

# MATERIAL SAFETY DATA SHEET



Bayer MaterialScience

**Bayer MaterialScience LLC**  
Product Safety & Regulatory Affairs  
100 Bayer Road  
Pittsburgh, PA 15205-9741  
USA

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

**NON-TRANSPORTATION**  
Bayer Emergency Phone: (412) 923-1800  
Bayer Information Phone: (800) 662-2927

## 1. Product and Company Identification

**Product Name:** DESMODUR Z 4470 BA  
**Material Number:** 2466957  
**Chemical Family:** Cyclo Aliphatic Polyisocyanate in Organic Solvent  
**Chemical Name:** Isophorone Diisocyanate Based Polyisocyanate in Organic Solvent  
**Synonyms:** Polymeric Isophorone Diisocyanate in Organic Solvent

## 2. Hazards Identification

### Emergency Overview

**WARNING! Color:** Pale yellow **Form:** Liquid **Odor:** Solvent.  
Flammable. Toxic gases/fumes may be given off during burning or thermal decomposition. Closed container may forcibly rupture under extreme heat or when contents have been contaminated with water. Use cold water spray to cool fire-exposed containers to minimize the risk of rupture. Vapors or mist may be a fire and explosion hazard when exposed to high temperature or ignition. Vapors may travel to areas away from work site before igniting/flashing back to vapor source. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling solvents may be harmful or fatal. Causes respiratory tract irritation. May cause allergic respiratory reaction. Harmful if inhaled. Respiratory sensitizer. Lung damage and respiratory sensitization may be permanent. Causes skin irritation. May cause allergic skin reaction. Skin sensitizer. Causes eye irritation. May cause lung damage.

### Potential Health Effects

**Primary Routes of Entry:** Inhalation, Skin Contact, Eye Contact  
**Medical Conditions Aggravated by Exposure:** Skin Allergies, Eczema, Asthma, Respiratory disorders

### HUMAN EFFECTS AND SYMPTOMS OF OVEREXPOSURE

Inhalation  
Acute Inhalation

Material Name: DESMODUR Z 4470 BA Article Number: 2466957

**For Product: DESMODUR Z 4470 BA**

Diisocyanate or polyisocyanate 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. Inhalation of the solvents may cause central nervous system depression with symptoms of nausea, lightheadedness, drowsiness, dizziness and loss of co-ordination.

**For Component: n-Butyl Acetate**

Causes respiratory tract irritation with symptoms of coughing, sore throat and runny nose. May cause nervous system effects which can include symptoms of dizziness, incoordination, headache, numbness, and/or confusion.

**Chronic Inhalation**

**For Product: DESMODUR Z 4470 BA**

As a result of previous repeated overexposures or a single large dose, certain individuals may develop sensitization to diisocyanates or polyisocyanates (asthma or asthma-like symptoms) that may cause them to react to a later exposure to diisocyanates or polyisocyanates 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 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. Chronic overexposure to diisocyanates has also been reported to cause lung damage (including fibrosis, decrease in lung function) that may be permanent. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling solvents may be harmful or fatal.

**For Component: n-Butyl Acetate**

Chronic exposure to organic solvents has been associated with various neurotoxic effects including permanent brain and nervous system damage.

**Skin**

**Acute Skin**

**For Product: DESMODUR Z 4470 BA**

Causes irritation with symptoms of reddening, itching, and swelling. Persons previously sensitized can experience allergic skin reaction with symptoms of reddening, itching, swelling, and rash. Cured material is difficult to remove.

**For Component: n-Butyl Acetate**

May cause irritation with symptoms of reddening and itching. If sufficient amounts are absorbed, systemic toxicity may occur with symptoms similar to those described in acute inhalation.

**Chronic Skin**

**For Product: DESMODUR Z 4470 BA**

Prolonged contact can cause reddening, swelling, rash, and, in some cases, skin sensitization.

**For Component: n-Butyl Acetate**

May cause defatting of the skin with symptoms of dryness and cracking.

