

# SAFETY DATA SHEET

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## RENCAST® 6444 US

Version	Revision Date:	SDS Number:	Date of last issue: 10/16/2015
1.1	07/09/2018	400001013259	Date of first issue: 10/16/2015

### SECTION 1. IDENTIFICATION

Product name : RENCAST® 6444 US

#### Manufacturer or supplier's details

Company name of supplier : Huntsman Advanced Materials Americas LLC  
Address : P.O. Box 4980  
The Woodlands,  
TX 77387  
United States of America (USA)  
Telephone : Non-Emergency: (800) 257-5547  
E-mail address of person responsible for the SDS : MSDS@huntsman.com  
Emergency telephone number : Chemtrec: (800) 424-9300 or (703) 527-3887

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

Recommended use : Component of a Polyurethane System.



### SECTION 2. HAZARDS IDENTIFICATION

#### GHS classification in accordance with 29 CFR 1910.1200

Acute toxicity (Inhalation) : Category 4  
Skin irritation : Category 2  
Eye irritation : Category 2A  
Respiratory sensitisation : Category 1  
Skin sensitisation : Category 1

#### GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements : H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H332 Harmful if inhaled.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

Precautionary statements : **Prevention:**

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P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
P264 Wash skin 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/ eye protection/ face protection.  
P285 In case of inadequate ventilation wear respiratory protection.

**Response:**

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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/doctor.

P362 Take off contaminated clothing and wash before reuse.

**Storage:**

Not available

**Disposal:**

P501 Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

**Other hazards**

None known.

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

Substance / Mixture : Substance

**Hazardous components**

Chemical name	CAS-No.	Concentration (% w/w)
4,4'-methylenedicyclohexyl diisocyanate	5124-30-1	10 - 20
3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	4098-71-9	1 - 2.5

The specific chemical identity and/or exact percentage (concentration) of composition may be withheld as a trade secret.

**SECTION 4. FIRST AID MEASURES**

General advice : Move out of dangerous area.  
Show this safety data sheet to the doctor in attendance.  
Treat symptomatically.  
Get medical attention if symptoms occur.

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- |   |   |
|---|---|
| If inhaled  | : Call a physician or poison control centre immediately.<br>If inhaled, remove to fresh air.<br>Get medical attention if symptoms occur.                                    |
| In case of skin contact                                     | : If skin irritation persists, call a physician.<br>If on skin, rinse well with water.<br>If on clothes, remove clothes.  |
| In case of eye contact                                      | : Immediately flush eye(s) with plenty of water.<br>Remove contact lenses.<br>Keep eye wide open while rinsing.<br>If eye irritation persists, consult a specialist.        |
| If swallowed  | : Keep respiratory tract clear.<br>Never give anything by mouth to an unconscious person.<br>If symptoms persist, call a physician.<br>Take victim immediately to hospital. |
| Most important symptoms and effects, both acute and delayed | : None known.   |
| Notes to physician  | : Treat symptomatically.  |

### SECTION 5. FIREFIGHTING MEASURES

- |   |   |
|---|---|
| Suitable extinguishing media                  | : Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. |
| Unsuitable extinguishing media                | : High volume water jet   |
| Specific hazards during firefighting          | : No information available.   |
| Hazardous combustion products                 | : Carbon oxides<br>Nitrogen oxides (NOx)<br>Hydrogen cyanide (hydrocyanic acid)                           |
| Specific extinguishing methods                | : No data is available on the product itself.   |
| Further information                           | : No action shall be taken involving any personal risk or without suitable training.                      |
| Special protective equipment for firefighters | : Wear self-contained breathing apparatus for firefighting if necessary.                                  |

### SECTION 6. ACCIDENTAL RELEASE MEASURES

- |                       |                                      |
|-----------------------|--------------------------------------|
| Personal precautions, | : Use personal protective equipment. |
|-----------------------|--------------------------------------|

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- protective equipment and emergency procedures      Ensure adequate ventilation.  
Refer to protective measures listed in sections 7 and 8.
- Environmental precautions      : Prevent product from entering drains.  
Prevent further leakage or spillage if safe to do so.  
If the product contaminates rivers and lakes or drains inform respective authorities.
- Methods and materials for containment and cleaning up      : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).  
Keep in suitable, closed containers for disposal.

**SECTION 7. HANDLING AND STORAGE**

- Advice on protection against fire and explosion      : Normal measures for preventive fire protection.
- Advice on safe handling      : Avoid formation of aerosol.  
Do not breathe vapours/dust.  
Avoid exposure - obtain special instructions before use.  
Avoid contact with skin and eyes.  
For personal protection see section 8.  
Smoking, eating and drinking should be prohibited in the application area.  
Provide sufficient air exchange and/or exhaust in work rooms.  
Dispose of rinse water in accordance with local and national regulations.  
Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.
- Conditions for safe storage      : Keep container tightly closed in a dry and well-ventilated place.  
Keep in properly labelled containers.
- Materials to avoid      : For incompatible materials please refer to Section 10 of this SDS.
- Further information on storage stability      : Stable under normal conditions.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION****Components with workplace control parameters**

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
4,4'-methylenedicyclohexyl diisocyanate	5124-30-1	TWA	0.005 ppm	ACGIH
3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	4098-71-9	TWA	0.005 ppm	ACGIH

**Personal protective equipment**

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- |                          |   |
|--------------------------|---|
| Respiratory protection   | : General and local exhaust ventilation is recommended to maintain vapor exposures below recommended limits. Where concentrations are above recommended limits or are unknown, appropriate respiratory protection should be worn. Follow OSHA respirator regulations (29 CFR 1910.134) and use NIOSH/MSHA approved respirators. Protection provided by air purifying respirators against exposure to any hazardous chemical is limited. Use a positive pressure air supplied respirator if there is any potential for uncontrolled release, exposure levels are unknown, or any other circumstance where air purifying respirators may not provide adequate protection. |
| Respiratory protection   | : In the case of vapour formation use a respirator with an approved filter.   |
| Hand protection          |   |
| Material                 | : butyl-rubber  |
| Break through time       | : > 8 h   |
| Material                 | : Solvent-resistant gloves (butyl-rubber)   |
| Material                 | : Nitrile rubber  |
| Break through time       | : 10 - 480 min  |
| Remarks                  | : For prolonged or repeated contact use protective gloves. The suitability for a specific workplace should be discussed with the producers of the protective gloves.  |
| Eye protection           | : Eye wash bottle with pure water<br>Tightly fitting safety goggles<br>Wear face-shield and protective suit for abnormal processing problems.   |
| Skin and body protection | : Impervious clothing<br>Choose body protection according to the amount and concentration of the dangerous substance at the work place.   |
| Hygiene measures         | : When using do not eat or drink.<br>When using do not smoke.<br>Wash hands before breaks and at the end of workday.  |

