

# Material Safety Data Sheet



## POLYGUARD UV PART A

### 1. Product and company identification

**POLYGUARD UV PART A**  
**Material uses** : Polyurea Roofing System  
**MSDS #** : 00073952  
**Validation date** : 8/23/2012.  
**Print date** : 8/23/2012.

**Supplier/Manufacturer** Polyall Roofing  
  
32700 Industrial Drive  
Madison Heights, MI 48071  
  
Phone: (855) 765-9255  
Fax: (248) 677-9325  
  
www.polyallroofing.com

**In case of emergency** : INFOTRAC: (800) 535-5053

### 2. Hazards identification

**Physical state** : Liquid.  
**Color** : Clear Yellow  
**OSHA/HCS status** : This material is classified as hazardous under OSHA Hazard Communication Standard (29 CFR 1910.1200).  
**Emergency overview** : WARNING!  
Harmful by inhalation. Irritating to eyes and respiratory system. May cause sensitization by inhalation and skin contact. This product is a respiratory irritant and potential respiratory sensitiser: repeated inhalation of vapour or aerosol at levels above the occupational exposure limit could cause respiratory sensitisation. A hyper-reactive response to even minimal concentrations of diisocyanates may develop in sensitised persons. The onset of the respiratory symptoms may be delayed for several hours after exposure.  
Reacts slowly with water to produce carbon dioxide which may rupture closed containers. This reaction accelerates at higher temperatures.  
Do not breathe vapor or mist. Do not get on skin or 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

<u>Name</u>	<u>CAS number</u>	<u>%</u>
Diphenylmethane 4,4'-diisocyanate	101-68-8	30 - 60
Homopolymer of methylenediphenyl diisocyanate	25686-28-6	13 - 30

### 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** : After contact with skin, wash immediately with plenty of warm soapy water. Get medical attention if irritation develops. Wash clothing before reuse. Clean shoes thoroughly before reuse. An MDI study has demonstrated that a polyglycol-based skin cleanser (such as D-Tam<sup>TM</sup>, PEG-400) or corn oil may be more effective than soap and water.
- 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** : 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** : Combustion products may include: carbon monoxide, carbon dioxide, nitrogen oxides, hydrocarbons and HCN.
- Extinguishing media**
- Suitable** : Use an extinguishing agent suitable for the surrounding fire.
- Not suitable** : None known.
- Special exposure hazards** : No specific hazard.
- 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. PVC boots, gloves, safety helmet and protective clothing should be worn. PVC boots, gloves, safety helmet and protective clothing should be worn.
- Special remarks on explosion hazards** : Due to reaction with water producing CO<sub>2</sub>-gas, a hazardous build-up of pressure could result if contaminated containers are re-sealed. Containers may burst if overheated.

### 6 . Accidental release measures

- Personal precautions** : Immediately contact emergency personnel. Evacuate the area. Keep upwind to avoid inhalation of vapours. Clean-up should only be performed by trained personnel. People dealing with major spillages should wear full protective clothing including respiratory protection. Use suitable protective equipment (section 8).
- Environmental precautions** : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## 6 . Accidental release measures

- Methods for cleaning up** : Contain and absorb large spillages onto an inert, non-flammable adsorbent carrier (such as earth or sand). Shovel into open-top drums or plastic bags for further decontamination, if necessary. Wash the spillage area clean with liquid decontaminant. Test atmosphere for MDI. Neutralize small spillages with decontaminant. Remove and properly dispose of residues. (See Section 13 for disposal considerations.) Notify applicable government authorities if release is reportable. The CERCLA RQ for 4,4-MDI is 5,000 lbs (see CERCLA in Section 15).

