Material Safety Data Sheet

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RENCAST® 6403-1 US

1 . Product and company identification

RENCAST® 6403-1 US

Material uses : Urethane resin
MSDS # : 00072191
Validation date : 3/9/2012.
Print date : 3/9/2012.

Supplier/Manufacturer : Huntsman Advanced Materials Americas LLC
P.O. Box 4980
The Woodlands, TX 77387

Non-Emergency phone: (800) 257-5547

E-Mail: MSDS@huntsman.com

In case of emergency : Chemtrec: (800) 424-9300 or (703) 527-3887

2 . Hazards identification

Physical state : Liquid.
Odor : Aromatic.
Color : Amber.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview : DANGER!

MAY BE FATAL IF INHALED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY CAUSE ALLERGIC RESPIRATORY AND SKIN REACTION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

Do not breathe vapor or mist. Do not get on skin or clothing. Avoid contact with eyes. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

See toxicological information (Section 11)

GENERAL INFORMATION : Read the entire MSDS for a more thorough evaluation of the hazards.

3 . Composition/information on ingredients

Name	CAS number	%
Diphenylmethane-4,4'-diisocyanate	101-68-8	60 - 100
Diphenylmethane diisocyanate, homopolymer	39310-05-9	13 - 30
diphenylmethane-di-isocyanate	26447-40-5	3 - 7
triethyl phosphate	78-40-0	1 - 3

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4 . First aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

Inhalation : Call medical doctor or poison control center immediately. Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Notes to physician : No specific treatment. Treat symptomatically. Call medical doctor or poison control center immediately if large quantities have been ingested.

5 . Fire-fighting measures

Flash point : Closed cup: >110°C (>230°F)

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
phosphorus oxides

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Do not breathe vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

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7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Persons with a history of skin sensitization problems or asthma, allergies or chronic or recurrent respiratory disease should not be employed in any process in which this product is used. Do not get in eyes or on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8 . Exposure controls/personal protection

Ingredient	Exposure limits
diphenylmethane-4,4'-di-isocyanate	**ACGIH TLV (United States, 2/2010).** TWA: 0.005 ppm 8 hour(s). **OSHA PEL (United States, 6/2010).** CEIL: 0.02 ppm CEIL: 0.2 mg/m³

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. Use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Respiratory : In case of inadequate ventilation wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

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8 . Exposure controls/personal protection

9 . Physical and chemical properties

General information

Appearance

Physical state : Liquid.

Color : Amber.

Odor : Aromatic.

Important health, safety and environmental information

pH : Not available.

Boiling/condensation point : Not available.

Melting/freezing point : Not available.

Flash point : Closed cup: >110°C (>230°F)

Flammable limits : Not available.

Auto-ignition temperature : Not available.

Vapor pressure : Not available.

Specific gravity : 1.17 to 1.21

Water solubility : Reacts with water

Partition coefficient: n-octanol/water (log Kow) : Not available.

Density : 1.17 to 1.21 g/cm^3

Vapor density : >0.01 [Air = 1]

Evaporation rate (butyl acetate = 1) : Not available.

VOC : Not available.

10 . Stability and reactivity

Chemical stability : The product is stable.

Under normal conditions of storage and use, hazardous reactions will not occur.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to avoid : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 . Toxicological information

Potential acute health effects

Inhalation : Very toxic by inhalation. Irritating to respiratory system. May cause sensitization by inhalation.

Ingestion : No known significant effects or critical hazards.

Skin : Irritating to skin. May cause sensitization by skin contact.

Eyes : Irritating to eyes.

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure

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11 . Toxicological information

Diphenylmethane-4,4'-diisocyanate	LD50 Dermal	Rabbit - Male, Female	>9400 mg/kg	-
	LD50 Intraperitoneal	Rabbit - Male	100 mg/kg	-
	LD50 Oral	Rat - Male	>10000 mg/kg	-
Diphenylmethane diisocyanate, homopolymer	LD50 Dermal	Rabbit - Male, Female	>9400 mg/kg	-
	LD50 Oral	Rat - Female	>5000 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat - Male, Female	0.49 mg/L	4 hours
diphenylmethane-di-isocyanate	LD50 Dermal	Rabbit - Male, Female	>9400 mg/kg	-
	LD50 Oral	Rat - Male, Female	>2000 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat - Male, Female	>2.24 mg/L	1 hours
triethyl phosphate	LD50 Dermal	Rabbit	>20000 mg/kg	-
	LD50 Oral	Rat	1600 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat - Male, Female	>8817 mg/m3	4 hours