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

- |                 |   |
|-----------------|---|
| Appearance      | : liquid                                      |
| Colour          | : amber                                       |
| Odour           | : slight                                      |
| Odour Threshold | : No data is available on the product itself. |
| pH              | : No data is available on the product itself. |
| Freezing point  | : No data is available on the product itself. |

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Melting point	: No data is available on the product itself.
Boiling point	: > 392 °F / > 200 °C
Flash point	: > 302 °F / > 150 °C Method: Pensky-Martens closed cup
Evaporation rate	: No data is available on the product itself.
Flammability (solid, gas)	: No data is available on the product itself.
Flammability (liquids)	: No data is available on the product itself.
Upper explosion limit / Upper flammability limit	: No data is available on the product itself.
Lower explosion limit / Lower flammability limit	: No data is available on the product itself.
Vapour pressure	: No data is available on the product itself.
Relative vapour density	: No data is available on the product itself.
Relative density	: 1.05
Density	: 1.05 g/cm3 (77 °F / 25 °C)
Solubility(ies)	
Water solubility	: Reacts violently with water.
Solubility in other solvents	: No data is available on the product itself.
Partition coefficient: n-octanol/water	: No data is available on the product itself.
Auto-ignition temperature	: No data is available on the product itself.
Decomposition temperature	: > 392 °F / > 200 °C
Self-Accelerating decomposition temperature (SADT)	: No data is available on the product itself.
Viscosity	: No data is available on the product itself.
Explosive properties	: No data is available on the product itself.
Oxidizing properties	: No data is available on the product itself.
Particle size	: No data is available on the product itself.

## SECTION 10. STABILITY AND REACTIVITY

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Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.
Possibility of hazardous reactions	: No hazards to be specially mentioned.
Conditions to avoid	: None known.
Incompatible materials	: None known.
Hazardous decomposition products	: No hazardous decomposition products are known.
Hazardous decomposition products	: carbon monoxide
	carbon dioxide
	Nitrogen oxides

**SECTION 11. TOXICOLOGICAL INFORMATION**

Information on likely routes of exposure : No data is available on the product itself.

**Acute toxicity**

Acute oral toxicity - Product : Acute toxicity estimate : > 5,000 mg/kg  
Method: Calculation method

Acute inhalation toxicity - Product : Acute toxicity estimate: 1.1 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: Calculation method

**Components:**

4,4'-methylenedicyclohexyl diisocyanate:

Acute dermal toxicity : LD50 (Rat, male and female): > 7,000 mg/kg  
Method: OECD Test Guideline 402

3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate:

Acute dermal toxicity : LD50 (Rat): > 7,000 mg/kg  
Method: OECD Test Guideline 402

Acute toxicity (other routes of administration) : No data available

**Skin corrosion/irritation****Components:**

4,4'-methylenedicyclohexyl diisocyanate:

Species: Rabbit

Method: OECD Test Guideline 404

Result: Skin irritation

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3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate:

Species: Rabbit

Method: OECD Test Guideline 404

Result: Corrosive after 1 to 4 hours of exposure

**Serious eye damage/eye irritation****Components:**

4,4'-methylenedicyclohexyl diisocyanate:

Species: Rabbit

Result: Eye irritation

Method: OECD Test Guideline 405

3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate:

Species: Rabbit

Result: Corrosive

**Respiratory or skin sensitisation****Components:**

4,4'-methylenedicyclohexyl diisocyanate:

Exposure routes: Skin

Species: Guinea pig

Method: OECD Test Guideline 406

Result: May cause sensitisation by skin contact.

Exposure routes: Respiratory Tract

Species: Guinea pig

Result: May cause sensitisation by inhalation.

3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate:

Exposure routes: Skin

Species: Guinea pig

Result: May cause sensitisation by skin contact.

Exposure routes: Respiratory Tract

Species: Humans

Result: May cause sensitisation by inhalation.

Assessment: No data available

**Germ cell mutagenicity****Components:**

4,4'-methylenedicyclohexyl diisocyanate:

Genotoxicity in vitro

: Concentration: 50 ug/plate

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 471

Result: negative

Concentration: 28 µg/L

Metabolic activation: with and without metabolic activation

Method: OECD Test Guideline 473

Result: negative



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Concentration: 96 µg/L  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 476  
Result: negative

Genotoxicity in vivo : No data available

**Carcinogenicity**

No data available

Carcinogenicity - Assessment : No data available

**IARC**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**ACGIH**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

**OSHA**

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

**NTP**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Reproductive toxicity****Components:**

4,4'-methylenedicyclohexyl diisocyanate:

Effects on fertility : Species: Rat, male and female  
Application Route: Inhalation  
Target Organs: Respiratory Tract  
Method: OECD Test Guideline 421  
Result: negative

**Components:**

4,4'-methylenedicyclohexyl diisocyanate:

Effects on foetal development : Species: Rat, female  
Application Route: Inhalation  
General Toxicity Maternal: No observed adverse effect level: 1 mg/m<sup>3</sup>  
Method: OECD Test Guideline 414  
Result: No teratogenic effects

Reproductive toxicity - Assessment : No data available

**STOT - single exposure****Components:**

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4,4'-methylenedicyclohexyl diisocyanate:  
Exposure routes: Inhalation  
Target Organs: Respiratory Tract  
Assessment: May cause respiratory irritation.