## 7 . Handling and storage

- Handling** : Avoid personal contact with the product or reaction mixture. Use only with adequate ventilation to ensure that the occupational exposure limit is not exceeded. The efficiency of the ventilation system must be monitored regularly because of the possibility of blockage. Avoid breathing aerosols, mists and vapors. (See Section 8--Exposure Control for details.) Keep stocks of decontaminant readily available.
- Storage** : Keep container in a cool, well-ventilated area. Keep container tightly closed. Keep away from moisture. Due to reaction with water producing CO<sub>2</sub>-gas, a hazardous build-up of pressure could result if contaminated containers are re-sealed. Do not reseal contaminated containers. Uncontaminated containers, free of moisture, may be resealed only after placing under a nitrogen blanket. Do not store in containers made of copper, copper alloys or galvanized surfaces.

## 8 . Exposure controls/personal protection

Ingredient	Exposure limits
Diphenylmethane 4,4'-diisocyanate	<b>ACGIH TLV (United States, 2/2010).</b> TWA: 0.005 ppm 8 hour(s). <b>OSHA PEL (United States, 6/2010).</b> CEIL: 0.02 ppm CEIL: 0.2 mg/m <sup>3</sup>

- Recommended monitoring procedures** : Conditions of use, adequacy of engineering or other control measures, and actual exposures will dictate the need for specific protective devices at your workplace.
- Engineering measures** : Use local exhaust ventilation to maintain airborne concentrations below the TLV. Suitable respiratory equipment should be used in cases of insufficient ventilation or where operational procedures demand it. For guidance on engineering control measures refer to publications such as the ACGIH current edition of 'Industrial Ventilation, a manual of Recommended Practice.'
- 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** : When the product is sprayed or heated without adequate ventilation, an approved MSHA/NIOSH positive-pressure, supplied-air respirator may be required. Air purifying respirators equipped with organic vapor cartridges and a HEPA (P100) particulate filter may be used under certain conditions when a cartridge change-out schedule has been developed in accordance with the OSHA respiratory protection standard (29 C.F.R. 1910.134).
- 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** : Chemical safety goggles. If there is a potential for splashing, use a full face shield.

## 8 . Exposure controls/personal protection

- Skin** : The following protective materials are recommended: Gloves - neoprene, nitrile rubber, butyl rubber. Thin latex disposable gloves should be avoided for repeated or long term use. Protective clothing should be selected and used in accordance with 'Guidelines for the Selection of Chemical Protective Clothing' published by ACGIH.
- 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.
- Other protection** : Consult your supervisor or S.O.P. for special handling instructions.

## 9 . Physical and chemical properties

### General information

#### Appearance

- Physical state** : Liquid.
- Color** : Clear Yellow
- Odor** : Not available.

### Important health, safety and environmental information

- pH** : Not available.
- Boiling/condensation point** : >300°C decomposes
- Melting/freezing point** : Not available.
- Flash point** : Closed cup: >110°C (>230°F)
- Flammable limits** : Not available.
- Auto-ignition temperature** : >600°C
- Vapor pressure** : Not available.
- Specific gravity** : 1.17
- Partition coefficient: n-octanol/water (log Kow)** : Not available.
- Viscosity** : Dynamic: 900 mPa·s (900 cP)
- Density** : Not available.
- Vapor density** : Not available.
- Evaporation rate (butyl acetate = 1)** : Not available.
- VOC** : Not available.

## 10 . Stability and reactivity

- Chemical stability** : Stable at room temperature. Reaction with water (moisture) produces CO<sub>2</sub>-gas. Exothermic reaction with materials containing active hydrogen groups. The reaction becomes progressively more vigorous and can be violent at higher temperatures if the miscibility of the reaction partners is good or is supported by stirring or by the presence of solvents. MDI is insoluble with, and heavier than water and sinks to the bottom but reacts slowly at the interface. A solid water-insoluble layer of polyurea is formed at the interface by liberating carbon dioxide gas.
- Under normal conditions of storage and use, hazardous reactions will not occur.
- Hazardous polymerization** : Polymerization may occur at elevated temperatures in the presence of alkalis, tertiary amines and metal compounds.
- Conditions to avoid** : Avoid high temperatures.
- Materials to avoid** : Water, alcohols, amines, bases, and acids.