Chronic toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Diphenylmethane-4,4'-diisocyanate	Chronic NOEC Inhalation Dusts and mists	Rat - Male, Female	0.2 mg/m3	2 years; 5 days per week
Diphenylmethane diisocyanate, homopolymer	Chronic NOEC Inhalation Dusts and mists	Rat - Male, Female	0.2 mg/m3	2 years; 5 days per week
	Sub-chronic NOEC Inhalation Dusts and mists	Rat - Male, Female	<4 mg/m3	90 days; 5 days per week
diphenylmethane-di-isocyanate	Chronic NOEC Inhalation Dusts and mists	Rat - Male, Female	0.2 mg/m3	2 years; 5 days per week
triethyl phosphate	Sub-acute NOAEL Oral	Rat - Male, Female	1000 mg/kg	4 weeks; 7 days per week
	Sub-chronic NOEC Inhalation Dusts and mists	Rat - Male	366 mg/m3	12 weeks; 5 days per week

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Diphenylmethane-4,4'-diisocyanate	Skin - Irritant	Rabbit	-	-	-
Diphenylmethane diisocyanate, homopolymer	Skin - Irritant	Rabbit	-	-	-
triethyl phosphate	Eyes - Moderate irritant	Rabbit	-	-	-
	Skin - Non-irritant.	Rabbit	-	-	-

Skin : **diphenylmethane-4,4'-di-isocyanate**: Irritating to skin.
Diphenylmethane diisocyanate, homopolymer: Irritating to skin.
triethyl phosphate: Non-irritating to the skin.

Eyes : **triethyl phosphate**: Irritating to eyes.

Sensitizer

Product/ingredient name	Route of exposure	Species	Result

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11 . Toxicological information

Diphenylmethane-4,4'-diisocyanate	Respiratory	Guinea pig	Sensitizing
diphenylmethane-di-isocyanate	skin	Guinea pig	Not sensitizing
	Respiratory	Guinea pig	Sensitizing
triethyl phosphate	skin	Mouse	Not sensitizing

Carcinogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Diphenylmethane-4,4'-diisocyanate	Positive - Inhalation - NOAEL	Rat - Male, Female	1 mg/m3	2 years; 5 days per week
Diphenylmethane diisocyanate, homopolymer	Negative - Inhalation - NOAEL	Rat - Male, Female	1 mg/m3	2 years; 5 days per week
diphenylmethane-di-isocyanate	Negative - Inhalation - NOAEL	Rat - Male, Female	1 mg/m3	2 years; 5 days per week
	Negative - Inhalation - NOAEL	Rat - Female	0.7 mg/m3	2 years; 5 days per week

Carcinogenic class

Product/ingredient name	ACGIH	IARC	EPA	NIOSH	NTP	OSHA
Diphenylmethane-4,4'-diisocyanate	-	3	-	-	-	-

Mutagenicity

Product/ingredient name	Test	Experiment	Result
Diphenylmethane-4,4'-diisocyanate	EU EC B.13/14 Mutagenicity - Reverse Mutation Test using Bacteria	Experiment: In vitro Subject: Bacteria Metabolic activation: +/-	Negative
	OECD 474 Mammalian Erythrocyte Micronucleus Test	Experiment: In vivo Subject: Mammalian-Animal	Negative
Diphenylmethane diisocyanate, homopolymer	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria Metabolic activation: +/-	Negative
	OECD 474 Mammalian Erythrocyte Micronucleus Test	Experiment: In vivo Subject: Mammalian-Animal	Negative
diphenylmethane-di-isocyanate	EU EC B.13/14 Mutagenicity - Reverse Mutation Test using Bacteria	Experiment: In vitro Subject: Bacteria Metabolic activation: +/-	Negative
	OECD 474 Mammalian Erythrocyte Micronucleus Test	Experiment: In vivo Subject: Mammalian-Animal	Negative
triethyl phosphate	-	Experiment: In vitro Subject: Bacteria	Negative
	OECD 476 *In vitro* Mammalian Cell Gene Mutation Test	Experiment: In vitro Subject: Mammalian-Animal Metabolic activation: +/-	Negative
	OECD 482 Genetic Toxicology: DNA Damage and Repair, Unscheduled DNA Synthesis in Mammalian Cells *in vitro*	Experiment: In vitro Subject: Mammalian-Animal Cell: Somatic	Negative
	OECD 478 Genetic	Experiment: In vivo	Negative

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11 . Toxicological information

