

# SAFETY DATA SHEET

## INSTAPAK® COMPONENT "A"

### Section 1. Identification

**Product identifier** : INSTAPAK® COMPONENT "A"  
**Product code** : Not available.  
**Other means of identification** : Not available.  
**Product type** : Liquid.

#### Relevant identified uses of the substance or mixture and uses advised against

**Product use** : Polymethylene Polyphenylisocyanate (PMDI) mixture for the production of Instapak® polyurethane packaging foam.

**Area of application** : Industrial applications.

**Supplier/Manufacturer** : Sealed Air (Canada) Co./Cie  
95 Glidden Road  
Brampton, Ontario  
L6T 2H8  
  
Telephone no.: (905) 456-0701

**e-mail address of person responsible for this SDS** : EHSinstapak@sealedair.com

**Emergency telephone number (with hours of operation)** : (613) 996-6666 (CANUTEC)

### Section 2. Hazard identification

**Classification of the substance or mixture** : ACUTE TOXICITY (inhalation) - Category 4  
SKIN IRRITATION - Category 2  
EYE IRRITATION - Category 2A  
RESPIRATORY SENSITIZATION - Category 1  
SKIN SENSITIZATION - Category 1  
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3  
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (respiratory tract) - Category 2

#### GHS label elements

**Hazard pictograms** :



**Signal word** : Danger

**Hazard statements** : Harmful if inhaled.  
Causes serious eye irritation.  
Causes skin irritation.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause an allergic skin reaction.  
May cause respiratory irritation.  
May cause damage to organs through prolonged or repeated exposure. (respiratory tract)

#### Precautionary statements

## Section 2. Hazard identification

- Prevention** : Wear protective gloves. Wear eye or face protection.  
Wear respiratory protection.  
Use only outdoors or in a well-ventilated area.  
Do not breathe vapor.  
Wash hands thoroughly after handling.  
Contaminated work clothing should not be allowed out of the workplace.
- Response** : Get medical attention if you feel unwell.  
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER or physician if you feel unwell.  
If experiencing respiratory symptoms: Call a POISON CENTER or physician.  
IF ON SKIN: Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.  
If skin irritation or rash occurs: Get medical attention.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
If eye irritation persists: Get medical attention.
- Storage** : Store locked up.
- Disposal** : Dispose of contents and container in accordance with all local, regional, national and international regulations.
- Supplemental label elements** : Percentage of the mixture consisting of ingredient(s) of unknown oral toxicity: 42%  
Percentage of the mixture consisting of ingredient(s) of unknown inhalation toxicity: 42%
- Other hazards which do not result in classification** : Contact with water in container lead to a dangerous build-up of pressure in container due to the generation of carbon dioxide.

## Section 3. Composition/information on ingredients

- Substance/mixture** : Mixture
- Other means of identification** : Not available.

Ingredient name	% (w/w)	CAS number
Diphenylmethanediisocyanate, isomers and homologues	100	9016-87-9
4,4'-methylenediphenyl diisocyanate (MDI)	42 - 55	101-68-8

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

## Section 4. First-aid measures

### Description of necessary first aid measures

- Eye contact** : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 15 minutes. Get medical attention.
- Inhalation** : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If necessary, call a poison center or physician. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. In the event of any complaints or symptoms, avoid further exposure.

## Section 4. First-aid measures

- Skin contact** : Wash with soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 15 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention following exposure or if feeling unwell. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

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

#### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Harmful if inhaled. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : Low acute oral toxicity. Exposure not probable with intended use.

#### Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
wheezing and breathing difficulties  
asthma
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : No specific data.

### Indication of immediate medical attention and special treatment needed, if necessary

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.
- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

## Section 5. Fire-fighting measures

### Extinguishing media

**Suitable extinguishing media** : In case of fire, use water spray (fog), foam, dry chemical or carbon dioxide (CO<sub>2</sub>).

**Unsuitable extinguishing media** : Do not use water jet.

**Specific hazards arising from the chemical** : In a fire or if heated, a pressure increase will occur and the container may burst.