## 10 . Stability and reactivity

**Hazardous decomposition products** : carbon monoxide, carbon dioxide, nitrogen oxides, hydrocarbons and HCN.

## 11 . Toxicological information

### Potential acute health effects

- Inhalation** : May cause sensitization by inhalation.  
**Ingestion** : Low oral toxicity. Ingestion may cause irritation of the gastrointestinal tract.  
**Skin** : Irritating to skin. May cause sensitisation by skin contact  
**Eyes** : Irritating to eyes.

### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Diphenylmethane 4,4'-diisocyanate	LD50 Dermal	Rabbit - Male, Female	>9400 mg/kg	-
	LD50 Oral	Rat - Male	>10000 mg/kg	-
Homopolymer of methylenediphenyl diisocyanate	LC50 Inhalation Dusts and mists	Rat - Male, Female	0.49 mg/L	4 hours
	LD50 Oral	Rat - Female	>5000 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat - Male, Female	0.49 mg/L	4 hours

**Conclusion/Summary** : Diphenylmethane 4,4'-diisocyanate: Irritating to respiratory system.

### Chronic toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Homopolymer of methylenediphenyl diisocyanate	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

### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Diphenylmethane 4,4'-diisocyanate	Skin - Irritant	Rabbit	-	-	-
	Eyes - Non-irritant.	Rabbit	-	-	-
Homopolymer of methylenediphenyl diisocyanate	Skin - Irritant	Rabbit	-	-	-
	Non-corrosive Eyes - Non-irritant.	Other Rabbit	-	-	-

- Skin** : **Diphenylmethane 4,4'-diisocyanate**: Irritating to skin.  
**4,4'-Methylenediphenyl diisocyanate, oligomers**: Irritating to skin.  
**Eyes** : **Diphenylmethane 4,4'-diisocyanate**: Based on the human occupational exposure data, this substance is considered as irritating to eyes.  
**4,4'-Methylenediphenyl diisocyanate, oligomers**: Irritating to eyes.

### Sensitizer

Product/ingredient name	Route of exposure	Species	Result
-------------------------	-------------------	---------	--------

## 11 . Toxicological information

Diphenylmethane 4,4'-diisocyanate	skin	Mouse	Sensitizing
	skin	Guinea pig	Not sensitizing
Homopolymer of methylenediphenyl diisocyanate	Respiratory	Guinea pig	Sensitizing
	skin	Guinea pig	Sensitizing
	Respiratory	Guinea pig	Sensitizing

### Carcinogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Diphenylmethane 4,4'-diisocyanate	Positive - Inhalation - NOAEL	Rat - Male, Female	1 mg/m <sup>3</sup>	2 years; 5 days per week
Homopolymer of methylenediphenyl diisocyanate	Negative - Inhalation - NOAEL	Rat - Male, Female	1 mg/m <sup>3</sup>	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
Homopolymer of methylenediphenyl diisocyanate	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

**Conclusion/Summary** : Diphenylmethane 4,4'-diisocyanate: No mutagenic effect.

### Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Diphenylmethane 4,4'-diisocyanate	Negative - Inhalation	Rat - Female	12 mg/m <sup>3</sup> NOAEL	10 days; 6 hours per day
Homopolymer of methylenediphenyl diisocyanate	Negative - Inhalation	Rat - Male, Female	12 mg/m <sup>3</sup> NOAEL	20 days