	Toxicology: Rodent Dominant Lethal Test	Subject: Mammalian-Animal

Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Diphenylmethane-4,4'-diisocyanate	Negative - Inhalation	Rat - Male, Female	12 mg/m3 NOAEL	20 days
Diphenylmethane diisocyanate, homopolymer	Negative - Inhalation	Rat - Male, Female	12 mg/m3 NOAEL	20 days
diphenylmethane-di-isocyanate	Negative - Inhalation	Rat - Male, Female	12 mg/m3 NOAEL	20 days
triethyl phosphate	Negative - Oral	Rat	625 mg/kg NOAEL	10 days; 7 days per week

Reproductive toxicity

Product/ingredient name	Maternal toxicity	Fertility	Development toxin	Species	Dose	Exposure
diphenylmethane-di-isocyanate	Negative	Negative	Negative	Rat - Male, Female	Inhalation: 4 mg/m3 NOAEL	20 days

Potential chronic health effects

Chronic effects : Contains material that can cause target organ damage. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Target organs : Contains material which causes damage to the following organs: upper respiratory tract.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Medical conditions aggravated by over-exposure

Pre-existing respiratory and skin disorders and disorders involving any other target organs mentioned in this MSDS as being at risk may be aggravated by over-exposure to this product.

12 . Ecological information

Environmental effects : Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
Diphenylmethane-4,4'-diisocyanate	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute EC50 >1000 mg/L Fresh water	Daphnia	24 hours Static
	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute EC50 >100 mg/L Fresh water	Bacteria	3 hours Static
	OECD 203 Fish, Acute Toxicity	Acute LC50	Fish	96 hours Static

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12 . Ecological information

	Test	>1000 mg/L		
	OECD 211 *Daphnia Magna* Reproduction Test	Chronic NOEC >10 mg/L Fresh water	Daphnia	21 days Semi-static
Diphenylmethane diisocyanate, homopolymer	OECD 201 Alga, Growth Inhibition Test	Acute EC50 >1640 mg/L Fresh water	Algae	72 hours Static
	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute EC50 >1000 mg/L Fresh water	Daphnia	24 hours Static
	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute EC50 >100 mg/L Fresh water	Bacteria - Activated sludge	3 hours Static
	OECD 203 Fish, Acute Toxicity Test	Acute LC50 >1000 mg/L Fresh water	Fish	96 hours Static
	OECD 211 *Daphnia Magna* Reproduction Test	Chronic NOEC >10 mg/L Fresh water	Daphnia	21 days Semi-static
diphenylmethane-di-isocyanate	OECD 202 *Daphnia* sp. Acute Immobilisation Test	Acute EC50 >1000 mg/L Fresh water	Daphnia	24 hours Static
	OECD 209 Activated Sludge, Respiration Inhibition Test	Acute EC50 >100 mg/L Fresh water	Bacteria - Activated sludge	3 hours Static
	OECD 203 Fish, Acute Toxicity Test	Acute LC50 >1000 mg/L Fresh water	Fish	96 hours Static
	OECD 201 Alga, Growth Inhibition Test	Chronic EC50 >1640 mg/L Fresh water	Algae	72 hours Static
	OECD 211 *Daphnia Magna* Reproduction Test	Chronic NOEC >10 mg/L Fresh water	Daphnia	21 days Semi-static
Terphenyl, hydrogenated	-	Acute EC50 56 mg/L Fresh water	Aquatic plants	96 hours
	-	Acute EC50 >1.34 mg/L Fresh water	Daphnia	48 hours
	-	Acute LC50 >100 mg/L	Fish	96 hours
	-	Chronic NOEC 103 mg/L Fresh water	Bacteria	3 hours
triethyl phosphate	-	Acute EC50 901 mg/L Fresh water	Algae	72 hours Static
	EPA OPPTS	Acute LC50 >100 mg/L Fresh water	Fish	96 hours Static

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12 . Ecological information

	EPA OPPTS	Acute LC50 >100 mg/L Fresh water	Daphnia	96 hours Static
	OECD 211 *Daphnia Magna* Reproduction Test	Chronic NOEC 31.6 mg/L Fresh water	Daphnia	21 days

Biodegradability

Product/ingredient name	Test	Result	Dose	Inoculum
Diphenylmethane-4,4'-diisocyanate	OECD 302C Inherent Biodegradability: Modified MITI Test (II)	0 % - Not readily - 28 days	30 mg/L	-
Diphenylmethane diisocyanate, homopolymer	OECD 302C Inherent Biodegradability: Modified MITI Test (II)	0 % - Not readily - 28 days	30 mg/L Oxygen consumption	-
diphenylmethane-di-isocyanate	OECD 302C Inherent Biodegradability: Modified MITI Test (II)	0 % - Not readily - 28 days	30 mg/L Oxygen consumption	-
triethyl phosphate	EPA OPPTS 302B Inherent Biodegradability: Zahn-Wellens/EMPA Test	98 % - Inherent - 28 days	-	Activated sludge
	OECD 301C Ready Biodegradability - Modified MITI Test (I)	0 % - Not readily - 28 days	-	Activated sludge