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

**Special protective actions for fire-fighters** : 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.

## Section 6. Accidental release measures

### Personal precautions, protective equipment and emergency procedures

**For non-emergency personnel** : 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.

**For emergency responders** : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

**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 and materials for containment and cleaning up

**Small spill** : Stop leak if without risk. Move containers from spill area. Dilute with water and mop up if water-soluble. Alternatively, or if water-insoluble, absorb with an inert dry material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.

**Large spill** : 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.

## Section 7. Handling and storage

### Precautions for safe handling

**Protective measures** : Put on appropriate personal protective equipment (see Section 8). 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.

**Advice on general occupational hygiene** : 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. See also Section 8 for additional information on hygiene measures.

**Conditions for safe storage, including any incompatibilities** : Storage temperature: 10 to 38°C (50 to 100.4°F). 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. Store locked up. 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. See Section 10 for incompatible materials before handling or use.

## Section 8. Exposure controls/personal protection

### Control parameters

#### Occupational exposure limits

Ingredient name	Exposure limits
Diphenylmethanediisocyanate, isomers and homologues  4,4'-methylenediphenyl diisocyanate (MDI)	<p><b>CA Alberta Provincial (Canada, 4/2009).</b>            8 hrs OEL: 0.07 mg/m<sup>3</sup> 8 hours.            8 hrs OEL: 0.005 ppm 8 hours.</p> <p><b>CA British Columbia Provincial (Canada, 7/2016).</b>            TWA: 0.005 ppm 8 hours.            C: 0.01 ppm</p> <p><b>CA Ontario Provincial (Canada, 7/2015).</b>            C: 0.02 ppm            TWA: 0.005 ppm 8 hours.</p> <p><b>CA Alberta Provincial (Canada, 4/2009).</b>            8 hrs OEL: 0.005 ppm 8 hours.            8 hrs OEL: 0.05 mg/m<sup>3</sup> 8 hours.</p> <p><b>CA British Columbia Provincial (Canada, 7/2016). Absorbed through skin. Skin sensitizer.</b>            TWA: 0.005 ppm 8 hours.            C: 0.01 ppm</p> <p><b>CA Quebec Provincial (Canada, 1/2014). Skin sensitizer.</b>            TWAEV: 0.005 ppm 8 hours.            TWAEV: 0.051 mg/m<sup>3</sup> 8 hours.</p> <p><b>CA Ontario Provincial (Canada, 7/2015).</b>            TWA: 0.005 ppm 8 hours.</p> <p><b>CA Saskatchewan Provincial (Canada, 7/2013).</b>            STEL: 0.015 ppm 15 minutes.            TWA: 0.005 ppm 8 hours.</p>

## Section 8. Exposure controls/personal protection

- Appropriate engineering controls** : 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.
- 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.
- Individual protection measures**
- 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.
- Eye/face protection** : 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, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.
- Skin protection**
- Hand protection** : 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. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.  
Recommended: nitrile rubber, neoprene rubber or butyl rubber.
- Body protection** : 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.
- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

## Section 9. Physical and chemical properties

### Appearance

- Physical state** : Liquid.
- Color** : Black. Brown.
- Odor** : Slight / Odorless.
- Odor threshold** : Not available.
- pH** : Not available.
- Melting point** : Not available.
- Boiling point** : Not available.
- Flash point** : Open cup: 229°C (444.2°F)
- Evaporation rate** : Not available.
- Flammability (solid, gas)** : Not applicable.
- Lower and upper explosive (flammable) limits** : Not available.
- Vapor pressure** : 0.0000004 kPa (0.000003 mm Hg) [room temperature]



## Section 9. Physical and chemical properties

<b>Vapor density</b>	: Not available.
<b>Relative density</b>	: Not available.
<b>Solubility</b>	: Soluble in the following materials: acetone.
<b>Solubility in water</b>	: Water: Insoluble
<b>Partition coefficient: n-octanol/water</b>	: Not available.
<b>Auto-ignition temperature</b>	: 232°C (449.6°F)
<b>Decomposition temperature</b>	: Not available.
<b>Viscosity</b>	: Kinematic (room temperature): 1.9 cm <sup>2</sup> /s (190 cSt)
<b>Flow time (ISO 2431)</b>	: Not available.

