



# Safety Data Sheet

## 1. Identification

**Walttools**  
1246 Leah Rd  
Morris, IL 60450  
USA

### TRANSPORTATION EMERGENCY

CALL INFOTRAC: (800) 535-5053  
INTERNATIONAL: (800) 535-5053

### NON-TRANSPORTATION

Emergency Phone: Call Infotrac  
Information Phone: (800) 535-5053

**Product Name:** WBU-G or M part b  
**Chemical Family:** Aliphatic Polyisocyanate Dispersion Based On Hexamethylene Diisocyanate(HDI)  
**Use:** Part B of two component water based urethane coating for sealing concrete.  
**Restrictions on use:** Do-It-Yourself Applications

## 2. Hazards Identification

### GHS Classification

Acute toxicity (Inhalation): Category 4  
Skin sensitization: Category 1  
Specific target organ toxicity - single exposure: Category 3 (Respiratory system)

### GHS Label Elements

Hazard pictograms:



Signal word: Danger

Hazard statements: Flammable liquid  
May cause an allergic skin reaction.  
Harmful if inhaled.  
May cause respiratory irritation.

Precautionary statements: **Prevention:**  
Avoid breathing dust, mist, gas, vapors or spray.  
Use only outdoors or in a well-ventilated area.  
Contaminated work clothing must not be allowed out of the Workplace. Wear protective gloves.

**Response:**

IF ON SKIN: Wash with plenty of soap and water.

IF INHALED: Remove person to fresh air and keep at rest in a position comfortable for breathing.

Call a doctor or emergency medical facility (i.e. 911) if you feel unwell.

If skin irritation or rash occurs: Get medical attention.

Wash contaminated clothing before reuse.

**Storage:**

Store in a well-ventilated place.

Store locked up.

**Disposal:**

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

### 3. Composition/Information on Ingredients

#### Hazardous Components

Residual diisocyanate monomer content: < 0.50%

<u>Weight Percent</u>	<u>Components</u>	<u>CAS-No.</u>	<u>Classification</u>
5-25%	Aliphatic Polyisocyanate based on Hexamethylene Diisocyanate	9048-90-2	Acute toxicity Category 4 Inhalation. Skin sensitisation Category 1. Specific target organ toxicity - single exposure Category 3 Respiratory system.
<0.5%	Hexamethylene-1,6-Diisocyanate	822-06-0	Acute toxicity Category 4 Oral. 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.
5-30%	Dimethyl Carbonate	616-38-6	Flammable Liquid

The specific chemical identity and/or exact percentage of component(s) have been withheld as a trade secret.

### 4. First Aid Measures

#### 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.

May cause skin irritation with symptoms of reddening, itching, and swelling. 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.

May cause eye irritation with symptoms of reddening, tearing, stinging, and swelling. May cause temporary corneal injury. 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 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. Get medical attention if irritation develops and persists.

#### **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.

Material Name: WBU-G/M part B

Material Number: 06653804

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

### **Fire Fighting Procedure**

Cool tanks/drums with water spray/remove them into safety. Do not move the load if exposed to heat. Take account of toxic fire-fighting water. Use water moderately and if possible collect or contain it. 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**

**DIRECT EXPLOSION HAZARD.** Gas/vapor explosive with air within explosion limits.

**INDIRECT EXPLOSION HAZARD.** May be ignited by sparks. 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 INFOTRAC at 1-800-535-5053 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.

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:

6 Months: after receipt of material by customer

### Storage Temperature

**Minimum:** 10 °C (50 °F)

**Maximum:** 25 °C (77 °F)

### Storage Conditions

Store separate from food products.

Material Name: WBU-G/M part B

Material Number: 06653804

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**

**Exposure Limits**

**Aliphatic Polyisocyanate based on Hexamethylene Diisocyanate (9048-90-2)**

Exposure Limit

Time weighted average 0.5 mg/m<sup>3</sup>

Exposure Limit

Short Term Exposure Limit (STEL): 1.0 mg/m<sup>3</sup> (15-min)

**Hexamethylene-1,6-Diisocyanate (822-06-0)**

US. ACGIH Threshold Limit Values

Time weighted average 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**

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 HDI.