Other ecological information

Biological Oxygen Demand (BOD 5 DAY) : Not Determined

Chemical Oxygen Demand (COD) : Not Determined

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Diphenylmethane-4,4'-diisocyanate	-	-	Not readily
Diphenylmethane diisocyanate, homopolymer	-	-	Not readily
diphenylmethane-di-isocyanate	-	-	Not readily
triethyl phosphate	-	-	Not readily

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Diphenylmethane-4,4'-diisocyanate	4.51	200	high
Diphenylmethane diisocyanate, homopolymer	8.56	200	high
diphenylmethane-di-isocyanate	4.51	439	high
Terphenyl, hydrogenated	6.5	-	high
triethyl phosphate	1.11	0.5 to 0.8	low

Other adverse effects : No known significant effects or critical hazards.

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12 . Ecological information

PBT : Not applicable.

Other information

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

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

14 . Transport information

Proper shipping name

DOT : Not regulated.

TDG : Not regulated.

IMDG : Not regulated.

IATA : Not regulated.

Regulatory information	UN number	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-		-
TDG Classification	Not regulated.	-	-		-
IMDG Class	Not regulated.	-	-		-
IATA-DGR Class	Not regulated.	-	-		-

PG* : Packing group

15 . Regulatory information

U.S. Federal regulations

HCS Classification : Highly toxic material
Irritating material
Sensitizing material
Target organ effects

U.S. Federal regulations : **United States inventory (TSCA 8b)**: All components are listed or exempted.

TSCA 5(a)2 final significant new use rule (SNUR) : None.

TSCA 5(e) substance consent order : None.

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15 . Regulatory information

TSCA 12(b) one-time export notification: : None.

TSCA 12(b) annual export notification : None.

SARA 302/304/311/312 extremely hazardous substances : **SARA 302/304/311/312 extremely hazardous substances**: No Ingredient Listed

SARA 311/312 hazard identification : **SARA 311/312 MSDS distribution - chemical inventory - hazard identification**: Immediate (acute) health hazard, Delayed (chronic) health hazard;

Clean Air Act Section 111 - Volatile Organic Compounds (VOC)

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) :

Product name	CAS number	Concentration
Diphenylmethane-4,4'-diisocyanate	101-68-8	60 - 100

Clean Air Act - Ozone Depleting Substances (ODS) : EPCRA Section 313 (40 CFR 372) CERCLA (Comprehensive Environmental Response, Compensation and Liability Act): 4,4-Methylene diphenyl diisocyanate (CAS 101-68-8) has a 5,000 lb. RQ (reportable quantity). Any spill or release above the RQ must be reported to the National Response Center (800-424-8802).

This product does not contain nor is it manufactured with ozone depleting substances.

SARA 313 Form R - Reporting requirements :

Product name	CAS number	Concentration
Diphenylmethane-4,4'-diisocyanate	101-68-8	60 - 100

CERCLA: Hazardous substances: No ingredients listed.

STATE REGULATIONS:

PENNSYLVANIA - RTK: None of the components are listed.

California Prop 65 : This product contains no listed substances known to the State of California to cause cancer, birth defects or other reproductive harm, at levels which would require a warning under the statute.

Canada

WHMIS (Canada) : Class D-1A: Material causing immediate and serious toxic effects (Very toxic).
Class D-2A: Material causing other toxic effects (Very toxic).
Class D-2B: Material causing other toxic effects (Toxic).

CEPA DSL : All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): All components are listed or exempted.
Japan inventory: At least one component is not listed.
Korea inventory: All components are listed or exempted.
New Zealand Inventory of Chemicals (NZIoC): All components are listed or exempted.
Philippines inventory (PICCS): All components are listed or exempted.

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16 . Other information

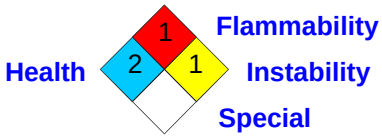
Label requirements : MAY BE FATAL IF INHALED. CAUSES RESPIRATORY TRACT, EYE AND SKIN IRRITATION. MAY CAUSE ALLERGIC RESPIRATORY AND SKIN REACTION. CONTAINS MATERIAL THAT CAN CAUSE TARGET ORGAN DAMAGE.