**Eye**

**Acute Eye**

**For Product: DESMODUR Z 4470 BA**

Causes irritation with symptoms of reddening, tearing, stinging, and swelling. May cause temporary corneal injury. Vapor may cause irritation with symptoms of burning and tearing.

**For Component: n-Butyl Acetate**

Causes irritation with symptoms of reddening, tearing, stinging, and swelling.

**Chronic Eye**

**For Product: DESMODUR Z 4470 BA**

Prolonged vapor contact may cause conjunctivitis.

**For Component: n-Butyl Acetate**

Prolonged vapor contact may cause conjunctivitis.

**Ingestion**

**Acute Ingestion**

**For Product: DESMODUR Z 4470 BA**

May cause irritation; Symptoms may include abdominal pain, nausea, vomiting, and diarrhea.

**For Component: n-Butyl Acetate**

Symptoms of ingestion may include abdominal pain, nausea, vomiting, and diarrhea. Ingestion and/or vomiting may cause aspiration into the lungs resulting in chemical pneumonitis (inflammation of the lungs). May cause nervous system effects which can include symptoms of dizziness, incoordination, headache, numbness, and/or confusion.

**Chronic Ingestion**

**For Product: DESMODUR Z 4470 BA**

Chronic exposure to organic solvents has been associated with various neurotoxic effects including permanent brain and nervous system damage.

**For Component: n-Butyl Acetate**

Chronic exposure to organic solvents has been associated with various neurotoxic effects including permanent brain and nervous system damage.

**Carcinogenicity:**

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

**3. Composition/Information on Ingredients**

**Hazardous Components**

Residual diisocyanate monomer content:, < 0.50%

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
60 - 100%	Isophorone Diisocyanate	53880-05-0
	Homopolymer	
25 - 35%	n-Butyl Acetate	123-86-4
<=0.5%	Isophorone Diisocyanate(IPDI)	4098-71-9

**4. First Aid Measures**

**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

Material Name: DESMODUR Z 4470 BA	Article Number: 2466957
-----------------------------------	-------------------------

contact lenses, if easily removable, and continue eye irrigation for not less than 15 minutes. Get medical attention if irritation develops.

#### **Skin Contact**

Immediately remove contaminated clothing and shoes. Wash off with soap and water. Use lukewarm water if possible. Wash contaminated clothing before reuse. For severe exposures, immediately get under safety shower and begin rinsing. Call a physician if irritation develops or persists.

#### **Inhalation**

Move to an area free from further exposure. 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. Extreme asthmatic reactions can be life threatening.

#### **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. Fire-Fighting Measures**

**Suitable Extinguishing Media:** dry chemical, carbon dioxide (CO<sub>2</sub>), foam, water spray for large fires.

#### **Special Fire Fighting Procedures**

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.

#### **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. Flammable Liquid. Vapors may spread long distances and ignite. Vapors or mist may be a fire and explosion hazard when exposed to high temperature or ignition.

### **6. Accidental release measures**

#### **Spill and Leak Procedures**

Evacuate non-emergency personnel. Isolate the area and prevent access. Remove ignition sources. Notify management. Put on protective equipment. Control source of the leak. Ventilate. Contain the spill to prevent spread into drains, sewers, water supplies, or soil. Call Bayer at 412-923-1800 for assistance and advice. Major Spill or Leak (Standing liquid): To minimize vapor, cover the spillage with fire fighting foam (AFFF). Released material may be pumped into closed, but not sealed, metal container for disposal. Process can generate heat. Minor Spill or Leak (Wet surface): Cover spill area with suitable absorbent

material (Kitty Litter, Oil-Dri®, etc). Saturate absorbent material with neutralization solution and mix. Wait 15 minutes. Collect material in open-head metal containers. Repeat applications of decontamination solution, with scrubbing, followed by absorbent until the surface is decontaminated. Check for residual surface contamination. Swype® test kits have been used for this purpose. Apply lid loosely and allow containers to vent for 72 hours to let carbon dioxide (CO<sub>2</sub>) escape.