## Section 10. Stability and reactivity

<b>Reactivity</b>	: No specific test data related to reactivity available for this product or its ingredients.
<b>Chemical stability</b>	: Stable under normal conditions of use and storage. Polymerises at about 200°C with evolution of carbon dioxide.
<b>Possibility of hazardous reactions</b>	: 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. PMDI is insoluble with and heavier than water and sinks to the bottom reacting slowly at the interface. A solid water-insoluble layer of polyurea is formed at the interface by liberating CO <sub>2</sub> gas. Under normal conditions of storage and use, hazardous polymerization will not occur.
<b>Conditions to avoid</b>	: Avoid high temperature and moisture.
<b>Incompatible materials</b>	: Reactive or incompatible with the following materials: oxidizing agents, acids, alkalis, moisture, water, alcohols and amines.
<b>Hazardous decomposition products</b>	: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

## Section 11. Toxicological information

### Information on toxicological effects

#### Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Diphenylmethanediisocyanate, isomers and homologues	LC50 Inhalation Dusts and mists	Rat - Male, Female	1.5 mg/l Estimated.	4 hours
	LC50 Inhalation Dusts and mists	Rat - Male, Female	0.31 mg/l	4 hours
	LD50 Dermal	Rabbit - Male, Female	>9400 mg/kg	-
4,4'-methylenediphenyl diisocyanate (MDI)	LD50 Oral	Rat - Male	>10000 mg/kg	-
	LC50 Inhalation Dusts and mists	Rat	0.49 mg/l	4 hours

**Conclusion/Summary** : Not available.

#### Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
4,4'-methylenediphenyl diisocyanate (MDI)	Eyes - Moderate irritant	Rabbit	-	100 milligrams	-

## Section 11. Toxicological information

### Conclusion/Summary

**Skin** : Not available.  
**Eyes** : Not available.  
**Respiratory** : Not available.

### Sensitization

Product/ingredient name	Route of exposure	Species	Result
Diphenylmethanediisocyanate, isomers and homologues	skin	Guinea pig	Not sensitizing
4,4'-methylenediphenyl diisocyanate (MDI)	Respiratory skin	Rat	Sensitizing
	Respiratory	Mouse	Sensitizing
	skin	Guinea pig	Sensitizing
	skin	Guinea pig	Not sensitizing

### Conclusion/Summary

**Skin** : Not available.  
**Respiratory** : Not available.

### Mutagenicity

Product/ingredient name	Test	Experiment	Result
Diphenylmethanediisocyanate, isomers and homologues	OECD 471 Bacterial Reverse Mutation Test	Experiment: In vitro Subject: Bacteria	Negative
	OECD 474 Mammalian Erythrocyte Micronucleus Test	Experiment: In vivo Subject: Mammalian-Animal	Negative
4,4'-methylenediphenyl diisocyanate (MDI)	OECD 474 Mammalian Erythrocyte Micronucleus Test	Subject: Mammalian-Animal	Negative
	EU	Subject: Mammalian-Animal	Negative

**Conclusion/Summary** : Not available.

### Carcinogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Diphenylmethanediisocyanate, isomers and homologues	Positive - Inhalation - TC	Rat - Male, Female	0 to 6 mg/m <sup>3</sup>	2 years; 5 days per week
4,4'-methylenediphenyl diisocyanate (MDI)	Positive - Inhalation - TC	Rat	-	2 years; 5 days per week

**Conclusion/Summary** : Polymeric MDI has been classified as IARC Group 3 ("Not classifiable as to its carcinogenicity to humans") (1999) indicating there is inadequate evidence available to describe the carcinogenic potential. Epidemiological studies found no association between isocyanates and cancer. In chronic exposure studies in rodents, PMDI produced tumors only at the highest exposure level of 6 mg/m<sup>3</sup>. This exposure level is significantly above the TLV for MDI (0.051 mg/m<sup>3</sup>). Based on the weight of the evidence, a determination of not classified for carcinogenicity is justified.