Hazardous Material Information System (U.S.A.) :

Health	2
Flammability	1
Physical hazards	1
Personal protection	

The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



Date of printing : **3/9/2012.**

Date of issue : 3/9/2012.

Date of previous issue : No previous validation.

Version : 1

Indicates information that has changed from previously issued version.

Notice to reader

While 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.

NO PERSON OR ORGANIZATION EXCEPT A DULY AUTHORIZED HUNTSMAN EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR HUNTSMAN PRODUCTS. DATA SHEETS FROM UNAUTHORIZED SOURCES MAY CONTAIN INFORMATION THAT IS NO LONGER CURRENT OR ACCURATE. NO PART OF THIS DATA SHEET MAY BE REPRODUCED OR TRANSMITTED IN ANY FORM, OR BY ANY MEANS, WITHOUT PERMISSION IN WRITING FROM HUNTSMAN. ALL REQUESTS FOR PERMISSION TO REPRODUCE MATERIAL FROM THIS DATA SHEET SHOULD BE DIRECTED TO HUNTSMAN, MANAGER, PRODUCT SAFETY AT THE ABOVE ADDRESS.

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16 . Other information

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Huntsman Advanced Materials Americas Inc.

4917 Dawn Avenue
East Lansing, MI 48823-5691

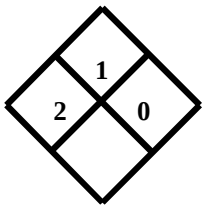
8am to 5pm Phone: (517) 351-5900
24-Hour Emergency Phone: 1-888-354-3323

Effective Date: 10/13/04 **Material Safety Data Sheet** **MSDS No: 6101**

1. PRODUCT IDENTIFICATION

Trade Name: Ren 6403-1

Chemical Family: Polyol



NFPA RATING

Health:	**2**
Flammability:	**1**
Reactivity:	**0**
Personal Protection:	

HMIS RATING

Synonyms:
RP 6403-1 Hardener
TDT 178-76 Hardener

Intended Use or Product Type: Polyol hardener

2. COMPOSITION / INFORMATION ON INGREDIENTS

OSHA	CAS No.	CHEMICAL IDENTITY	EXPOSURE LIMITS					CARCINOGEN STATUS		
			ACGIH		OSHA		MFR.	IARC	NTP	OSHA
			TWA	STEL	PEL	STEL				
*	107-21-1 Common Name:	1,2-Ethanediol Ethylene glycol	NE	100 mg/m3	NE	NE	NE	NR	NR	NR
*	120-07-0 Common Name:	Ethanol, 2,2'-(Phenylimino)bis-N,N-Hydroxyethyl aniline	NE	NE	NE	NE	NE	NR	NR	NR

* = OSHA Hazardous Ingredient

3. HAZARDS IDENTIFICATION

Emergency Overview: Causes skin and eye irritation.

Primary Route(s) of Entry: Dermal; heated product may produce inhalable vapors.

4. FIRST AID MEASURES

Ingestion: If conscious, give 2 - 4 glasses of water to drink. Do not induce vomiting. Call a physician.

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Skin: Immediately wash with soap and water. Remove contaminated clothing and launder before reuse. Destroy contaminated shoes.

Inhalation: Remove to fresh air. Call a physician.

Eyes: Immediately flush eyes with water for at least 15 minutes. Call a physician.

Overexposure Effects: Causes skin and eye irritation.

Medical Conditions Aggravated by Exposure: Skin and eye conditions.

Additional Information: Referral to a physician is recommended if there is any question about the seriousness of any injury.

5. FIRE FIGHTING MEASURES

Flash Point:	> 230°F (> 110 °C)
Flash Point Method Used:	Estimated
Flammable Limits in Air (Lower - % by volume):	Not established
Flammable Limits in Air (Upper - % by volume):	Not established

Fire Fighting Extinguishing Media: Carbon dioxide, dry chemical, foam, water.

Fire Fighting Equipment: Use self-contained breathing apparatus.

Fire and Explosion Hazards: Decomposition and combustion products may be toxic.

6. ACCIDENTAL RELEASE MEASURES

Accidental Release Measures: Remove spillage by absorbing in absorbent material.

7. HANDLING AND STORAGE

Signal Word: Warning!

Precautions: Can cause skin and eye irritation. Avoid contact with eyes, skin, and clothing. Wash thoroughly after handling.

Other Handling Information: Nuisance dust may be generated when sanding or sawing cured material.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Skin Protection: Wear impermeable gloves.

Respiratory Protection: Use NIOSH approved organic vapor cartridge respirator when vapor/mist exposure is likely.

Eye Protection: Wear splash-proof chemical goggles.

