

# SAFETY DATA SHEET



## 1. Identification

**Covestro LLC**  
**formerly Bayer MaterialScience LLC**  
**1 Covestro Circle**  
**Pittsburgh, PA 15205**  
**USA**

### TRANSPORTATION EMERGENCY

CALL CHEMTREC: (800) 424-9300  
INTERNATIONAL: (703) 527-3887

### NON-TRANSPORTATION

Emergency Phone: Call Chemtrec  
Information Phone: (844) 646-0545

**Product Name:** DESMODUR I  
**Material Number:** 5883997  
**Chemical Family:** Cycloaliphatic Diisocyanate  
**Use:** Raw material for coatings, adhesives, sealants, or elastomers in industrial applications  
**Restrictions on use:** Do-It-Yourself Applications, Medical applications

## 2. Hazards Identification

### GHS Classification

Acute toxicity (Inhalation): Category 1  
Skin corrosion: Category 1  
Serious eye damage: Category 1  
Respiratory sensitisation: Category 1  
Skin sensitisation: Category 1  
Specific target organ toxicity - single exposure: Category 3 (Respiratory system)

### GHS Label Elements

Hazard pictograms:



Signal word: Danger

Hazard statements: Causes severe skin burns and eye damage.  
May cause an allergic skin reaction.  
Fatal if inhaled.  
May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
May cause respiratory irritation.

Precautionary statements:

**Prevention:**

Do not breathe dust, mist, gas, vapors or spray.  
Wash skin and face thoroughly after handling.  
Use only outdoors or in a well-ventilated area.  
Contaminated work clothing must not be allowed out of the workplace.  
Wear permeation resistant protective gloves and clothing. Wear eye and face protection.  
In case of inadequate ventilation wear respiratory protection. The type of respiratory protection selected must comply with the requirements set forth in OSHA's Respiratory Protection Standard (29 CFR 1910.134) or regional standards. For additional details, see section 8 of the SDS.

**Response:**

IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a doctor or emergency medical facility (i.e., 911).  
If skin irritation or rash occurs: Get medical attention.  
If experiencing respiratory symptoms: Call a doctor or emergency medical facility (i.e. 911).  
Wash contaminated clothing before reuse.

**Storage:**

Store locked up.  
Store in a well-ventilated place. Keep container tightly closed.

**Disposal:**

Dispose of contents and container in accordance with existing federal, state, and local environmental control laws.

**3. Composition/Information on Ingredients**

**Hazardous Components**

<u>Weight Percent</u>	<u>Components</u>	<u>CAS-No.</u>	<u>Classification</u>
95 - 100%	Isophorone Diisocyanate(IPDI)	4098-71-9	Acute toxicity Category 1 Inhalation. Skin corrosion Category 1. Serious eye damage Category 1. Respiratory sensitisation Category 1. Skin sensitisation Category 1. Specific target organ toxicity - single exposure Category 3 Respiratory system.

**4. First Aid Measures**

Material Name: DESMODUR I

Material Number: 5883997

**Most Important Symptom(s)/Effect(s)**

**Acute:** Isocyanate vapors or mist at concentrations above the exposure limits or guidelines can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) with symptoms of runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing difficulty). Persons with a preexisting, nonspecific bronchial hyperreactivity can respond to concentrations below the exposure limits or guidelines with similar symptoms as well as asthma attack or asthma-like symptoms. Exposure well above the exposure limits or guidelines may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). Chemical or hypersensitivity pneumonitis, with flu-like symptoms (e.g. fever, chills), has also been reported. These symptoms can be delayed up to several hours after exposure. These effects are usually reversible.

Causes severe skin irritation with symptoms of reddening, itching, and swelling. May cause necrosis and possible scarring. Can cause sensitization. Persons previously sensitized can experience allergic skin reaction with symptoms of reddening, itching, swelling, and rash. Cured material is difficult to remove.

Causes serious eye damage with symptoms of eye burns, corneal injury, and possible blindness. Vapor or aerosol may cause irritation with symptoms of burning and tearing.

May cause irritation of the digestive tract; Symptoms may include abdominal pain, nausea, vomiting, and diarrhea.