**Respiratory Protection**

A respirator that is recommended or approved for use in isocyanate-containing environments (air-purifying or fresh air-supplied) may be necessary for spray applications or other situations such as high temperature use which may produce inhalation exposures. A supplied-air respirator (either positive pressure or continuous flow-type) is recommended. Before an air-purifying respirator can be used, air monitoring must be performed to measure airborne concentrations of HDI monomer and HDI polyisocyanate. Specific conditions under which air-purifying respirators can be used are outlined in the following sections. Observe OSHA regulations for respirator use (29 CFR 1910.134). **SPRAY APPLICATION:** A. Good industrial hygiene practice dictates that when isocyanate-based coatings are spray applied, some form of respiratory protection should be worn. During the spray application of coatings containing this product the use of a supplied-air (either positive pressure or continuous flow-type) respirator is mandatory when ONE OR MORE of the following conditions exists: -the airborne isocyanate concentrations are not known; or -the airborne isocyanate monomer concentrations exceed 0.05 ppm averaged over eight (8) hours (10 times the 8 hour TWA exposure limit); or -the airborne polyisocyanate (polymeric, oligomeric) concentrations exceed 5 mg/m<sup>3</sup> averaged over 8 hours or 10 mg/m<sup>3</sup> averaged over 15 minutes (10 times the 8 hour TWA or the 15 minute STEL exposure limits); or -operations are performed in a confined space (See OSHA Confined Space Standard, 29 CFR 1910.146). A properly fitted air-purifying (combination organic vapor and particulate) respirator, proven by test to be effective in isocyanate-containing spray paint environments, and used in accordance with all recommendations made by the manufacturer, can be used when ALL of the following conditions are met: -The airborne isocyanate monomer concentrations are known to be below

0.05 ppm averaged over eight (8) hours (10 times 8 hour TWA exposure limit); and -the airborne polyisocyanate (polymeric, oligomeric) concentrations are known to be below 5 mg/m<sup>3</sup> averaged over 8 hours or 10 mg/m<sup>3</sup> averaged over 15 minutes (10 times the 8 hour TWA or the 15 minute STEL exposure limits) and - a NIOSH-certified End of Service Life Indicator or a change schedule based upon objective information or data is used to ensure that cartridges are replaced before the end of their service life. In addition, prefilters should be changed whenever breathing resistance increases due to particulate buildup.

**NON-SPRAY OPERATIONS:** A. During non-spray operations such as mixing, batch-making, brush or roller application, etc., at elevated temperatures (for example, heating of material or application to a hot substrate), it is possible to be exposed to airborne isocyanate vapors. Therefore, when the coatings system will be applied in a non-spray manner, a supplied-air (either positive pressure or continuous flow-type) respirator is mandatory when ONE OR MORE of the following conditions exists: - the airborne isocyanate concentrations are not known; or - the airborne isocyanate monomer concentrations exceed 0.05 ppm averaged over eight (8) hours (10 times the 8 hour TWA exposure limit); or - the airborne polyisocyanate (polymeric, oligomeric) concentrations exceed 5 mg/m<sup>3</sup> averaged over 8 hours or 10 mg/m<sup>3</sup> averaged over 15 minutes (10 times the 8 hour TWA or the 15 minute STEL exposure limits); or - operations are performed in a confined space (See OSHA Confined Space Standard, 29 CFR 1910.146). A properly fitted air-purifying (combination organic vapor and particulate) respirator, proven by test to be effective in isocyanate-containing paint environments, and used in accordance with all recommendations made by the manufacturer, can be used when ALL of the following conditions are met: -the airborne concentrations of the isocyanate monomer are below 0.05 ppm averaged over eight (8) hours (10 times the 8 hour TWA exposure limit); and - the airborne polyisocyanate (polymeric, oligomeric) concentrations are known to be below 5 mg/m<sup>3</sup> averaged over eight (8) hours or 10 mg/m<sup>3</sup> averaged over 15 minutes (10 times the 8 hour TWA or the 15 minute STEL exposure limits) and - a NIOSH-certified End of Service Life Indicator or a change schedule based upon objective information or data is used to ensure that cartridges are replaced before the end of their service life. In addition, prefilters should be changed whenever breathing resistance increases due to particulate buildup.

#### **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**

Avoid all skin contact. Depending on the conditions of use, cover as much of the exposed skin area as possible with appropriate clothing to prevent skin contact., 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 should be permitted.

#### **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>	Colorless
<b>Odor:</b>	mild
<b>Odor Threshold:</b>	No Data Available
<b>pH:</b>	No Data Available
<b>Boiling Point:</b>	> 102 °C (215 °F) @ 1,013 hPa
<b>Flash Point:</b>	> 196 °C (384 °F)
<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>	Approximately 21 hPa @ 20 °C (68 °F)
<b>Vapor Density:</b>	No Data Available
<b>Density:</b>	ca. 1.09 g/cm <sup>3</sup> @ 20 °C (68 °F) (DIN 51757)
<b>Relative Vapor Density:</b>	No Data Available
<b>Specific Gravity:</b>	No Data Available
<b>Solubility in Water:</b>	Partial soluble - Reacts slowly with water to liberate CO <sub>2</sub> gas
<b>Partition Coefficient: n-</b>	No Data Available
<b>Auto-ignition Temperature:</b>	ca. 415 °C (779 °F) (DIN 51794)
<b>Decomposition Temperature:</b>	No Data Available
<b>Dynamic Viscosity:</b>	Approximately 3,550 - 4,950 mPa.s @ 23 °C (73.4 °F)
<b>Kinematic Viscosity:</b>	No Data Available
<b>Bulk Density:</b>	Approximately 1,087 kg/m <sup>3</sup> @ 20 °C (68 °F)
<b>Pour point:</b>	ca. -24 °C (-11.2 °F) (ISO 3016)
<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

### Conditions to Avoid

Avoid extreme heat or cold.