Engineering Controls: General mechanical and local exhaust in accordance with ACGIH recommendations.

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9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	Off White
Physical State:	Liquid
Solubility in Water:	Slight
Vapor Pressure:	Not Determined
Specific Gravity:	1.06 (water = 1)
Boiling Point:	Not Determined
Evaporation Rate:	Not Determined
Vapor Density:	Not Determined
VOC:	63.07 g/L
pH:	Not Determined

Percent Volatile: Less than 1%.

10. STABILITY AND REACTIVITY

Conditions to Avoid: Excessive heat for prolonged periods of time.

Stability: Stable.

Incompatibility: Strong oxidizers, acids and bases.

Hazardous Decomposition Products: Combustion may form toxic materials, such as carbon dioxide, carbon monoxide.

Hazardous Polymerization: Will not occur.

11. TOXICOLOGICAL INFORMATION

Skin Irritation: Irritant.

Eye Irritation: Irritant.

Teratogenicity: Contains Ethylene glycol. An inhalation teratology study has confirmed that ethylene glycol is teratogenic in CD-1 mice. Fetotoxicity was present at 1,000 and 2,500 mg/m as evidenced by reduced body weights and reduced ossification at numerous skeletal districts. Teratogenicity was demonstrated at 1,000 and 2,500 mg/m3 as evidenced by a significantly increased incidence of malformations.

12. ECOLOGICAL INFORMATION

13. DISPOSAL CONSIDERATIONS

Waste Disposal Method: Consult qualified local or corporate personnel for method that will comply with local, state and federal health and environmental regulations.

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Additional Information: Disposal of Cured Product: This product when cured may contain very small quantities of organic mercury compounds. It is the responsibility of the user to determine if the selected disposal method complies with applicable regulations.

14. TRANSPORT INFORMATION

DOT: Non-Bulk
Proper Shipping Name: Resin compounds, N.O.I.

Department of Transportation: Not regulated as a hazardous material by the U.S. Dept. of Transportation (DOT) 49 CFR 172.101 hazardous materials table.

15. REGULATORY INFORMATION

US Federal Regulations:

Occupational Safety and Health Act (OSHA): This Material Safety Data Sheet (MSDS) has been prepared in compliance with the federal OSHA Hazard Communication Standard 29 CFR 1910.1200. This product is considered to be a hazardous chemical under that standard.

Resource Conservation and Recovery Act (RCRA): D 009 contains mercury.

SARA Title III: Section 313 Toxic Chemical List (TCL): This product contains a toxic chemical(s) for routine annual toxic chemical release reporting under section 313 (40 CFR 372). This information must be included in all MSDS's copied or distributed for this material.

Chemical Name: 1,2-Ethanediol
Common Name: Ethylene glycol
Percent in Composition: 5.95 % by wt
Comment:

TSCA Section 8(b) - Inventory Status: All chemical components of this product are in compliance with TSCA inventory requirements.

TSCA Section 12(b) - Export Notification: This product does not contain any chemical(s) that are subject to a Section 12(b) export notification.

State Regulations:

California Proposition 65: The following is required composition information. This product contains the following chemical(s) which are currently listed on the California list of Known Carcinogens and Reproductive Toxins:

Chemical Name: Mercury catalyst
CAS Number: Held confidential by our supplier
Percent in Composition: 0.26 % by wt
Comment: Warning! This chemical is known to the State of California to cause birth defects or other reproductive harm.

Chemical Name: 2- Propenenitrile
Common Name: Acrylonitrile

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CAS Number: 107-13-1
Percent in Composition: 0.0022 % by wt
Comment: Warning! This chemical is known to the State of California to cause cancer.

Pennsylvania Right-to-Know: The following is required composition information:

Chemical Name: Polymer Polyol
CAS Number: Confidential
Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: Ethanol, 2,2'-(Phenylimino)bis-
Common Name: N,N-Hydroxyethyl aniline
CAS Number: 120-07-0
Comment: Not on Pennsylvania Hazardous Substance List

Chemical Name: 1,2-Ethanediol
Common Name: Ethylene glycol
CAS Number: 107-21-1
Comment: Environmental Hazardous Substance

16. OTHER INFORMATION

MSDS No: 6101
Approved By: Dianne Blessing
Title: EH&S Specialist

Disclaimer: The information and recommendations contained herein are based upon tests in controlled laboratory conditions, are believed to be correct, and are provided for the sole purpose of hazard communication as part of Huntsman's product safety program. This product has not been tested for, and therefore is not recommended or suitable for, uses for which prolonged contact with mucous membranes, abraded skin, or blood is intended or likely, or for uses for which implantation within the human body is intended, and Huntsman assumes no liability for any such uses.