**Delayed:** Symptoms affecting the respiratory tract can also occur several hours after overexposure.

**Eye Contact**

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Use lukewarm water if possible. Use fingers to ensure that eyelids are separated and that the eye is being irrigated. Then remove contact lenses, if easily removable, and continue eye irrigation for not less than 15 minutes. Get medical attention.

**Skin Contact**

Immediately remove contaminated clothing and shoes. In case of skin contact, wash affected areas with soap and water. Use lukewarm water if possible. After washing, cover affected skin area with polyethylene glycol (300-500 molecular weight) and wash again immediately with soap and water to thoroughly remove polyethylene glycol and residual isocyanate. Repeat if necessary. Get medical attention immediately. Wash contaminated clothing before reuse. For severe exposures, immediately get under safety shower and begin rinsing.

**Inhalation**

Move to an area free from further exposure. Extreme asthmatic reactions that may occur in sensitized persons can be life threatening. Get medical attention immediately. Administer oxygen or artificial respiration as needed. Asthmatic symptoms may develop and may be immediate or delayed up to several hours.

**Ingestion**

Do NOT induce vomiting. Wash mouth out with water. Do not give anything by mouth to an unconscious person. Get medical attention.

**Notes to Physician**

Eyes: Stain for evidence of corneal injury. If cornea is burned, instill antibiotic/steroid preparation as needed. Workplace vapors could produce reversible corneal epithelial edema impairing vision. Skin: This compound is a skin sensitizer. Treat symptomatically as for contact dermatitis or thermal burn. Ingestion: Treat symptomatically. There is no specific antidote. Inducing vomiting is contraindicated because of the irritating nature of the compound. Inhalation: Treatment is essentially symptomatic. An individual having

a dermal or pulmonary sensitization reaction to this material should be removed from further exposure to any diisocyanate.

## 5. Firefighting Measures

**Suitable Extinguishing Media:** Dry chemical, Carbon dioxide (CO<sub>2</sub>), Foam, water spray for large fires.

**Unsuitable Extinguishing Media:** High volume water jet

### Fire Fighting Procedure

Firefighters should wear NFPA compliant structural firefighting protective equipment, including self-contained breathing apparatus and NFPA compliant helmet, hood, boots and gloves. Avoid contact with product. Decontaminate equipment and protective clothing prior to reuse. During a fire, isocyanate vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. Exposure to heated diisocyanate can be extremely dangerous.

### Hazardous Decomposition Products

By Fire and High Heat: Carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), dense black smoke., Hydrogen cyanide, Isocyanate, Isocyanic Acid, Other undetermined compounds

### Unusual Fire/Explosion Hazards

Closed container may forcibly rupture under extreme heat or when contents are contaminated with water (CO<sub>2</sub> formed). Use cold-water spray to cool fire-exposed containers to minimize the risk of rupture. Large fires can be extinguished with large volumes of water applied from a safe distance, since reaction between water and hot diisocyanate can be vigorous.

## 6. Accidental Release Measures

### Spill and Leak Procedures

Implement site emergency response plan. Evacuate non-emergency personnel. The magnitude of the evacuation depends upon the quantity released, site conditions, and the ambient temperature. Isolate the area and prevent access of unauthorized personnel. Notify management. Call CHEMTREC at 1-800-424-9300 for assistance and advice.

Wear necessary personal protective equipment (PPE) as specified in the SDS or the site emergency response plan. Ventilate and remove ignition sources. Control the source of the leak. Contain the released material by damming, diking, retaining, or diverting into an appropriate containment area. Absorb or pump off as much of the spilled material as possible. When using absorbent, completely cover the spill area with suitable absorbent material (e.g., vermiculite, kitty litter, Oil-Dri®, etc.). Allow for the absorbent material to absorb the spilled liquid. Shovel the absorbent material into an approved metal container (i.e., 55-gallon salvage drum). Do not fill the container more than 2/3 full to allow for expansion, and do not tighten the lid on the container. Repeat application of absorbent material until all liquid has been removed from the surface.