### Reproductive toxicity

**Conclusion/Summary** : Not available.

### Teratogenicity

Product/ingredient name	Result	Species	Dose	Exposure
Diphenylmethanediisocyanate, isomers and homologues	Negative - Inhalation	Rat - Female	0 to 12 mg/m <sup>3</sup>	20 days; 6 hours per day
4,4'-methylenediphenyl diisocyanate (MDI)	Negative - Inhalation	Rat - Male, Female	12 mg/m <sup>3</sup> NOAEL	-

**Conclusion/Summary** : No Teratogenic effects observed at doses tested. Fetotoxicity seen only with maternal toxicity.

### Specific target organ toxicity (single exposure)



## Section 11. Toxicological information

Name	Category	Route of exposure	Target organs
Diphenylmethanediisocyanate, isomers and homologues	Category 3	Not applicable.	Respiratory tract irritation
4,4'-methylenediphenyl diisocyanate (MDI)	Category 3	Not applicable.	Respiratory tract irritation

### Specific target organ toxicity (repeated exposure)

Name	Category	Route of exposure	Target organs
Diphenylmethanediisocyanate, isomers and homologues	Category 2	Skin Inhalation	Not determined Not determined
4,4'-methylenediphenyl diisocyanate (MDI)	Category 2	Inhalation	respiratory tract

### Aspiration hazard

Not available.

**Information on the likely routes of exposure** : Routes of entry anticipated: Oral, Inhalation.  
Routes of entry not anticipated: Dermal.

### Potential acute health effects

- Eye contact** : Causes serious eye irritation.
- Inhalation** : Harmful if inhaled. May cause respiratory irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
- Skin contact** : Causes skin irritation. May cause an allergic skin reaction.
- Ingestion** : Low acute oral toxicity. Exposure not probable with intended use.

### Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:  
pain or irritation  
watering  
redness
- Inhalation** : Adverse symptoms may include the following:  
respiratory tract irritation  
coughing  
wheezing and breathing difficulties  
asthma
- Skin contact** : Adverse symptoms may include the following:  
irritation  
redness
- Ingestion** : No specific data.

### Delayed and immediate effects and also chronic effects from short and long term exposure

#### Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

#### Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

### Potential chronic health effects

Product/ingredient name	Result	Species	Dose	Exposure
Diphenylmethanediisocyanate, isomers and homologues	Sub-acute NOEL Inhalation Dusts and mists	Rat - Male, Female	0.2 mg/m <sup>3</sup>	2 years; 6 hours per day

## Section 11. Toxicological information

<b>Conclusion/Summary</b>	: Not available.
<b>General</b>	: May cause damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.
<b>Carcinogenicity</b>	: No known significant effects or critical hazards.
<b>Mutagenicity</b>	: No known significant effects or critical hazards.
<b>Teratogenicity</b>	: No known significant effects or critical hazards.
<b>Developmental effects</b>	: No known significant effects or critical hazards.
<b>Fertility effects</b>	: No known significant effects or critical hazards.

### Numerical measures of toxicity

#### Acute toxicity estimates

Route	ATE value
Inhalation (dusts and mists)	1.5 mg/l

## Section 12. Ecological information

### Toxicity

Product/ingredient name	Result	Species	Exposure
Diphenylmethanediisocyanate, isomers and homologues	EC50 >100 mg/l	Micro-organism	3 hours
	Acute EC50 >1640 mg/l	Algae	72 hours Static
	Acute EC50 >1000 mg/l Chronic NOEC >10 mg/l	Daphnia - Daphnia magna Daphnia	24 hours 21 days Semi-Static
4,4'-methylenediphenyl diisocyanate (MDI)	Acute EC50 >1000 mg/l	Daphnia	24 hours Static
	Acute EC50 >100 mg/l	Micro-organism	3 hours Static
	Acute LC50 >1000 mg/l	Fish	24 hours Static
	Acute NOEC >10 mg/l	Daphnia	21 days Semi-Static