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USER SHOULD CONSULT A LEGAL ADVISOR OR THE APPROPRIATE GOVERNMENTAL AGENCY TO DETERMINE THE APPLICABILITY OR EFFECT OF ANY LAW OR REGULATION WITH RESPECT TO THE PRODUCT. HUNTSMAN DOES NOT UNDERTAKE TO FURNISH ADVICE ON SUCH MATTERS.

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Material Safety Data Sheet

HUNTSMAN
Enriching lives through innovation

REN® 6403-2 US

1 . Product and company identification

REN® 6403-2 US

Material uses : Polyol

MSDS # : 00071213

Validation date : 12/16/2011.

Print date : 12/16/2011.

Supplier/Manufacturer : Huntsman Advanced Materials Americas LLC
P.O. Box 4980
The Woodlands, TX 77387

Non-Emergency phone: (800) 257-5547

E-Mail: MSDS@huntsman.com

In case of emergency : Chemtrec: (800) 424-9300 or (703) 527-3887

2 . Hazards identification

Physical state : Liquid.

Color : White.

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Emergency overview : WARNING!

CAUSES EYE IRRITATION. MAY BE HARMFUL IF SWALLOWED. MAY CAUSE RESPIRATORY TRACT AND SKIN IRRITATION.

Do not ingest. Do not get in eyes. Avoid breathing vapor or mist. Avoid contact with skin and clothing. Use only with adequate ventilation. Keep container tightly closed and sealed until ready for use. Wash thoroughly after handling.

See toxicological information (Section 11)

GENERAL INFORMATION : Read the entire MSDS for a more thorough evaluation of the hazards.

3 . Composition/information on ingredients

Name	CAS number	%
alkenyl modified oxyalkylene polymer		60 - 100
ETHANOL, 2,2'-(PHENYLIMINO)BIS-	120-07-0	3 - 7

4 . First aid measures

Eye contact : Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

Skin contact : In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

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4 . First aid measures

Inhalation : Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately.

Ingestion : Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention immediately.

Notes to physician : Treatment with ethyl alcohol is indicated if toxic ingestion is suspected or if there is metabolic acidosis following ingestion of this product. Administer ethyl alcohol sufficient to maintain blood ethyl alcohol levels of above 100 mg/dL.

4-Methylpyrazole (Fomepizole, Antizole) is also a recognized antidote for this product.

5 . Fire-fighting measures

Flash point : Closed cup: >110°C (>230°F)

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides

Extinguishing media

Suitable : Use an extinguishing agent suitable for the surrounding fire.

Not suitable : None known.

Special exposure hazards : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

6 . Accidental release measures

Personal precautions : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Avoid breathing vapor or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment (see Section 8).

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

Methods for cleaning up : Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product. Note: see section 1 for emergency contact information and section 13 for waste disposal.

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7 . Handling and storage

Handling : Put on appropriate personal protective equipment (see Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapor or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Storage : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see section 10) and food and drink. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination.

8 . Exposure controls/personal protection

Consult local authorities for acceptable exposure limits.

Recommended monitoring procedures : If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.

Engineering measures : Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protection

Respiratory : In case of inadequate ventilation wear respiratory protection. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Eyes : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts.

Skin : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

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9 . Physical and chemical properties

General information

Appearance

Physical state : Liquid.

Color : White.

Odor : Not available.

Important health, safety and environmental information

pH : Not available.

Boiling/condensation point : Not available.

Melting/freezing point : Not available.

Flash point : Closed cup: >110°C (>230°F)

Flammable limits : Not available.

Auto-ignition temperature : Not available.

Vapor pressure : Not available.

Specific gravity : 1.06

Partition coefficient: n-octanol/water (log Kow) : Not available.

Density : Not available.

Vapor density : Not available.

Evaporation rate (butyl acetate = 1) : Not available.

VOC : Not available.

10 . Stability and reactivity

Chemical stability : The product is stable.
Under normal conditions of storage and use, hazardous reactions will not occur.

Hazardous polymerization : Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to avoid : No specific data.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 . Toxicological information

Potential acute health effects

Inhalation : Slightly irritating to the respiratory system.

Ingestion : Harmful if swallowed.

Skin : Slightly irritating to the skin.

Eyes : Severely irritating to eyes. Risk of serious damage to eyes.

Product/ingredient name	Result	Species	Dose	Exposure
ETHANOL, 2,2'-(PHENYLIMINO)BIS-	LD50 Oral	Rat	980 mg/kg	-

Potential chronic health effects

Chronic effects : No known significant effects or critical hazards.