Decontaminate the spill surface area using a neutralization solution (see list of solutions on the SDS); scrubbing the surface with a broom or brush helps the decontamination solution to penetrate into porous surfaces. Wait at least 15 minutes after first application of the neutralization solution. Cover the area with absorbent material and shovel this into an approved metal container. Check for residual surface contamination using Swype® test kits, available from Colorimetric Laboratories, Inc. (CLI) at 847-803-3737. If the Swype® test pad demonstrates that isocyanate remains on the surface (red color on pad), repeat applications of neutralization solution, with scrubbing, followed by absorbent until the surface is decontaminated (no color change on Swype® pad). Apply lid loosely to metal waste container (do not

tighten the lid because carbon dioxide gas and heat can be generated from the neutralization process). With the lid still loosely in place, move the container to an isolated, well-ventilated area to allow release of carbon dioxide. After 72 hours, seal the container, and properly dispose of the waste material and any contaminated equipment (i.e., broom or brush) in accordance with existing federal, state and local regulations.

#### **Additional Spill Procedures/Neutralization**

Products or product mixtures that have been shown to be effective neutralization solutions for decontaminating surfaces, tools, or equipment that have been in contact with an isocyanate includes:

Products available through industrial suppliers:

- Spartan Chemical Company: 1-800-537-8990:
  - o Spartan® ShineLine Emulsifier Plus
  - o Spartan® SC-200 Heavy Duty Cleaner
- Colorimetric Laboratories, Inc. (CLI): 1-847-803-3737
  - o Isocyanate Decontamination Solution
- Mix equal amounts of the following:
  - o Mineral spirits (80%), VM&P Naphtha (15%), and household detergent (5%), and
  - o A 50-50 mixture of monoethanolamine and water

In a separate container, blend the two solutions in a 1:1 ratio by volume. Immediately prior to applying this blended neutralization solution onto the contaminated surface area, mix or agitate the container to help ensure uniform mixing of the ingredients.

If the above products are not available, the following products can be obtained through retail outlets:

- ZEP® Commercial Heavy-Duty Floor Stripper
- Greased Lightning® Super Strength Cleaner and Degreaser
- EASY OFF® Grill and Oven Cleaner or EASY OFF® Fume Free Oven Cleaner
- A mixture of 50% Simple Green® Pro HD Heavy-Duty Cleaner and 50% household ammonia
- A mixture of 90% Fantastic® Heavy Duty All Purpose Cleaner and 10% household ammonia.

Note: Always wear proper PPE when cleaning up an isocyanate spill and using a neutralization solution. It may take two or more applications of the neutralization solution to decontaminate the surface. Check for residual surface contamination using a surface wipe method such as the CLI Swype® pad.

## **7. Handling and Storage**

### **Handling/Storage Precautions**

Do not breathe vapors, mists, or dusts. Use adequate ventilation to keep airborne isocyanate levels below the exposure limits. Wear respiratory protection if material is heated, sprayed, used in a confined space, or if the exposure limit is exceeded. Warning properties (irritation of the eyes, nose and throat or odor) are not adequate to prevent overexposure from inhalation. This material can produce asthmatic sensitization upon either single inhalation exposure to a relatively high concentration or upon repeated inhalation exposures to lower concentrations. Individuals with lung or breathing problems or prior allergic reactions to isocyanates must not be exposed to vapor or spray mist. Avoid contact with skin and eyes. Wear appropriate eye and skin protection. Wash thoroughly after handling. Do not breathe smoke and gases created by overheating or burning this material. Decomposition products can be highly toxic and irritating. Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected.

**Storage Period:**

12 Months: after receipt of material by customer

**Storage Temperature**

**Minimum:** -20 °C (-4 °F)

**Maximum:** 50 °C (122 °F)

**Storage Conditions**

Employee education and training in the safe use and handling of this product are required under the OSHA Hazard Communication Standard 29 CFR 1910.1200.

**Substances to Avoid**

Water, Amines, Strong bases, Alcohols, Copper alloys

**8. Exposure Controls/Personal Protection****Isophorone Diisocyanate(IPDI) (4098-71-9)**

US. ACGIH Threshold Limit Values

Time Weighted Average (TWA): 0.005 ppm

Any component which is listed in section 3 and is not listed in this section does not have a known ACGIH TLV, OSHA PEL or supplier recommended occupational exposure limit.