### 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

<b>Likely Routes of Exposure:</b>	Skin Contact Inhalation Eye Contact
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### Health Effects and Symptoms

Material Name: WBU-G/M part B

Material Number: 06653804



**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.

May cause skin irritation with symptoms of reddening, itching, and swelling. 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.

May cause eye irritation with symptoms of reddening, tearing, stinging, and swelling. May cause temporary corneal injury. 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: WBU-G/M part B**

Data on the product is not available.

Please find the data available for a similar product.

**Toxicity Data for: Aliphatic Polyisocyanate based on Hexamethylene Diisocyanate**

**Toxicity Note**

Data is based on a similar product, including residual monomer.

**Acute Oral Toxicity**

LD50: > 5,000 mg/kg (rat)

**Acute Inhalation Toxicity**

LC50: 0.39 mg/l, 4 h, dust/mist (rat, female)

The test atmosphere generated in the animal study is not representative of workplace environments, how the substance is placed on the market, and how it can reasonably be expected to be used. Therefore the test result cannot be directly applied for the purpose of assessing hazard. Based on expert judgment and the weight of the evidence, a modified classification for acute inhalation toxicity is justified.

**Acute Dermal Toxicity**

LD50: > 2,000 mg/kg (rat, male/female) (OECD Test Guideline 402)

**Skin Irritation**

rabbit, OECD Test Guideline 404, slight irritant

**Eye Irritation**

rabbit, OECD Test Guideline 405, slight irritant

**Sensitization**

dermal: sensitizer (Guinea pig, Magnusson/Kligmann (Maximization Test))

Skin sensitization (local lymph node assay (LLNA)):: positive (Mouse, OECD Test Guideline 429)

Skin sensitization (local lymph node assay (LLNA)):: positive (Mouse, OECD Test Guideline 406)

Toxicological studies of a comparable product.

**Repeated Dose Toxicity**

3 wks, inhalation: NOAEL: 3.7 - 4.3 mg/m<sup>3</sup>, (Rat)

90 days, Inhalation: NOAEL: 3.3 - 3.4 mg/m<sup>3</sup>, (Rat)

Irritation to lungs and nasal cavity.

**Mutagenicity**

Genetic Toxicity in Vitro:

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

**Toxicity Data for: Hexamethylene-1,6-Diisocyanate****Acute Oral Toxicity**

LD50: 746 mg/kg (rat, male) (OECD Test Guideline 401)

LD50: 959 mg/kg (rat, male) (OECD Test Guideline 401)

**Acute Inhalation Toxicity**

LC50: 0.124 mg/l, 4 h, vapour (rat, male/female) (OECD Test Guideline 403)

**Acute Dermal Toxicity**

LD50: > 7,000 mg/kg (rat, male/female) (OECD Test Guideline 402)

**Skin Irritation**

rabbit, OECD Test Guideline 404, Corrosive

**Eye Irritation**

rabbit, OECD Test Guideline 405, Corrosive

**Sensitization**

dermal: sensitizer (Guinea pig, Maximisation Test)

dermal: sensitizer (Human, Case Report)

Respiratory sensitization: sensitizer (Guinea pig)

**Repeated Dose Toxicity**

2 years, inhalation: NOAEL: 0.005 ppm, (rat, Male/Female, 6 hrs/day 5 days/week)

Irritation to lungs and nasal cavity.

**Mutagenicity**

Genetic Toxicity in Vitro:

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

Point mutation in mammalian cells (HPRT test): negative (Metabolic Activation: with/without)

Genetic Toxicity in Vivo:

Micronucleus test: negative (Mouse, male/female, Inhalative)

negative

**Carcinogenicity**

rat, male/female, Inhalative, 2 yrs, 6 hours/day, 5 days/week Did not show carcinogenic effects in animal experiments.

**Toxicity to Reproduction/Fertility**

Combined Repeated Dose Toxicity Study with the Reproduction/Developmental Toxicity Screening Test, Inhalative, 6 hours/day 7 days/week, (rat, male/female) NOAEL (F2): 0.3 ppm Fertility and developmental toxicity tests did not reveal any effect on reproduction.

**Developmental Toxicity/Teratogenicity**

rat, female, Inhalative, 6 hours/day (Exposure duration: day 0 - 19 of gestation), NOAEL (teratogenicity): 0.3 ppm, NOAEL (maternal): 0.005 ppm Did not show teratogenic effects in animal experiments.