**Conclusion/Summary** : Not available.

### Persistence and degradability

Product/ingredient name	Test	Result	Dose	Inoculum
Diphenylmethanediisocyanate, isomers and homologues	OECD 302C Inherent Biodegradability: Modified MITI Test (II)	0 % - 28 days	-	-
4,4'-methylenediphenyl diisocyanate (MDI)	OECD 302C Inherent Biodegradability: Modified MITI Test (II)	0 % - 28 days	-	-

**Conclusion/Summary** : Not available.

## Section 12. Ecological information

Product/ingredient name	Aquatic half-life	Photolysis	Biodegradability
Diphenylmethanediisocyanate, isomers and homologues	Fresh water 0.92 days, 25°C	-	Not readily
4,4'-methylenediphenyl diisocyanate (MDI)	-	-	Not readily

### Bioaccumulative potential

Product/ingredient name	LogP <sub>ow</sub>	BCF	Potential
Diphenylmethanediisocyanate, isomers and homologues	-	<14	low
4,4'-methylenediphenyl diisocyanate (MDI)	4.51	200	low

### Mobility in soil

Soil/water partition coefficient (K<sub>oc</sub>) : Not available.

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

## Section 13. Disposal considerations

**Disposal methods** : The generation of waste should be avoided or minimized wherever possible. 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. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. 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.

## Section 14. Transport information

	TDG Classification	DOT Classification	ADR/RID	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.

### Additional information

**DOT Classification** : **Reportable quantity** 11904.8 lbs / 5404.8 kg. Package sizes shipped in quantities less than the product reportable quantity are not subject to the RQ (reportable quantity) transportation requirements.

## Section 14. Transport information

**Special precautions for user** : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

**Transport in bulk according to Annex II of MARPOL and the IBC Code** : Not available.

## Section 15. Regulatory information

### Canadian lists

**Canadian NPRI** : The following components are listed: Polymeric diphenylmethane diisocyanate; Methylenebis(phenylisocyanate)

**CEPA Toxic substances** : None of the components are listed.

**Canada inventory** : All components are listed or exempted.

### International regulations

#### Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

#### Montreal Protocol (Annexes A, B, C, E)

Not listed.

#### Stockholm Convention on Persistent Organic Pollutants

Not listed.

#### Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

#### UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

## Section 16. Other information

### History

**Date of issue/Date of revision** : 27/06/2017

**Date of previous issue** : 12/06/2014

**Version** : 2

**Prepared by** : Sphera Solutions, Inc.

**Key to abbreviations** : ATE = Acute Toxicity Estimate  
BCF = Bioconcentration Factor  
GHS = Globally Harmonized System of Classification and Labelling of Chemicals  
IATA = International Air Transport Association  
IBC = Intermediate Bulk Container  
IMDG = International Maritime Dangerous Goods  
LogPow = logarithm of the octanol/water partition coefficient  
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)  
UN = United Nations  
HPR = Hazardous Products Regulations

### Procedure used to derive the classification

## Section 16. Other information

Classification	Justification
ACUTE TOXICITY (inhalation) - Category 4	Calculation method
SKIN IRRITATION - Category 2	Calculation method
EYE IRRITATION - Category 2A	Calculation method
RESPIRATORY SENSITIZATION - Category 1	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (SINGLE EXPOSURE) (Respiratory tract irritation) - Category 3	Calculation method
SPECIFIC TARGET ORGAN TOXICITY (REPEATED EXPOSURE) (respiratory tract) - Category 2	Calculation method

**References** : HPR = Hazardous Products Regulations

✔ Indicates information that has changed from previously issued version.

### Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.