**Industrial Hygiene/Ventilation Measures**

Local exhaust should be used to maintain levels below the TLV whenever this diisocyanate is heated, sprayed, or aerosolized. Standard reference sources regarding industrial ventilation (e.g., ACGIH Industrial Ventilation Manual) should be consulted for guidance about adequate ventilation. To ensure that published exposure limits have not been exceeded, monitoring for airborne diisocyanate should become part of the overall employee exposure characterization program. NIOSH, OSHA, Covestro, and others have developed sampling and analytical methods. Covestro methods can be made available, upon request.

**Respiratory Protection**

Airborne IPDI concentrations greater than the appropriate standard/guideline can occur in inadequately ventilated environments when IPDI is sprayed, aerosolized, or heated. In such cases, respiratory protection must be worn. The type of respiratory protection selected must comply with the requirements set forth in OSHA's Respiratory Protection Standard (29 CFR 1910.134). The type of respiratory protection available includes (1) an atmosphere-supplying respirator such as a self-contained breathing apparatus (SCBA) or a supplied air respirator (SAR) in the positive pressure or continuous flow mode, or (2) an air-purifying respirator (APR). If an APR is selected, the following conditions must be met: (1) (a) the cartridge must be equipped with an end-of-service life indicator (ESLI) certified by NIOSH, or (1) (b) a change out schedule, based on objective information or data that will ensure that the cartridges are changed out before the end of their service life, must be developed and implemented. The basis for the change out schedule must be described in the written respirator program, and (2) the airborne IPDI concentration must be no greater than 10 times the appropriate standard/guideline. The recommended APR cartridge is an organic vapor/particulate filter combination cartridge (OV/P100).

**Hand Protection**

Gloves should be worn., Nitrile rubber gloves., Butyl rubber gloves., Neoprene gloves

**Eye Protection**

When directly handling liquid product, eye protection is required. Examples of eye protection include a chemical safety goggle, or chemical safety goggle in combination with a full face shield when there is a greater risk of splash.

### Skin Protection

Any area of skin that could potentially come in contact with this diisocyanate, or a formulation containing this diisocyanate, must be covered by a permeation resistant barrier (e.g., butyl or nitrile rubber gloves, neoprene apron, chemical suit, etc.). When there is potential for a major splash directly onto the skin, such as when breaking into lines, a full chemical suit is required. When the application results in airborne vapor or mist, a full permeation resistant suit, including head covering, faceshield, gloves and overshoes, is required. Animal tests and other research indicate that skin contact with diisocyanates can play a role in causing isocyanate sensitization and respiratory reaction. This data reinforces the need to prevent direct skin contact with isocyanates.

### Medical Surveillance

All applicants who are assigned to an isocyanate work area should undergo a pre-placement medical evaluation. A history of eczema or respiratory allergies such as hay fever, are possible reasons for medical exclusion from isocyanate areas. Applicants who have a history of adult asthma should be restricted from work with isocyanates. Applicants with a history of prior isocyanate sensitization should be excluded from further work with isocyanates. A comprehensive annual medical surveillance program should be instituted for all employees who are potentially exposed to diisocyanates. Once a worker has been diagnosed as sensitized to any isocyanate, no further exposure can be permitted. Refer to the Covestro pamphlet (Medical Surveillance Program for Isocyanate Workers) for additional guidance.

### Additional Protective Measures

Emergency showers and eye wash stations should be available. Educate and train employees in the safe use and handling of this product. Follow all label instructions.