**Conclusion/Summary** : Diphenylmethane 4,4'-diisocyanate: No known significant effects or critical hazards.

### Reproductive toxicity

**Conclusion/Summary** : Diphenylmethane 4,4'-diisocyanate: No known significant effects or critical hazards.

### 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.

## 11 . Toxicological information

- Carcinogenicity** : Rats have been exposed for two years to a respirable aerosol of polymeric MDI which resulted in chronic pulmonary irritation at high concentrations. Only at the top level (6 mg/m<sup>3</sup>), there was a significant incidence of a benign tumour of the lung (adenoma) and one malignant tumour (adenocarcinoma). There were no lung tumours at 1 mg/m<sup>3</sup> and no effects at 0.2 mg/m<sup>3</sup>. Overall, the tumour incidence, both benign and malignant, and the number of animals with the tumours were not different from controls. The increased incidence of lung tumours is associated with prolonged respiratory irritation and the concurrent accumulation of yellow material in the lung, which occurred throughout the study. In the absence of prolonged exposure to high concentrations leading to chronic irritation and lung damage, it is highly unlikely that tumour formation will occur.
- Mutagenicity** : There is no substantial evidence of mutagenic potential.
- Teratogenicity** : No birth defects were seen in two independent animal (rat) studies. Fetotoxicity was observed at doses that were extremely toxic (including lethal) to the mother. Fetotoxicity was not observed at doses that were not maternally toxic. The doses used in these studies were maximal, respirable concentrations, which are well in excess of defined occupational exposure limits.
- 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** : By comparison with an analogous product, the following values are anticipated. The measured ecotoxicity is that of the hydrolysed product, generally under conditions maximising production of soluble species. Even so, the observed ecotoxicity is low/very low. A pond study showed gross contamination caused no significant toxic effects on a wide variety of flora in all trophic levels (including fish), no detectable diaminodiphenylmethane (MDA), and no evidence of bioaccumulation of MDI or MDA.

### Aquatic ecotoxicity

Product/ingredient name	Test	Result	Species	Exposure
Diphenylmethane 4,4'-diisocyanate	OECD 202 <i>Daphnia</i> sp. Acute Immobilisation Test	Acute EC50 >1000 mg/L Fresh water	Daphnia	24 hours Static
	OECD 203 Fish, Acute Toxicity Test	Acute LC50 >1000 mg/L	Fish	96 hours Static
	OECD 211 <i>Daphnia Magna</i> Reproduction Test	Chronic NOEC >10 mg/L Fresh water	Daphnia	21 days Semi- static
	OECD 201 Alga, Growth Inhibition Test	Chronic NOECr 1640 mg/L Fresh water	Algae	72 hours Static
Homopolymer of methylenediphenyl diisocyanate	OECD 201 Alga, Growth Inhibition Test	Acute EC50 >1640 mg/L Fresh water	Algae	72 hours Static
	OECD 202	Acute EC50	Daphnia	24 hours Static

## 12 . Ecological information

	<i>Daphnia</i> sp. Acute Immobilisation Test	>1000 mg/L Fresh water		
	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 <i>Daphnia Magna</i> Reproduction Test	Chronic NOEC >10 mg/L Fresh water	Daphnia	21 days Semi- static
Diphenylmethane-2,4'- diisocyanate	OECD 202 <i>Daphnia</i> 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 Test	Acute LC50 >1000 mg/L Fresh water	Fish	96 hours Static
	OECD 211 <i>Daphnia Magna</i> Reproduction Test	Chronic NOEC >10 mg/L Fresh water	Daphnia	21 days Semi- static

### Biodegradability

#### Product/ingredient name

Diphenylmethane 4,4'-diisocyanate

#### Test

OECD 302C  
Inherent  
Biodegradability:  
Modified MITI  
Test (II)

#### Result

0 % - Not readily  
- 28 days

#### Dose

30 mg/L BOD:

#### Inoculum

-

Homopolymer of methylenediphenyl  
diisocyanateOECD 302C  
Inherent  
Biodegradability:  
Modified MITI  
Test (II)0 % - Not readily  
- 28 days30 mg/L Oxygen  
consumption

-

Diphenylmethane-2,4'- diisocyanate

OECD 302C  
Inherent  
Biodegradability:  
Modified MITI  
Test (II)0 % - Not readily  
- 28 days

30 mg/L

-

### Other ecological information

**Biological Oxygen Demand** : Not Determined  
(BOD 5 DAY)

**Chemical Oxygen Demand** : Not Determined  
(COD)

#### Product/ingredient name

#### Aquatic half-life

#### Photolysis

#### Biodegradability

## 12 . Ecological information

Diphenylmethane 4,4'-diisocyanate	Fresh water 0.83 days	-	Not readily
Homopolymer of methylenediphenyl diisocyanate	-	-	Not readily
Diphenylmethane-2,4'- diisocyanate	-	-	Not readily