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

Neutralization solutions:

- (1) Colorimetric Laboratories Inc. (CLI) decontamination solution.
- (2) A mixture of 75% water, 20% non-ionic surfactant (e.g. Poly-Tergent SL-62, Tergitol TMN-10) and 5% n-propanol.
- (3) A mixture of 80% water, 20% non-ionic surfactant (e.g. Poly-Tergent SL-62, Tergitol TMN-10).
- (4) A mixture of 90% water, 3-8% ammonium hydroxide or concentrated ammonia, and 2% liquid detergent.

Bayer requires that CHEMTREC be immediately notified (800-424-9300) when this product is unintentionally released from its container during its course of distribution, regardless of the amount released. Distribution includes transportation, storage incidental to transportation, loading and unloading. Such notification must be immediate and made by the person having knowledge of the release.

### **7. Handling and Storage**

#### **Storage Temperature:**

**minimum:** 0 °C (32 °F)  
**maximum:** 40 °C (104 °F)

#### **Storage Period**

6 Months @ 25 °C (77 °F)

#### **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. Ground and bond containers and equipment before transferring to avoid static sparks.

#### **Further Info on Storage Conditions**

Avoid contact with moisture/water. Avoid extreme heat.

### **8. Exposure Controls / Personal Protection**

#### **n-Butyl Acetate (123-86-4)**

US. ACGIH Threshold Limit Values  
Time Weighted Average (TWA): 150 ppm  
US. ACGIH Threshold Limit Values  
Short Term Exposure Limit (STEL): 200 ppm

Material Name: DESMODUR Z 4470 BA

Article Number: 2466957

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)  
PEL: 150 ppm, 710 mg/m<sup>3</sup>

**Isophorone Diisocyanate(IPDI) (4098-71-9)**

US. ACGIH Threshold Limit Values

Time Weighted Average (TWA): 0.005 ppm

**Industrial Hygiene/Ventilation Measures**

Good industrial hygiene practice dictates that worker protection should be achieved through engineering controls, such as ventilation, whenever feasible. When such controls are not feasible to achieve full protection, the use of respirators and other personal protective equipment is mandated. Exhaust air may need to be cleaned by scrubbers or filters to reduce environmental contamination. Curing ovens must be ventilated to prevent emissions into the workplace. If oven off-gases are not vented properly (i.e. they are released into the work area), it is possible to be exposed to airborne monomeric diisocyanate.

**Respiratory Protection**

At normal room temperatures airborne diisocyanate and solvent concentrations can exceed the ACGIH TLV-TWA; therefore, in inadequately ventilated environments and spray applications 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 then (a) the cartridge must be equipped with an end-of-service life indicator (ESLI) certified by NIOSH, or (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. Further, if an APR is selected, the airborne diisocyanate concentration must be no greater than 10 times the TLV or PEL. An organic vapor (OV) cartridge is recommended for APR use in non-spray situations. For spray applications, a combination particulate/organic vapor (P95/OV) cartridge is recommended. If polyisocyanate concentrations exceed 10 mg/m<sup>3</sup>, an SAR is recommended.

**Hand Protection**

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

**Eye Protection**

When handling liquid product, chemical goggles should be worn., Chemical safety goggles in combination with a full face shield if a splash hazard exists.

**Skin and body protection**

Cover as much of the exposed skin area as possible with appropriate clothing., Gloves, long sleeved shirts and pants.