## 9. Physical and Chemical Properties

<b>State of Matter:</b>	liquid
<b>Color:</b>	Clear
<b>Odor:</b>	pungent
<b>Odor Threshold:</b>	No Data Available
<b>pH:</b>	No Data Available
<b>Boiling Point:</b>	ca. 310 °C (590 °F) @ 1,013 hPa
<b>Flash Point:</b>	ca. 150 °C (302 °F) @ 1,013 hPa (EG A9)
<b>Evaporation Rate:</b>	No Data Available
<b>Lower Explosion Limit:</b>	No Data Available
<b>Upper Explosion Limit:</b>	No Data Available
<b>Vapor Pressure:</b>	0.00048 mmHg @ 20 °C (68 °F)
<b>Vapor Density:</b>	No Data Available
<b>Density:</b>	ca. 1.06 g/cm <sup>3</sup> @ 20 °C (68 °F) (DIN EN ISO 2811)
<b>Relative Vapor Density:</b>	No Data Available
<b>Specific Gravity:</b>	1.06 @ 20 °C (68 °F)
<b>Solubility in Water:</b>	No Data Available
<b>Partition Coefficient: n-octanol/water:</b>	logPow: ca. 4.75 @ 20 °C (68 °F) (value calculated)
<b>Auto-ignition Temperature:</b>	ca. 430 °C (806 °F) (DIN 51794)
<b>Decomposition Temperature:</b>	Polymerises at about 260 °C with evolution of CO <sub>2</sub> .
<b>Dynamic Viscosity:</b>	ca. 10 mPa.s @ 25 °C (77 °F) (DIN EN ISO 3219/A.3)
<b>Kinematic Viscosity:</b>	No Data Available
<b>Bulk Density:</b>	1,059.27 kg/m <sup>3</sup>
<b>Molecular Weight:</b>	222.32
<b>Self Ignition:</b>	not applicable

## 10. Stability and Reactivity

### Hazardous Reactions

Contact with moisture, other materials that react with isocyanates, or temperatures above 350 F (177 C), may cause polymerization

### Stability

Stable under normal conditions of use and storage.

### Materials to Avoid

Water, Amines, Strong bases, Alcohols, Copper alloys

### Hazardous Decomposition Products

By Fire and High Heat: Carbon dioxide (CO<sub>2</sub>), carbon monoxide (CO), oxides of nitrogen (NO<sub>x</sub>), dense black smoke., Hydrogen cyanide, Isocyanate, Isocyanic Acid, Other undetermined compounds

## 11. Toxicological Information

**Likely Routes of Exposure:** Skin Contact  
Inhalation  
Eye Contact

### Health Effects and Symptoms

**Acute:** Isocyanate vapors or mist at concentrations above the exposure limits or guidelines can irritate (burning sensation) the mucous membranes in the respiratory tract (nose, throat, lungs) with symptoms of runny nose, sore throat, coughing, chest discomfort, shortness of breath and reduced lung function (breathing difficulty). Persons with a preexisting, nonspecific bronchial hyperreactivity can respond to concentrations below the exposure limits or guidelines with similar symptoms as well as asthma attack or asthma-like symptoms. Exposure well above the exposure limits or guidelines may lead to bronchitis, bronchial spasm and pulmonary edema (fluid in lungs). Chemical or hypersensitivity pneumonitis, with flu-like symptoms (e.g. fever, chills), has also been reported. These symptoms can be delayed up to several hours after exposure. These effects are usually reversible.

Causes severe skin irritation with symptoms of reddening, itching, and swelling. May cause necrosis and possible scarring. Can cause sensitization. Persons previously sensitized can experience allergic skin reaction with symptoms of reddening, itching, swelling, and rash. Cured material is difficult to remove.

Causes serious eye damage with symptoms of eye burns, corneal injury, and possible blindness. Vapor or aerosol may cause irritation with symptoms of burning and tearing.

May cause irritation of the digestive tract; Symptoms may include abdominal pain, nausea, vomiting, and diarrhea.

**Chronic:** As a result of previous repeated overexposures or a single large dose, certain individuals may develop sensitization to isocyanates (asthma or asthma-like symptoms) that may cause them to react to a later exposure to isocyanates at levels well below the exposure limits or guidelines. These symptoms, which can include chest tightness, wheezing, cough, shortness of breath or asthmatic attack, could be immediate or delayed up to several hours after exposure. Extreme asthmatic reactions can be life threatening. Similar to many non-specific asthmatic responses, there are reports that once sensitized an individual can experience these symptoms upon exposure to dust, cold air, or other irritants. This



increased lung sensitivity can persist for weeks and in severe cases for several years. Sensitization can be permanent.