3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate:  
Exposure routes: Inhalation  
Target Organs: Respiratory Tract  
Assessment: May cause respiratory irritation.

### STOT - repeated exposure

No data available

### Repeated dose toxicity

#### Components:

4,4'-methylenedicyclohexyl diisocyanate:  
Species: Rat, male and female  
NOEC: 3 mg/m<sup>3</sup>  
Test atmosphere: dust/mist  
Exposure time: 13 Weeks  
Number of exposures: 6 h  
Method: OECD Test Guideline 413

Repeated dose toxicity - : No data available  
Assessment

### Aspiration toxicity

No data available

### Experience with human exposure

General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

Ingestion: No data available

### Toxicology, Metabolism, Distribution

No data available

### Neurological effects

No data available

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**Further information**

Ingestion: No data available

**SECTION 12. ECOLOGICAL INFORMATION****Ecotoxicity****Components:**

4,4'-methylenedicyclohexyl diisocyanate:

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): > 8.1 mg/l  
Exposure time: 96 h  
Test Type: static test  
Test substance: Fresh water  
Method: Directive 67/548/EEC, Annex V, C.1.

3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate:

Toxicity to fish : LC50 (Brachydanio rerio (zebrafish)): 72 mg/l  
Exposure time: 96 h  
Test Type: static test

**Components:**

4,4'-methylenedicyclohexyl diisocyanate:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): > 8.3 mg/l  
Exposure time: 48 h  
Test Type: static test  
Test substance: Fresh water  
Method: Directive 67/548/EEC, Annex V, C.2.

3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate:

Toxicity to daphnia and other aquatic invertebrates : LC50 (Crangon crangon (shrimp)): 4 mg/l  
Exposure time: 96 h  
Test Type: static test

EC50 (Daphnia magna (Water flea)): 27 mg/l  
Exposure time: 48 h  
Test Type: static test

EC50: 83.7 mg/l  
Exposure time: 24 h  
Method: DIN 38412

**Components:**

4,4'-methylenedicyclohexyl diisocyanate:

Toxicity to algae : EgC50 (Desmodesmus subspicatus (green algae)): > 5 mg/l  
Exposure time: 72 h  
Test Type: static test  
Test substance: Fresh water  
Method: Directive 67/548/EEC, Annex V, C.3.

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3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate:  
Toxicity to algae : EC50 (algae): > 70 mg/l  
Exposure time: 72 h  
Test Type: static test

M-Factor (Acute aquatic toxicity) : No data available

Toxicity to fish (Chronic toxicity) : No data available

### Components:

3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate:  
Toxicity to daphnia and other aquatic invertebrates : NOEC (Daphnia magna (Water flea)): 3 mg/l  
(Chronic toxicity) Exposure time: 21 d  
M-Factor (Chronic aquatic toxicity) : No data available

### Components:

3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate:  
Toxicity to microorganisms : EC50: 263 mg/l  
Exposure time: 3 h  
Method: Directive 67/548/EEC, Annex, B.15

Toxicity to soil dwelling organisms : No data available

Plant toxicity : No data available

Sediment toxicity : No data available

Toxicity to terrestrial organisms : No data available

### Ecotoxicology Assessment

### Components:

4,4'-methylenedicyclohexyl diisocyanate:  
Acute aquatic toxicity : This product has no known ecotoxicological effects.

3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate:  
Acute aquatic toxicity : Toxic to aquatic life.

### Components:

4,4'-methylenedicyclohexyl diisocyanate:  
Chronic aquatic toxicity : This product has no known ecotoxicological effects.

3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate:  
Chronic aquatic toxicity : Toxic to aquatic life with long lasting effects.

Toxicity Data on Soil : No data available

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Other organisms relevant to the environment : No data available

**Persistence and degradability****Components:**

4,4'-methylenedicyclohexyl diisocyanate:

Biodegradability : Inoculum: activated sludge  
Concentration: 30 mg/l  
Result: Not readily biodegradable.  
Biodegradation: 0 %  
Exposure time: 28 d  
Method: Directive 67/548/EEC Annex V, C.4.D.

3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate:

Biodegradability : Inoculum: activated sludge  
Result: Not readily biodegradable.  
Biodegradation: 0 %  
Exposure time: 28 d  
Method: Tested according to Directive 92/69/EEC.

Biochemical Oxygen Demand (BOD) : No data available

Chemical Oxygen Demand (COD) : No data available

BOD/COD : No data available

ThOD : No data available

BOD/ThOD : No data available

Dissolved organic carbon (DOC) : No data available

Physico-chemical removability : No data available

Stability in water : No data available

Photodegradation : No data available

Impact on Sewage Treatment : No data available

**Bioaccumulative potential**

Bioaccumulation : No data available

Partition coefficient: n-octanol/water : No data available

**Mobility in soil**

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Mobility : No data available

Distribution among environmental compartments : No data available

Stability in soil : No data available

### Other adverse effects

Environmental fate and pathways : No data available

Results of PBT and vPvB assessment : No data available

Endocrine disrupting potential : No data available

Adsorbed organic bound halogens (AOX) : No data available

### Hazardous to the ozone layer

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82  
Protection of Stratospheric Ozone - CAA Section 602 Class I Substances  
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information : No data available

Global warming potential (GWP) : No data available

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : Do not dispose of waste into sewer.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Send to a licensed waste management company.  
Dispose of as hazardous waste in compliance with local and national regulations.  
Dispose of contents/ container to an approved waste disposal plant.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.

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### SECTION 14. TRANSPORT INFORMATION

#### International Regulations

##### IATA

Not regulated as dangerous goods

##### IMDG

Not regulated as dangerous goods

#### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

#### National Regulations

##### DOT Classification

Not regulated as dangerous goods

### SECTION 15. REGULATORY INFORMATION

#### EPCRA - Emergency Planning and Community Right-to-Know Act

##### CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
benzoyl chloride	98-88-4	1000	*

\*: Calculated RQ exceeds reasonably attainable upper limit.