**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 Bayer 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>Form:</b>	Liquid
<b>Color:</b>	Pale yellow
<b>Odor:</b>	Solvent
<b>Freezing Point:</b>	Not Established
<b>Boiling Point/Range:</b>	Begins at 127 °C (260.6 °F)
<b>Flash Point:</b>	Approximately 34 °C (93.2 °F)
<b>Lower Explosion Limit:</b>	1.2 %(V) for the solvent
<b>Upper Explosion Limit:</b>	7.5 %(V) for the solvent
<b>Vapor Pressure:</b>	Approximately 12 hPa @ 20 °C (68 °F) for the solvent
<b>Specific Gravity:</b>	Approximately 1.06 @ 20 °C (68 °F)
<b>Solubility in Water:</b>	Insoluble
<b>Autoignition Temperature:</b>	Approximately 370 °C (698 °F)
<b>VOC Content:</b>	Approximately 25 - 35 % Estimated based on component(s)
<b>Viscosity, Dynamic:</b>	Approximately 600 mPa.s @ 23 °C (73.4 °F)
<b>Bulk Density:</b>	Approximately 8.846 lb/gal

## 10. Stability and Reactivity

### Stability

Stable under normal conditions of use and storage.

### Materials to avoid

Water, Amines, Strong bases, Alcohols, copper alloys

### Conditions to avoid

Heat, flames and sparks.

### 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

### Toxicity Data for DESMODUR Z 4470 BA

#### Toxicity Note

Toxicity data is based on a similar product.

#### Acute Oral Toxicity

LD50: 5,000 mg/kg (Rat)

#### Skin Irritation

rabbit, Exposure Time: 24 h, Non-irritating

#### Eye Irritation

rabbit, Slightly irritating

#### Sensitization

inhalation: non-sensitizer (guinea pig)

### Toxicity Data for n-Butyl Acetate

#### Acute Oral Toxicity

LD50: > 5,000 mg/kg (Rat, Female)

**Acute Inhalation Toxicity**

LC50: > 29.2 mg/l, vapor, 4 hrs (Rat)

LC50: > 23.4 mg/l, aerosol, 4 hrs (Rat)

**Acute dermal toxicity**

LD50: > 5,000 mg/kg (rabbit, male)

**Skin Irritation**

Guinea pig, Acute Dermal Irritation, Exposure Time: 24 hrs, Non-irritating

Human, Patch Test, Exposure Time: 48 hrs, Non-irritating

**Eye Irritation**

rabbit, Draize, Exposure Time: 24 hrs, Non-irritating

rabbit, Draize, Exposure Time: 24 hrs, Slightly irritating

**Sensitization**

dermal: non-sensitizer (Guinea pig, Maximization Test)

dermal: non-sensitizer (Human, Magnusson/Kligmann (Maximization Test))

**Repeated Dose Toxicity**

13 Weeks, inhalation: NOAEL: 500 ppm, (Rat, )

**Mutagenicity**

Genetic Toxicity in Vitro:

Ames: negative (Salmonella typhimurium, Metabolic Activation: with/without)

Cytogenetic assay: negative (other mammalian cell line, Metabolic Activation: without)

**Developmental Toxicity/Teratogenicity**

Rat, Female, inhalation, gestation days 1-16, 7 hrs/day, NOAEL (teratogenicity): 1,500 ppm,

Teratogenic effects seen only with maternal toxicity.

rabbit, female, inhalation, gestation days 1-19, 7 hrs/day, NOAEL (teratogenicity): 1500 ppm,

No Teratogenic effects observed at doses tested.

**12. Ecological Information**

**Ecological Data for n-Butyl Acetate**

**Biodegradation**

aerobic, 98 %, Exposure time: 28 Days

**Biological Oxygen Demand (BOD)**

1,020 mg/g

**Chemical Oxygen Demand (COD)**

2,320 mg/g

**Theoretical Biological Oxygen Demand (ThBOD)**

2,207 mg/g

**Bioaccumulation**

approximately 4 - 14 BCF

**Acute and Prolonged Toxicity to Fish**

Material Name: DESMODUR Z 4470 BA

Article Number: 2466957



LC50: 18 mg/l (Fathead minnow (*Pimephales promelas*), 96 hrs)  
LC50: 185 mg/l (Silverside Minnow (*Menidia peninsulae*), 96 hrs)

