6	-	9.22: 96 h Oncorhynchus mykiss mg/L LC50	6.14: 48 h Daphnia magna mg/L EC50
Butyl Acetate 123-86-4	674.7: 72 h Desmodesmus subspicatus mg/L EC50	100: 96 h Lepomis macrochirus mg/L LC50 static 17 - 19: 96 h Pimephales promelas mg/L LC50 flow-through 62: 96 h Leuciscus idus mg/L LC50 static	72.8: 24 h Daphnia magna mg/L EC50
1,2,4-Trimethylbenzene 95-63-6	-	7.19 - 8.28: 96 h Pimephales promelas mg/L LC50 flow-through	6.14: 48 h Daphnia magna mg/L EC50
Cumene 98-82-8	2.6: 72 h Pseudokirchneriella subcapitata mg/L EC50	6.04 - 6.61: 96 h Pimephales promelas mg/L LC50 flow-through 4.8: 96 h Oncorhynchus mykiss mg/L LC50 flow-through 2.7: 96 h Oncorhynchus mykiss mg/L LC50 semi-static 5.1: 96 h Poecilia reticulata mg/L LC50 semi-static	0.6: 48 h Daphnia magna mg/L EC50 7.9 - 14.1: 48 h Daphnia magna mg/L EC50 Static
Isophorone Diisocyanate 4098-71-9	118.7: 72 h Desmodesmus subspicatus mg/L EC50	1.8: 48 h Leuciscus idus mg/L LC50 static	83.7: 24 h Daphnia magna mg/L EC50

### Persistence and degradability

No information available.

### Bioaccumulation

No information available.

Chemical Name	Partition coefficient
Butyl Acetate 123-86-4	1.81
1,2,4-Trimethylbenzene 95-63-6	3.63
Cumene 98-82-8	3.55

### Other adverse effects

No information available

## 13. DISPOSAL CONSIDERATIONS

### Waste treatment methods

#### **Disposal of wastes**

Disposal should be in accordance with applicable regional, national and local laws and regulations.

#### **Contaminated packaging**

Do not reuse container.

US EPA Waste Number D001 U055 U239

Chemical Name	RCRA	RCRA - Basis for Listing	RCRA - D Series Wastes	RCRA - U Series Wastes
Cumene 98-82-8	-	-	-	U055

This product contains one or more substances that are listed with the State of California as a hazardous waste.

Chemical Name	California Hazardous Waste Status
Butyl Acetate 123-86-4	Toxic
Cumene 98-82-8	Toxic Ignitable

**14. TRANSPORT INFORMATION**

DOT Not regulated

**15. REGULATORY INFORMATION**

**International Inventories**

TSCA	Complies
DSL/NDSL	Complies
EINECS/ELINCS	Complies
ENCS	Does not comply
IECSC	Complies
KECL	Complies
PICCS	Complies
AICS	Complies

**Legend:**

- TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
- DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List
- EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
- ENCS - Japan Existing and New Chemical Substances
- IECSC - China Inventory of Existing Chemical Substances
- KECL - Korean Existing and Evaluated Chemical Substances
- PICCS - Philippines Inventory of Chemicals and Chemical Substances
- AICS - Australian Inventory of Chemical Substances

**US Federal Regulations**

**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product contains a chemical or chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

Chemical Name	SARA 313 - Threshold Values %
1,2,4-Trimethylbenzene - 95-63-6	1.0

**SARA 311/312 Hazard Categories**

Acute health hazard Yes





**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Shipping information may vary based upon container size and shipping destination. Each user of this material needs to evaluate the conditions of use and design the appropriate protective mechanisms to prevent employee exposures, property damage, or release to the environment. The manufacturer assumes no responsibility for injury to the recipient or third persons, or for any damages to any property resulting from misuse of the product.

**End of Safety Data Sheet**