##### SARA 311/312 Hazards

: Acute toxicity (any route of exposure)  
Skin corrosion or irritation  
Serious eye damage or eye irritation  
Respiratory or skin sensitisation

##### SARA 313

: The following components are subject to reporting levels established by SARA Title III, Section 313:

4,4'-methylenedicyclohexyl diisocyanate	5124-30-1	13 - 30 %
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3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	4098-71-9	1 - 3 %
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The following components are subject to reporting levels established by SARA Title III, Section 313:

4,4'-methylenedicyclohexyl diisocyanate	5124-30-1	>= 10 - < 20 %
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3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate 4098-71-9 >= 1 - < 5 %

This product does not contain any hazardous air pollutants (HAP), as defined by the U.S. Clean Air Act Section 112 (40 CFR 61).

### California Prop. 65

This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

### The components of this product are reported in the following inventories:

CH INV	: On the inventory, or in compliance with the inventory
DSL	: This product contains one or several components listed in the Canadian NDSL.
AICS	: On the inventory, or in compliance with the inventory
NZIoC	: Not in compliance with the inventory
ENCS	: On the inventory, or in compliance with the inventory
KECI	: Not in compliance with the inventory
PICCS	: Not in compliance with the inventory
IECSC	: Low volume exemption, On the inventory, or in compliance with the inventory
TCSI	: On the inventory, or in compliance with the inventory
TSCA	: On the inventory, or in compliance with the inventory

### Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

### TSCA - 5(a) Significant New Use Rule List of Chemicals

No substances are subject to a Significant New Use Rule.

### US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

No substances are subject to TSCA 12(b) export notification requirements.



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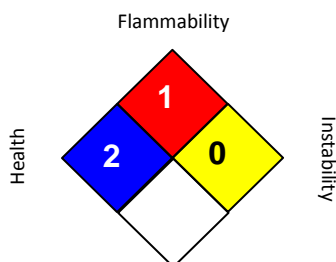
## RENCAST® 6444 US

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			Date of first issue: 10/16/2015

### SECTION 16. OTHER INFORMATION

#### Further information

##### NFPA 704:



##### HMIS® IV:

HEALTH	*	2
FLAMMABILITY		1
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

Revision Date : 07/09/2018

ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
ACGIH / TWA : 8-hour, time-weighted average

The information and recommendations in this publication are to the best of our knowledge, information and belief accurate at the date of publication, NOTHING HEREIN IS TO BE CONSTRUED AS A WARRANTY, EXPRESS OR OTHERWISE.

IN ALL CASES, IT IS THE RESPONSIBILITY OF THE USER TO DETERMINE THE APPLICABILITY OF SUCH INFORMATION AND RECOMMENDATIONS AND THE SUITABILITY OF ANY PRODUCT FOR ITS OWN PARTICULAR PURPOSE.

THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

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**SECTION 1. IDENTIFICATION**

Product name : REN® 6444 US

**Manufacturer or supplier's details**Company name of supplier : Huntsman Advanced Materials Americas LLC  
Address : P.O. Box 4980

The Woodlands,

TX 77387

United States of America (USA)

Telephone : Non-Emergency: (800) 257-5547

E-mail address of person responsible for the SDS : MSDS@huntsman.com

Emergency telephone number : Chemtrec: (800) 424-9300 or (703) 527-3887

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

Recommended use : Component of a Polyurethane System.

**SECTION 2. HAZARDS IDENTIFICATION****GHS classification in accordance with 29 CFR 1910.1200**

Acute toxicity (Oral) : Category 4

Acute toxicity (Inhalation) : Category 4

Skin sensitisation : Category 1

Germ cell mutagenicity : Category 2

Carcinogenicity : Category 2

Reproductive toxicity : Category 1B

Specific target organ toxicity  
- single exposure (Oral) : Category 2 (Liver)Specific target organ toxicity  
- repeated exposure (Oral) : Category 1 (Liver)Specific target organ toxicity  
- repeated exposure (Oral) : Category 2 (Kidney)

Acute aquatic toxicity : Category 1

Chronic aquatic toxicity : Category 1

**GHS label elements**

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Hazard pictograms



Signal word

: Danger

Hazard statements

: H302 + H332 Harmful if swallowed or if inhaled.  
H317 May cause an allergic skin reaction.  
H341 Suspected of causing genetic defects.  
H351 Suspected of causing cancer.  
H360 May damage fertility or the unborn child.  
H371 May cause damage to organs (Liver) if swallowed.  
H372 Causes damage to organs (Liver) through prolonged or repeated exposure if swallowed.  
H373 May cause damage to organs (Kidney) through prolonged or repeated exposure if swallowed.  
H410 Very toxic to aquatic life with long lasting effects.

Precautionary statements

: **Prevention:**  
P201 Obtain special instructions before use.  
P202 Do not handle until all safety precautions have been read and understood.  
P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray.  
P264 Wash skin thoroughly after handling.  
P270 Do not eat, drink or smoke when using this product.  
P271 Use only outdoors or in a well-ventilated area.  
P272 Contaminated work clothing should not be allowed out of the workplace.  
P273 Avoid release to the environment.  
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.  
**Response:**  
P301 + P312 + P330 IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.  
P302 + P352 IF ON SKIN: Wash with plenty of soap and water.  
P304 + P340 + P312 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.  
P308 + P311 IF exposed or concerned: Call a POISON CENTER/doctor.  
P308 + P313 IF exposed or concerned: Get medical advice/ attention.  
P333 + P313 If skin irritation or rash occurs: Get medical advice/ attention.  
P363 Wash contaminated clothing before reuse.  
P391 Collect spillage.  
**Storage:**  
P405 Store locked up.  
**Disposal:**  
P501 Dispose of contents/container to an approved facility in accordance with local, regional, national and international regulations.

Other hazards

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None known.

### SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance / Mixture : Mixture

#### Hazardous components

Chemical name	CAS-No.	Concentration (% w/w)
dibutyl phthalate	84-74-2	50 - 70
4,4'-methylenebis(2-ethylaniline)	19900-65-3	30 - 50

The specific chemical identity and/or exact percentage (concentration) of composition may be withheld as a trade secret.