**Acute Toxicity to Aquatic Invertebrates**

EC50: 72.8 mg/l (Water flea (*Daphnia magna*), 48 hrs)  
EC50: 32 mg/l (brine shrimp (*Artemia salina*), 48 hrs)

**Toxicity to Aquatic Plants**

EC50: 670 mg/l, End Point: growth (*Cryptomonad (Chilomonas paramecium)*, 48 hrs)  
674.7 mg/l, End Point: growth (*Green algae (Scenedesmus subspicatus)*, 72 hrs)

**Toxicity to Microorganisms**

EC50: 959 mg/l, (*Pseudomonas putida*, 18 hrs)

**Additional Ecotoxicological Remarks**

No data available for this component.

**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.

**14. Transportation information**

**Land transport (DOT)**

**Proper Shipping Name:** Resin solution (contains Isophorone Diisocyanate Homopolymer, n-Butyl Acetate)  
**Hazard Class or Division:** 3  
**UN/NA Number:** UN1866  
**Packaging Group:** III  
**Hazard Label(s):** Flammable Liquid

**RSPA/DOT Regulated Components:**

n-Butyl Acetate

**Reportable Quantity:** 16,666 lb

**Sea transport (IMDG)**

**Proper Shipping Name:** RESIN SOLUTION (contains Isophorone Diisocyanate Homopolymer, n-Butyl Acetate)  
**Hazard Class or Division:** 3  
**UN-No:** UN1866  
**Packaging Group:** III  
**Hazard Label(s):** Flammable liquids

**Air transport (ICAO/IATA)**

**Proper Shipping Name:** Resin solution (contains Isophorone Diisocyanate Homopolymer, n-

Material Name: DESMODUR Z 4470 BA | Article Number: 2466957

Hazard Class or Division: Butyl Acetate)  
 3  
 UN-No: UN1866  
 Packaging Group: III  
 Hazard Label(s): Flammable liquids

**15. Regulatory Information**

United States Federal Regulations

OSHA Hazcom Standard Rating: Hazardous

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

US. EPA CERCLA Hazardous Substances (40 CFR 302):

Components

n-Butyl Acetate Reportable quantity: 5,000 lbs

SARA Section 311/312 Hazard Categories:

Acute Health Hazard, Chronic Health Hazard, Fire 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

None

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

None

US. EPA Resource Conservation and Recovery Act (RCRA) Composite List of Hazardous Wastes and Appendix VIII Hazardous Constituents (40 CFR 261):

When discarded in its purchased form, this product meets the criteria of ignitability, and should be managed as a hazardous waste (EPA Hazardous Waste Number D001). (40 CFR 261.20-24)

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 MSDS 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 %</u>	<u>Components</u>	<u>CAS-No.</u>
60 - 100%	Isophorone Diisocyanate	53880-05-0
	Homopolymer	
25 - 35%	n-Butyl Acetate	123-86-4

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

<u>Weight %</u>	<u>Components</u>	<u>CAS-No.</u>
25 - 35%	n-Butyl Acetate	123-86-4
<=0.5%	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.

**16. Other Information**

**NEPA 704M Rating**

Health	2
Flammability	3
Reactivity	1
Other	

0=Insignificant 1=Slight 2=Moderate 3=High 4=Extreme

**HMIS Rating**

Health	2*
Flammability	3
Physical Hazard	1

0=Minimal 1=Slight 2=Moderate 3=Serious 4=Severe

\* = Chronic Health Hazard

Bayer MaterialScience LLC's method of hazard communication is comprised of Product Labels and Material Safety Data Sheets. HMIS and NFPA ratings are provided by Bayer MaterialScience LLC as a customer service.

The handling of products containing reactive IPDI polyisocyanate/prepolymer and/or monomeric IPDI requires appropriate protective measures referred to in this MSDS. 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 Person: Product Safety Department  
Telephone: (412) 777-2835  
MSDS Number: R301153  
Version Date: 05/17/2005  
Report Version: 1.9

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