Prolonged contact with skin can cause reddening, swelling, rash, and, in some cases, skin sensitization. Animal tests and other research indicate that skin contact with isocyanates can play a role in causing isocyanate sensitization and respiratory reaction. This data reinforces the need to prevent direct skin contact with isocyanates.

Prolonged vapor contact with the eyes may cause conjunctivitis.

**Delayed:** Symptoms affecting the respiratory tract can also occur several hours after overexposure.

### **Toxicity Data for: DESMODUR I**

Data is based on the product.

#### **Toxicity Data for Isophorone Diisocyanate(IPDI)**

##### **Acute Oral Toxicity**

LD50: 4814 mg/kg (rat, male/female)

##### **Acute Inhalation Toxicity**

LC50: 0.031 mg/l, 4 h, dust/mist(rat, male/female) (OECD Test Guideline 403)

RD50: 3 mg/m<sup>3</sup> air, (Mouse, male)

##### **Acute Dermal Toxicity**

LD50: > 7000 mg/kg (rat, male/female) (OECD Test Guideline 402)

##### **Skin Irritation**

rabbit, OECD Test Guideline 404, Corrosive

##### **Eye Irritation**

rabbit, severe irritant

##### **Sensitization**

dermal: sensitizer (Guinea pig, Maximisation Test (GPMT))

inhalation: sensitizer (Other method)

##### **Repeated Dose Toxicity**

13 w, Inhalative: NOAEL: 0.27, LOAEL: 1.1 mg/m<sup>3</sup>, (rat, male/female, 6 hours a day, 5 days a week)  
Evidence of damage to organs other than the organs of respiration was not found.

4 w, Inhalative: NOAEL: 0.24, LOAEL: 1.05 mg/m<sup>3</sup>, (rat, male/female, 6 hours a day, 5 days a week)

##### **Mutagenicity**

Genetic Toxicity in Vitro:

Salmonella/microsome test (Ames test): No indication of mutagenic effects. (Metabolic Activation: with/without)

In vitro mammalian cell gene mutation test: negative (Chinese hamster ovary cells, Metabolic Activation: with/without)

Chromosome aberration test in vitro: positive (Chinese hamster ovary cells, Metabolic Activation: with/without)

Genetic Toxicity in Vivo:  
Micronucleus test: negative (Mouse, male, Inhalative)  
negative

**Developmental Toxicity/Teratogenicity**

rat, female, Inhalative, 6 hours/day (Exposure duration: day 6 - 19 of gestation), NOAEL (teratogenicity): 4.0 mg/m<sup>3</sup>, NOAEL (maternal): 1.0 mg/m<sup>3</sup> Did not show teratogenic effects in animal experiments.

**Carcinogenicity:**

No carcinogenic substances as defined by IARC, NTP and/or OSHA

**12. Ecological Information**

**Ecological Data for: DESMODUR I**

Data is based on the product.

**Ecological Data for Isophorone Diisocyanate(IPDI)**

**Biodegradation**

aerobic, 0 %, Exposure time: 28 d, i.e. not readily degradable

**Bioaccumulation**

Studies of hydrolysis products. Due to the low n-octanol-water partition coefficient, an accumulation in organisms is not to be expected.

**Acute and Prolonged Toxicity to Fish**

LC50: > 72 mg/l (Danio rerio (zebra fish), 96 h)

LC50: > 208 mg/l (Cyprinus carpio (Carp), 96 h)

**Acute Toxicity to Aquatic Invertebrates**

EC50: 27 mg/l (Daphnia magna (Water flea), 48 h)

**Toxicity to Aquatic Plants**

ErC50: > 70 mg/l, (Desmodosmus subspicatus (Green algae), 72 h)

**Toxicity to Microorganisms**

EC10: 554 mg/l, (Pseudomonas putida, 6 h)

EC50: 263 mg/l, (activated sludge, 3 h)

**13. Disposal Considerations**

**Waste Disposal Method**

Waste disposal should be in accordance with existing federal, state and local environmental control laws. Incineration is the preferred method.

**Empty Container Precautions**

Empty containers retain product residue; observe all precautions for product. Do not heat or cut empty container with electric or gas torch because highly toxic vapors and gases are formed. Do not reuse without thorough commercial cleaning and reconditioning. If container is to be disposed, ensure all product residues are removed prior to disposal.