### SECTION 4. FIRST AID MEASURES

General advice : Move out of dangerous area.  
Show this safety data sheet to the doctor in attendance.  
Treat symptomatically.  
Get medical attention if symptoms occur.

If inhaled : If inhaled, remove to fresh air.  
Get medical attention if symptoms occur.

In case of skin contact : If skin irritation persists, call a physician.  
If on skin, rinse well with water.  
If on clothes, remove clothes.

In case of eye contact : Flush eyes with water as a precaution.  
Remove contact lenses.  
Protect unharmed eye.  
Keep eye wide open while rinsing.  
If eye irritation persists, consult a specialist.

If swallowed : Induce vomiting immediately and call a physician.  
Keep respiratory tract clear.  
Never give anything by mouth to an unconscious person.  
If symptoms persist, call a physician.  
Take victim immediately to hospital.

Most important symptoms and effects, both acute and delayed : None known.

Notes to physician : Treat symptomatically.

### SECTION 5. FIREFIGHTING MEASURES

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



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- |   |   |
|---|---|
| Unsuitable extinguishing media                | : High volume water jet   |
| Specific hazards during firefighting          | : Do not allow run-off from fire fighting to enter drains or water courses.   |
| Hazardous combustion products                 | : Carbon oxides<br>Nitrogen oxides (NOx)  |
| Specific extinguishing methods                | : No data is available on the product itself.   |
| Further information                           | : Collect contaminated fire extinguishing water separately. This must not be discharged into drains.<br>Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. |
| Special protective equipment for firefighters | : Wear self-contained breathing apparatus for firefighting if necessary.  |

### SECTION 6. ACCIDENTAL RELEASE MEASURES

- |   |   |
|---|---|
| Personal precautions, protective equipment and emergency procedures | : Use personal protective equipment.  |
| Environmental precautions   | : Prevent product from entering drains.<br>Prevent further leakage or spillage if safe to do so.<br>If the product contaminates rivers and lakes or drains inform respective authorities. |
| Methods and materials for containment and cleaning up               | : Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).<br>Keep in suitable, closed containers for disposal.                             |

### SECTION 7. HANDLING AND STORAGE

- |   |  |
|---|--|
| Advice on protection against fire and explosion | : Normal measures for preventive fire protection.  |
| Advice on safe handling                         | : Do not breathe vapours/dust.<br>Avoid exposure - obtain special instructions before use.<br>Avoid contact with skin and eyes.<br>For personal protection see section 8.<br>Smoking, eating and drinking should be prohibited in the application area.<br>Dispose of rinse water in accordance with local and national regulations.<br>Persons susceptible to skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used. |

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Conditions for safe storage : Keep container tightly closed in a dry and well-ventilated place.  
Containers which are opened must be carefully resealed and kept upright to prevent leakage.  
Observe label precautions.  
Keep in properly labelled containers.

Recommended storage temperature : 2 - 40 °C

Further information on storage stability : Stable under normal conditions.

## SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Components with workplace control parameters

Components	CAS-No.	Value type (Form of exposure)	Control parameters / Permissible concentration	Basis
dibutyl phthalate	84-74-2	TWA	5 mg/m3	ACGIH
		TWA	5 mg/m3	OSHA Z-1

### Personal protective equipment

Respiratory protection : In the case of vapour formation use a respirator with an approved filter.

Hand protection

Remarks : The suitability for a specific workplace should be discussed with the producers of the protective gloves.

Eye protection : Eye wash bottle with pure water  
Tightly fitting safety goggles

Skin and body protection : Impervious clothing  
Choose body protection according to the amount and concentration of the dangerous substance at the work place.

Hygiene measures : When using do not eat or drink.  
When using do not smoke.  
Wash hands before breaks and at the end of workday.

## SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance : liquid

Colour : amber

Odour : slight, sweet

Odour Threshold : No data is available on the product itself.

pH : No data is available on the product itself.

Freezing point : No data is available on the product itself.

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Melting point	No data is available on the product itself.
Boiling point	: > 200 °C
Flash point	: > 182 °C Method: estimated, closed cup
Evaporation rate	: No data is available on the product itself.
Flammability (solid, gas)	: No data is available on the product itself.
Flammability (liquids)	: No data is available on the product itself.
Upper explosion limit / Upper flammability limit	: No data is available on the product itself.
Lower explosion limit / Lower flammability limit	: No data is available on the product itself.
Vapour pressure	: No data is available on the product itself.
Relative vapour density	: No data is available on the product itself.
Relative density	: No data is available on the product itself.
Density	: 1.03 - 1.07 g/cm <sup>3</sup> (20 °C)
Solubility(ies)	
Water solubility	: slightly soluble (20 °C)
Solubility in other solvents	: No data is available on the product itself.
Partition coefficient: n-octanol/water	: No data is available on the product itself.
Auto-ignition temperature	: No data is available on the product itself.
Decomposition temperature	: > 200 °C
Self-Accelerating decomposition temperature (SADT)	: No data is available on the product itself.
Viscosity	: No data is available on the product itself.
Explosive properties	: No data is available on the product itself.
Oxidizing properties	: No data is available on the product itself.
Particle size	: No data is available on the product itself.

### SECTION 10. STABILITY AND REACTIVITY

Reactivity	: No dangerous reaction known under conditions of normal use.
Chemical stability	: Stable under normal conditions.

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Possibility of hazardous reactions	: No hazards to be specially mentioned.
Conditions to avoid	: None known.
Incompatible materials	: None known.
Hazardous decomposition products	: carbon dioxide carbon monoxide Nitrogen oxides

## SECTION 11. TOXICOLOGICAL INFORMATION

Information on likely routes of exposure : No data is available on the product itself.

### Acute toxicity

Acute oral toxicity - Product : Acute toxicity estimate : 890.8 mg/kg  
Method: Calculation method

Acute inhalation toxicity - Product : Acute toxicity estimate: 2.67 mg/l  
Exposure time: 4 h  
Test atmosphere: dust/mist  
Method: Expert judgement  
Assessment: The substance/mixture is not toxic on inhalation as defined by dangerous goods regulations.