Target organs : No known significant effects or critical hazards.

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11 . Toxicological information

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Fertility effects : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Medical conditions aggravated by over-exposure

None known.

12 . Ecological information

Environmental effects : No known significant effects or critical hazards.

Aquatic ecotoxicity

Biodegradability

Other ecological information

Biological Oxygen Demand (BOD 5 DAY) : Not Determined

Chemical Oxygen Demand (COD) : Not Determined

Other adverse effects : No known significant effects or critical hazards.

PBT : Not applicable.

Other information

13 . Disposal considerations

Waste disposal : The generation of waste should be avoided or minimized wherever possible. Significant quantities of waste product residues should not be disposed of via the foul sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

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

14 . Transport information

Proper shipping name

DOT : Not regulated.

TDG : Not regulated.

IMDG : Not regulated.

IATA : Not regulated.

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14 . Transport information

Regulatory information	UN number	Classes	PG*	Label	Additional information
DOT Classification	Not regulated.	-	-		-
TDG Classification	Not regulated.	-	-		-
IMDG Class	Not regulated.	-	-		-
IATA-DGR Class	Not regulated.	-	-		-

PG* : Packing group

15 . Regulatory information

U.S. Federal regulations

HCS Classification : Irritating material

U.S. Federal regulations : **United States inventory (TSCA 8b)**: All components are listed or exempted.

TSCA 5(a)2 final significant new use rule (SNUR) : None.

TSCA 5(e) substance consent order : None.

TSCA 12(b) one-time export notification: : None.

TSCA 12(b) annual export notification : None.

SARA 302/304/311/312 extremely hazardous substances : **SARA 302/304/311/312 extremely hazardous substances**: No Ingredient Listed

SARA 311/312 hazard identification : **SARA 311/312 MSDS distribution - chemical inventory - hazard identification**: Immediate (acute) health hazard, Delayed (chronic) health hazard

Clean Air Act Section 112(b) Hazardous Air Pollutants (HAPs) :

Product name	CAS number	Concentration
Ethane-1-2-diol		3 - 7

Clean Air Act - Ozone Depleting Substances (ODS) : This product does not contain nor is it manufactured with ozone depleting substances.

SARA 313 No ingredients listed.

CERCLA: Hazardous substances: No ingredients listed.

STATE REGULATIONS:

PENNSYLVANIA - RTK: The following components are listed: 1,2-ETHANEDIOL

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15 . Regulatory information

California Prop 65 :

WARNING: This product contains less than 0.1% of a chemical known to the State of California to cause cancer.
WARNING: This product contains less than 1% of a chemical known to the State of California to cause birth defects or other reproductive harm.

Ingredient name	Cancer	Reproductive	No significant risk level	Maximum acceptable dosage level
ORGANIC COMPOUNDS OF MERCURY	No.	Yes.	No.	No.
aniline	Yes.	No.	Yes.	No.
acetaldehyde	Yes.	No.	90 µg/day (inhalation)	No.
1,4-dioxane	Yes.	No.	Yes.	No.
Ethylene oxide	Yes.	Yes.	No.	No.
acrylonitrile	Yes.	No.	Yes.	No.

Canada

WHMIS (Canada) : Class D-2B: Material causing other toxic effects (Toxic).

CEPA DSL : All components are listed or exempted.

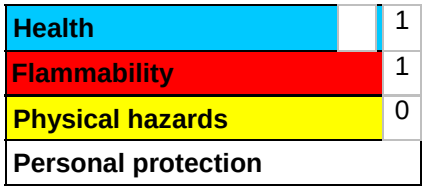
This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

International lists : **Australia inventory (AICS)**: All components are listed or exempted.
China inventory (IECSC): Not determined.
Japan inventory: At least one component is not listed.
Korea inventory: Not determined.
New Zealand Inventory of Chemicals (NZIoC): Not determined.
Philippines inventory (PICCS): Not determined.

16 . Other information

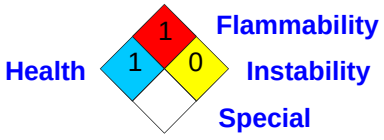
Label requirements : CAUSES EYE IRRITATION. MAY BE HARMFUL IF SWALLOWED. MAY CAUSE RESPIRATORY TRACT AND SKIN IRRITATION.

Hazardous Material Information System (U.S.A.) :



The customer is responsible for determining the PPE code for this material.

National Fire Protection Association (U.S.A.) :



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16 . Other information

Date of issue : 12/16/2011.

Date of previous issue : No previous validation.

Version : 1

Indicates information that has changed from previously issued version.

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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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