## 14. Transportation Information

### Land transport (DOT)

**Proper Shipping Name:** Isophorone diisocyanate  
**Hazard Class or Division:** 6.1  
**UN/NA Number:** UN2290  
**Packaging Group:** III  
**Hazard Label(s):** Toxic

### Sea transport (IMDG)

**Proper Shipping Name:** ISOPHORONE DIISOCYANATE  
**Hazard Class or Division:** 6.1  
**UN number:** UN2290  
**Packaging Group:** III  
**Hazard Label(s):** TOXIC  
**Marine pollutant:** Not a Marine Pollutant

### Air transport (ICAO/IATA)

**Proper Shipping Name:** Isophorone diisocyanate  
**Hazard Class or Division:** 6.1  
**UN number:** UN2290  
**Packaging Group:** III  
**Hazard Label(s):** TOXIC  
**Marine pollutant:** Not a Marine Pollutant

## 15. Regulatory Information

### United States Federal Regulations

**US. Toxic Substances Control Act:** Listed on the TSCA Inventory.

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

**US. EPA CERCLA Hazardous Substances (40 CFR 302) Components:**  
None

**SARA Section 311/312 Hazard Categories:**  
Acute Health Hazard

**US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 302 Extremely Hazardous Substance (40 CFR 355, Appendix A) Components:**  
Isophorone Diisocyanate(IPDI)

**US. EPA Emergency Planning and Community Right-To-Know Act (EPCRA) SARA Title III Section 313 Toxic Chemicals (40 CFR 372.65) - Supplier Notification Required Components:**  
Isophorone Diisocyanate(IPDI)

**US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261):**  
Under RCRA, it is the responsibility of the person who generates a solid waste, as defined in 40 CFR 261.2, to determine if that waste is a hazardous waste.

### State Right-To-Know Information

The following chemicals are specifically listed by individual states; other product specific health and safety data in other sections of the SDS may also be applicable for state requirements. For details on your regulatory requirements you should contact the appropriate agency in your state.

**Massachusetts, New Jersey or Pennsylvania Right to Know Substance Lists:**

<u>Weight percent</u>	<u>Components</u>	<u>CAS-No.</u>
>=95%	Isophorone Diisocyanate(IPDI)	4098-71-9

**New Jersey Environmental Hazardous Substances List and/or New Jersey RTK Special Hazardous Substances Lists:**

<u>Weight percent</u>	<u>Components</u>	<u>CAS-No.</u>
>=95%	Isophorone Diisocyanate(IPDI)	4098-71-9

**Massachusetts Right to Know Extraordinarily Hazardous Substance List:**

<u>Weight percent</u>	<u>Components</u>	<u>CAS-No.</u>
>=95%	Isophorone Diisocyanate(IPDI)	4098-71-9

**California Prop. 65:**

To the best of our knowledge, this product does not contain any of the listed chemicals, which the state of California has found to cause cancer, birth defects or other reproductive harm.

Based on information provided by our suppliers, this product is considered "DRC Conflict Free" as defined by the SEC Conflict Minerals Final Rule (Release No. 34-67716; File No. S7-40-10; Date: 2012-08-22).

## 16. Other Information

The method of hazard communication for Covestro LLC is comprised of Product Labels and Safety Data Sheets.

The handling of products containing reactive IPDI polyisocyanate/prepolymer and/or monomeric IPDI requires appropriate protective measures referred to in this SDS. These products are therefore recommended only for use in industrial or trade (commercial) applications. They are not suitable for use in Do-It-Yourself applications.

Contact:	Product Safety Department
Telephone:	(412) 413-2835
SDS Number:	112000013772
Version Date:	11/03/2015
SDS Version:	2.2

This information is furnished without warranty, express or implied. This information is believed to be accurate to the best knowledge of Covestro LLC. The information in this SDS relates only to the specific material designated herein. Covestro LLC assumes no legal responsibility for use of or reliance upon the information in this SDS.

|| Changes since the last version are highlighted in the margin. This version replaces all previous versions.