Acute dermal toxicity - Product : Acute toxicity estimate : 4,123 mg/kg  
Method: Calculation method

Acute toxicity (other routes of administration) : No data available

### Skin corrosion/irritation

#### Components:

dibutyl phthalate:  
Species: Rabbit  
Assessment: No skin irritation  
Method: OECD Test Guideline 404  
Result: No skin irritation

4,4'-methylenebis(2-ethylaniline):  
Species: Rabbit  
Assessment: No skin irritation  
Method: OPPTS 870.2500  
Result: No skin irritation



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**Serious eye damage/eye irritation****Components:**

dibutyl phthalate:

Species: Rabbit

Result: Normally reversible injuries

Assessment: No eye irritation

Method: OECD Test Guideline 405

4,4'-methylenebis(2-ethylaniline):

Species: Rabbit

Result: No eye irritation

Assessment: No eye irritation

Method: Acute Eye Irritation

**Respiratory or skin sensitisation****Components:**

dibutyl phthalate:

Exposure routes: Skin

Species: Guinea pig

Method: OECD Test Guideline 406

Result: Does not cause skin sensitisation.

4,4'-methylenebis(2-ethylaniline):

Exposure routes: Skin

Species: Humans

Result: The product is a skin sensitizer, sub-category 1A.

Assessment: No data available

**Germ cell mutagenicity****Components:**

dibutyl phthalate:

Genotoxicity in vitro : Concentration: 100 - 2000 ug/plate  
Metabolic activation: with and without metabolic activation  
Method: OECD Test Guideline 471  
Result: negative

4,4'-methylenebis(2-ethylaniline):

Genotoxicity in vitro : Test Type: Ames test  
Test system: Salmonella typhimurium  
Metabolic activation: with and without metabolic activation  
Method: Mutagenicity (Salmonella typhimurium - reverse mutation assay)  
Result: positive

**Components:**

dibutyl phthalate:

Genotoxicity in vivo : Exposure time: 13 Weeks  
Dose: 163 - 4278 mg/kg  
Result: negative

4,4'-methylenebis(2-ethylaniline):

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Genotoxicity in vivo : Test Type: In vivo micronucleus test  
Species: Mouse  
Cell type: Somatic  
Application Route: Intraperitoneal injection  
Exposure time: 72 h  
Dose: 56 - 140 mg/kg  
Method: OECD Test Guideline 474  
Result: Not classified due to inconclusive data.

Test Type: In vivo micronucleus test  
Species: Mouse  
Cell type: Somatic  
Application Route: Intraperitoneal injection  
Dose: 9.3 - 37 mg/kg  
Method: OECD Test Guideline 474  
Result: positive

### Components:

4,4'-methylenebis(2-ethylaniline):

Germ cell mutagenicity- : Positive result(s) from in vivo somatic cell mutagenicity tests  
Assessment supported by positive results from in vitro mutagenicity assays  
or chemical structure activity relationship to known germ cell  
mutagens

Germ cell mutagenicity- : No data available  
Assessment

### **Carcinogenicity**

#### Components:

4,4'-methylenebis(2-ethylaniline):

Species: Rat, (male and female)  
Application Route: Oral  
Exposure time: 103 weeks  
Dose: 9 - 10 mg/kg  
Frequency of Treatment: 24 hour  
Method: OECD Test Guideline 451  
Result: positive

#### Components:

4,4'-methylenebis(2-ethylaniline):

Carcinogenicity - : Limited evidence of carcinogenicity in animal studies  
Assessment

#### **IARC**

No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

#### **ACGIH**

No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

#### **OSHA**

No component of this product present at levels greater than or equal to 0.1% is on OSHA's list of regulated carcinogens.

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**NTP**

No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

**Reproductive toxicity****Components:**

dibutyl phthalate:  
Effects on fertility

: Species: Rat, male and female  
Application Route: Oral  
General Toxicity - Parent: No observed adverse effect level:  
385 mg/kg body weight  
Target Organs: Reproductive organs

**Components:**

dibutyl phthalate:  
Effects on foetal  
development

: Species: Rat, male and female  
Application Route: Oral  
General Toxicity Maternal: Lowest observed adverse effect  
level: 10,000 ppm  
Result: Teratogenic effects  
  
Species: Mouse  
Application Route: Oral  
General Toxicity Maternal: No observed adverse effect level:  
100 mg/kg body weight  
Result: Teratogenic effects

**Components:**

dibutyl phthalate:  
Reproductive toxicity -  
Assessment

: Clear evidence of adverse effects on sexual function and  
fertility, and/or on development, based on animal experiments

**STOT - single exposure****Components:**

4,4'-methylenebis(2-ethylaniline):  
Exposure routes: Ingestion  
Target Organs: Liver  
Assessment: May cause damage to organs.

**STOT - repeated exposure****Components:**

4,4'-methylenebis(2-ethylaniline):  
Exposure routes: Ingestion  
Target Organs: Liver  
Assessment: Causes damage to organs through prolonged or repeated exposure.

Exposure routes: Ingestion  
Target Organs: Kidney  
Assessment: May cause damage to organs through prolonged or repeated exposure.