### Bioaccumulative potential

<u>Product/ingredient name</u>	<u>LogP<sub>ow</sub></u>	<u>BCF</u>	<u>Potential</u>
Diphenylmethane 4,4'-diisocyanate	4.51	200	high
Homopolymer of methylenediphenyl diisocyanate	8.56	200	high
Diphenylmethane-2,4'- diisocyanate	4.51	200	high

**Mobility** : By considering the production and use of the substance, it is unlikely that significant environmental exposure in the air or water will arise. Immiscible with water, but will react with water to produce inert and non-biodegradable solids. Conversion to soluble products, including diamino- diphenylmethane (MDA), is very low under the optimal laboratory conditions of good dispersion and low concentration. In air, the predominant degradation process is predicted to be a relatively rapid OH radical attack, by calculation and by analogy with related diisocyanates.

**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** : OTHER REGULATED SUBSTANCES, LIQUID, N.O.S. (Methylene Diphenyl Diisocyanate)

**TDG** : Not regulated.

**IMDG** : Not regulated.

**IATA** : Not regulated.

## 14 . Transport information

Regulatory information	UN number	Classes	PG*	Label	Additional information
DOT Classification	NA3082	9	III		<b>Reportable quantity 5000 lbs. (2270 kg)</b> Single containers less than 5,000 lbs. are 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

: Toxic material  
Irritant  
Sensitizer

#### 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) 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**:  
Diphenylmethane 4,4'-diisocyanate: Immediate (acute) health hazard, Delayed (chronic) health hazard

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

Not available.

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

<u>Product name</u>	<u>CAS number</u>	<u>Concentration</u>
Diphenylmethane 4,4'-diisocyanate	101-68-8	30 - 60

#### Clean Air Act - Ozone Depleting Substances (ODS)

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

#### SARA 313

#### Product name

#### CAS number

#### Concentration

## 15 . Regulatory information

**Form R - Reporting requirements** : Diphenylmethane 4,4'-diisocyanate 45%

### CERCLA Hazardous substances

Components	Concentration %	Section 304 CERCLA Hazardous Substance	CERCLA Reportable Quantity (Lbs)	Product Reportable Quantity (Lbs)
Diphenylmethane 4,4'-diisocyanate	45.119	Listed	5000	11082

### 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)** : WHMIS Class D-2A: Material causing other toxic effects (Very toxic).  
WHMIS 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):** At least one component is not listed.  
**Japan inventory:** At least one component is not listed.  
**Korea inventory:** At least one component is not listed.  
**New Zealand Inventory of Chemicals (NZIoC):** At least one component is not listed.  
**Philippines inventory (PICCS):** All components are listed or exempted.

## 16 . Other information

**Label requirements** : Harmful by inhalation. Irritating to eyes and respiratory system. May cause sensitization by inhalation and skin contact. This product is a respiratory irritant and potential respiratory sensitizer: repeated inhalation of vapour or aerosol at levels above the occupational exposure limit could cause respiratory sensitisation. A hyper-reactive response to even minimal concentrations of diisocyanates may develop in sensitised persons. The onset of the respiratory symptoms may be delayed for several hours after exposure.  
Reacts slowly with water to produce carbon dioxide which may rupture closed containers. This reaction accelerates at higher temperatures.

**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.

## 16 . Other information

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



Date of printing : 8/23/2012.

Date of issue : 8/23/2012.

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 POLYALL EMPLOYEE IS AUTHORIZED TO PROVIDE OR MAKE AVAILABLE DATA SHEETS FOR POLYALL 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 POLYALL. ALL REQUESTS FOR PERMISSION TO REPRODUCE MATERIAL FROM THIS DATA SHEET SHOULD BE DIRECTED TO POLYALL, MANAGER, PRODUCT SAFETY AT THE ABOVE ADDRESS.**