**Neurological Effects**

Rats exposed by inhalation, 6 hours/day, for approximately 3 weeks, to concentrations as high as 0.3 ppm showed no neurobehavioral effects or damage to nerve tissues.

**Carcinogenicity:**

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

**12. Ecological Information****Ecological Data for: WBU-G/M part B**

Data on the product is not available.

Please find the data available for a similar product.

**Ecological Data for Aliphatic Polyisocyanate based on Hexamethylene Diisocyanate****Biodegradation**

1 %, Exposure time: 28 d, i.e. not readily degradable

Ecotoxicological reports on a comparable product

Material Name: WBU-G/M part B

Material Number: 06653804

**Acute and Prolonged Toxicity to Fish**

LC50: 8.9 mg/l (Danio rerio (zebra fish), 96 h)  
Ecotoxicological reports on a comparable product

**Acute Toxicity to Aquatic Invertebrates**

EC0: > 100 mg/l (Water flea (Daphnia magna), 48 h)

**Toxicity to Aquatic Plants**

EC50: > 1,000 mg/l, (Green algae (Desmodesmus subspicatus), 72 h)

**Toxicity to Microorganisms**

EC50: 1,600 mg/l, (activated sludge, 3 h)  
Ecotoxicological reports on a comparable product

**Additional Ecotoxicological Remarks**

Data is based on a similar product.

**Ecological Data for Hexamethylene-1,6-Diisocyanate****Biodegradation**

aerobic, 42 %, Exposure time: 28 d, i.e. not readily degradable

**Bioaccumulation**

value calculated, 57.6 BCF  
An accumulation in aquatic organisms is not to be expected.

value calculated, 3.2 BCF

An accumulation in aquatic organisms is not to be expected. Studies of hydrolysis products.

**Acute and Prolonged Toxicity to Fish**

LC0: >= 82.8 mg/l (Danio rerio (zebra fish), 96 h)

**Acute Toxicity to Aquatic Invertebrates**

EC0: >= 89.1 mg/l (Daphnia magna (Water flea), 48 h)

**Toxicity to Aquatic Plants**

ErC50: > 77.4 mg/l, (Desmodesmus subspicatus (Green algae), 72 h)

**Toxicity to Microorganisms**

EC50: 842 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:** Other regulated substances, liquid, n.o.s. (contains Hexamethylene-1,6-Diisocyanate, Aliphatic Polyisocyanate)  
**Hazard Class or Division:** 9  
**UN/NA Number:** NA3082  
**Packaging Group:** III  
**Hazard Label(s):** CLASS 9

### RSPA/DOT Regulated Components:

Hexamethylene-1,6-Diisocyanate

**Reportable Quantity:** 9074 kg (20005 lb)

### Sea transport (IMDG)

**Proper Shipping Name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (contains Hexamethylene-1,6-Diisocyanate, Aliphatic Polyisocyanate)  
**Hazard Class or Division:** 9  
**UN number:** UN3082  
**Packaging Group:** III  
**Hazard Label(s):** MISCELLANEOUS  
**Marine pollutant:** Marine pollutant

### Air transport (ICAO/IATA)

**Proper Shipping Name:** Environmentally hazardous substance, liquid, n.o.s. (contains Hexamethylene-1,6-Diisocyanate, Aliphatic Polyisocyanate)  
**Hazard Class or Division:** 9  
**UN number:** UN3082  
**Packaging Group:** III  
**Hazard Label(s):** MISCELLANEOUS

## 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:**

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):**

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:**

<b>Weight percent</b>	<b>Components</b>	<b>CAS-No.</b>
5-25%	Aliphatic Polyisocyanate based on Hexamethylene Diisocyanate	9048-90-2
0.5%	Hexamethylene-1,6-Diisocyanate	822-06-0
5-20%	Dimethyl Carbonate	616-38-6

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

<b>Weight percent</b>	<b>Components</b>	<b>CAS-No.</b>
<0.5%	Hexamethylene-1,6-Diisocyanate	822-06-0

**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.

**CFATS (Chemical Facility Anti-Terrorism Standards) Chemicals**

To the best of our knowledge, this product does not contain Appendix A Chemicals of Interest (COI), at or above the Screening Threshold Quantity (STQ), as defined by the Department of Homeland Security Chemical Facility Anti-terrorism Standard (CFATS, 6 CFR Part 27.

**16. Other Information**

The method of hazard communication for Waltools is comprised of product labels and safety data sheets. Safety data sheets for all of our products and general product declarations are available upon request.

The handling of products containing reactive HDI polyisocyanate/prepolymer and/or monomeric HDI 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: 112000019381  
Version Date: 12/08/2016  
SDS Version: 2.4

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