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**Repeated dose toxicity****Components:**

dibutyl phthalate:

Species: Rat, male and female

NOEC: 509 mg/m<sup>3</sup>

Application Route: Ingestion

Test atmosphere: dust/mist

Exposure time: 4 Weeks

Number of exposures: 6 h

Method: OECD Test Guideline 412

4,4'-methylenebis(2-ethylaniline):

Species: Rat, male and female

LOAEL: 7.5 - 8 mg/kg/d

Application Route: Ingestion

Exposure time: 2,160 h

Number of exposures: 7 d

Method: Subchronic toxicity

Species: Rat, male and female

NOAEL: 90 mg/kg/d

Application Route: Skin contact

Exposure time: 2,160 h

Number of exposures: 5 d

Method: Subchronic toxicity

Repeated dose toxicity - : No data available  
Assessment

**Aspiration toxicity**

No data available

**Experience with human exposure**

General Information: No data available

Inhalation: No data available

Skin contact: No data available

Eye contact: No data available

Ingestion: No data available

**Toxicology, Metabolism, Distribution**

No data available



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### Neurological effects

No data available

### Further information

Ingestion: No data available

## SECTION 12. ECOLOGICAL INFORMATION

### Ecotoxicity

#### Components:

dibutyl phthalate:

Toxicity to fish : LC50 (Lepomis macrochirus (Bluegill sunfish)): 0.48 mg/l  
Exposure time: 96 h  
Test Type: static test  
Test substance: Fresh water  
Method: OECD Test Guideline 203

4,4'-methylenebis(2-ethylaniline):

Toxicity to fish : LC50 (Oryzias latipes (Orange-red killifish)): 20.6 mg/l  
Exposure time: 96 h  
Test Type: semi-static test  
Test substance: Fresh water  
Method: OECD Test Guideline 203

#### Components:

dibutyl phthalate:

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 2.99 mg/l  
Exposure time: 48 h  
Test Type: static test  
Test substance: Fresh water  
Method: Gammarid Acute Toxicity Test

LC50 (Gammarus salinus (seawater shrimp)): 0.5 mg/l  
Exposure time: 96 h  
Test Type: static test  
Test substance: Marine water  
Method: Mysid Acute Toxicity Test

4,4'-methylenebis(2-ethylaniline):

Toxicity to daphnia and other aquatic invertebrates : EC50 (Daphnia magna (Water flea)): 0.35 mg/l  
Exposure time: 48 h  
Test Type: static test  
Method: OECD Test Guideline 202

#### Components:

dibutyl phthalate:

Toxicity to algae : EC50 (Selenastrum capricornutum (green algae)): 0.75 mg/l  
Exposure time: 240 h

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Test Type: static test  
Test substance: Fresh water

### Components:

dibutyl phthalate:  
M-Factor (Acute aquatic toxicity) : 1  
4,4'-methylenebis(2-ethylaniline):  
M-Factor (Acute aquatic toxicity) : 1

### Components:

dibutyl phthalate:  
Toxicity to fish (Chronic toxicity) : NOEC (Oncorhynchus mykiss (rainbow trout)): 0.1 mg/l  
Exposure time: 99 d

### Components:

dibutyl phthalate:  
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia pulex (Water flea)): 0.1 mg/l  
Exposure time: 10 d  
4,4'-methylenebis(2-ethylaniline):  
Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) : NOEC (Daphnia magna (Water flea)): 0.00525 mg/l  
Exposure time: 21 d  
Test Type: semi-static test  
Test substance: Fresh water  
Method: OECD Test Guideline 211

### Components:

4,4'-methylenebis(2-ethylaniline):  
M-Factor (Chronic aquatic toxicity) : 10

### Components:

dibutyl phthalate:  
Toxicity to microorganisms : EC50 (Bacteria): 2.2 mg/l  
Exposure time: 24 h

### Components:

dibutyl phthalate:  
Toxicity to soil dwelling organisms : LC50: 10 mg/kg  
Exposure time: 504 h  
NOEC: 0.5 mg/kg  
Exposure time: 504 h

### Components:

dibutyl phthalate:  
Plant toxicity : NOEC: 200 mg/l  
Exposure time: 3 Weeks  
Test substance: Natural

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## REN® 6444 US

Version	Revision Date:	SDS Number:	Date of last issue: -
1.0	11/16/2017	400001010265	Date of first issue: 11/16/2017

EC50: 387 mg/kg  
Exposure time: 168 h  
Method: Terrestrial Plants Test: Seedling Emergence and  
Seedling Growth Test

### Components:

dibutyl phthalate:

Sediment toxicity

: (Gammarus pulex (Amphipod)): 826 mg/kg sediment dw  
Study: Acute  
Test Type: Other guidelines  
Water: Fresh water  
Exposure duration: 10 d

100 mg/kg sediment dw  
Study: Chronic  
Water: Marine water  
Exposure duration: 8 Weeks

### Components:

dibutyl phthalate:

Toxicity to terrestrial  
organisms

: NOEC: 0.472 mg/kg  
Exposure time: 360 h

Ecotoxicology Assessment

Acute aquatic toxicity

: No data available

Chronic aquatic toxicity

: No data available

Toxicity Data on Soil

: No data available

Other organisms relevant to  
the environment

: No data available

### **Persistence and degradability**

#### Components:

dibutyl phthalate:

Biodegradability

: Inoculum: activated sludge  
Concentration: 21.7 mg/l  
Result: Readily biodegradable.  
Biodegradation: 81 %  
Exposure time: 28 d  
Method: Directive 67/548/EEC Annex V, C.4.C.

Inoculum: activated sludge  
Result: Readily biodegradable.  
Biodegradation: > 97 %  
Exposure time: 21 d

Biochemical Oxygen  
Demand (BOD)

: No data available

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Chemical Oxygen Demand (COD) : No data available

BOD/COD : No data available

ThOD : No data available

BOD/ThOD : No data available

Dissolved organic carbon (DOC) : No data available

Physico-chemical removability : No data available

Stability in water : No data available

### **Components:**

dibutyl phthalate:  
Photodegradation : Test Type: Air  
Rate constant: < .00001

Impact on Sewage Treatment : No data available

### **Bioaccumulative potential**

#### **Components:**

dibutyl phthalate:  
Bioaccumulation : Bioconcentration factor (BCF): 0.81  
Test substance: Marine water  
  
Bioconcentration factor (BCF): < 1

#### **Components:**

dibutyl phthalate:  
Partition coefficient: n-octanol/water : log Pow: 4.46 (30 °C)  
pH: 5 - 8  
Method: Partition coefficient

### **Mobility in soil**

Mobility : No data available

#### **Components:**

dibutyl phthalate:  
Distribution among environmental compartments : Koc: 1.4  
Stability in soil : No data available

### **Other adverse effects**

Environmental fate and pathways : No data available



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Results of PBT and vPvB assessment : No data available

Endocrine disrupting potential : No data available

Adsorbed organic bound halogens (AOX) : No data available

### Hazardous to the ozone layer

Ozone-Depletion Potential : Regulation: 40 CFR Protection of Environment; Part 82 Protection of Stratospheric Ozone - CAA Section 602 Class I Substances  
Remarks: This product neither contains, nor was manufactured with a Class I or Class II ODS as defined by the U.S. Clean Air Act Section 602 (40 CFR 82, Subpt. A, App.A + B).

Additional ecological information - Product : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.  
Very toxic to aquatic life with long lasting effects.

Global warming potential (GWP) : No data available

## SECTION 13. DISPOSAL CONSIDERATIONS

### Disposal methods

Waste from residues : The product should not be allowed to enter drains, water courses or the soil.  
Do not contaminate ponds, waterways or ditches with chemical or used container.  
Send to a licensed waste management company.

Contaminated packaging : Empty remaining contents.  
Dispose of as unused product.  
Do not re-use empty containers.

## SECTION 14. TRANSPORT INFORMATION

### International Regulations

#### IATA

UN/ID No.	: UN 3082
Proper shipping name	: Environmentally hazardous substance, liquid, n.o.s. (DIETHYL METHYLENE DIANILINE, DIBUTYL PHTHALATE)
Class	: 9

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Packing group : III  
Labels : Miscellaneous  
Packing instruction (cargo aircraft) : 964  
Packing instruction (passenger aircraft) : 964

### IMDG

UN number : UN 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(DIETHYL METHYLENE DIANILINE, DIBUTYL PHTHALATE)  
Class : 9  
Packing group : III  
Labels : 9  
EmS Code : F-A, S-F  
Marine pollutant : yes

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable for product as supplied.

### National Regulations

### DOT Classification

UN/ID/NA number : UN 3082  
Proper shipping name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
(DIETHYL METHYLENE DIANILINE, DIBUTYL PHTHALATE)  
Class : 9  
Packing group : III  
Labels : CLASS 9  
ERG Code : 171  
Marine pollutant : yes(DIETHYL METHYLENE DIANILINE, DIBUTYL PHTHALATE)  
Remarks : Above applies only to containers over 119 gallons or 450 liters. Not regulated if shipped in packages less than or equal to 119 gallons (450 liters).

## SECTION 15. REGULATORY INFORMATION

### EPCRA - Emergency Planning and Community Right-to-Know Act

#### CERCLA Reportable Quantity

Components	CAS-No.	Component RQ (lbs)	Calculated product RQ (lbs)
dibutyl phthalate	84-74-2	10	19

**SARA 311/312 Hazards** : Acute toxicity (any route of exposure)  
Respiratory or skin sensitisation  
Germ cell mutagenicity  
Carcinogenicity

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Reproductive toxicity  
Specific target organ toxicity (single or repeated exposure)

### SARA 313

: The following components are subject to reporting levels established by SARA Title III, Section 313:

dibutyl phthalate	84-74-2	>= 50 - < 70 %
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The following chemical(s) are listed as HAP under the U.S. Clean Air Act, Section 12 (40 CFR 61):

dibutyl phthalate	84-74-2
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### California Prop. 65

WARNING: This product can expose you to chemicals including dibutyl phthalate, which is/are known to the State of California to cause birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

### The components of this product are reported in the following inventories:

CH INV	: The formulation contains substances listed on the Swiss Inventory, On the inventory, or in compliance with the inventory
DSL	: All components of this product are on the Canadian DSL
AICS	: On the inventory, or in compliance with the inventory
NZIoC	: Not in compliance with the inventory
ENCS	: On the inventory, or in compliance with the inventory
KECI	: Not in compliance with the inventory
PICCS	: On the inventory, or in compliance with the inventory
IECSC	: On the inventory, or in compliance with the inventory
TCSI	: On the inventory, or in compliance with the inventory
TSCA	: On the inventory, or in compliance with the inventory

### Inventories

AICS (Australia), DSL (Canada), IECSC (China), REACH (European Union), ENCS (Japan), ISHL (Japan), KECI (Korea), NZIoC (New Zealand), PICCS (Philippines), TCSI (Taiwan), TSCA (USA)

### TSCA - 5(a) Significant New Use Rule List of Chemicals

No substances are subject to a Significant New Use Rule.

### US. Toxic Substances Control Act (TSCA) Section 12(b) Export Notification (40 CFR 707, Subpt D)

No substances are subject to TSCA 12(b) export notification requirements.



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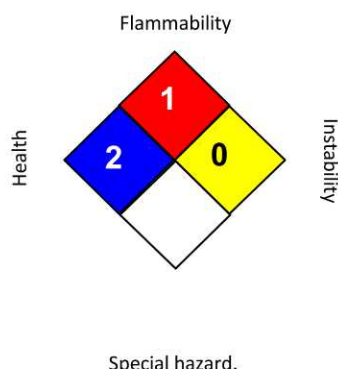
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### SECTION 16. OTHER INFORMATION

#### Further information

##### NFPA:



##### HMIS® IV:

HEALTH	*	3
FLAMMABILITY		1
PHYSICAL HAZARD		0

HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. The "\*" represents a chronic hazard, while the "/" represents the absence of a chronic hazard.

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ACGIH : USA. ACGIH Threshold Limit Values (TLV)  
OSHA Z-1 : USA. Occupational Exposure Limits (OSHA) - Table Z-1  
Limits for Air Contaminants  
ACGIH / TWA : 8-hour, time-weighted average  
OSHA Z-1 / TWA : 8-hour time weighted average

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THE PRODUCT MAY PRESENT HAZARDS AND SHOULD BE USED WITH CAUTION. WHILE CERTAIN HAZARDS ARE DESCRIBED IN THIS PUBLICATION, NO GUARANTEE IS MADE THAT THESE ARE THE ONLY HAZARDS THAT EXIST.

Hazards, toxicity and behaviour of the products may differ when used with other materials and are dependent upon the manufacturing circumstances or other processes. Such hazards, toxicity and behaviour should be determined by the user and made known to handlers, processors and end users.

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