

**MATERIAL SAFETY DATA SHEET**

**PRODUCT NAME:** URECON PART B

**HMIS CODES:** H F R P

**PRODUCT CODE:** URECON-II

3 1 0 -

(Used with following Urecon products: TG, SL, SC)

**SECTION 1: MANUFACTURER IDENTIFICATION**

**MANUFACTURER'S NAME:** KEY RESIN COMPANY

**ADDRESS:** 4050 Clough Woods Drive  
Batavia, Ohio 45103

**EMERGENCY NUMBER:** 1-800-424-9300

**DATE PRINTED:** 05/29/12

**INFORMATION NUMBER:** 1-513-943-4225

**PREPARER:** R. CAIN

**SECTION 2: HAZARDOUS INGREDIENTS**

HAZARDOUS COMPONENTS	CAS NUMBER	OSHA PEL	ACGIH TLV	WT %	CARCINOGEN
Polymeric Diphenylmethane Diisocyanate	9016-87-9	NE	NE	80-100	NO

**SECTION 3: PHYSICAL/CHEMICAL CHARACTERISTICS**

<b>BOILING POINT</b>	406° F
<b>VAPOR DENSITY</b>	8.5 (MDI) Air=1
<b>VAPOR PRESSURE</b>	Less than 10-5mmHg @ 77° F
<b>VOC</b>	nil
<b>SOLUBILITY IN WATER</b>	Reacts slowly releasing CO2 gas
<b>APPEARANCE AND ODOR</b>	amber, brown liquid with slightly musty odor
<b>SPECIFIC GRAVITY (H2O=1)</b>	1.24 @ 77° F

**SECTION 4: FIRE AND EXPLOSION HAZARD DATA**

**FLASH POINT:** 398° F

**METHOD USED:** Pensky-Martens Closed Cup

**FLAMMABLE LIMITS IN AIR BY VOLUME** LOWER: Not determined  
UPPER: Not determined

**EXTINGUISHING MEDIA:** Dry chemical, CO2, Foam, Water spray for large fires

**SPECIAL FIRE FIGHTING PROCEDURES:** Full emergency equipment with self contained breathing apparatus and full protective clothing should be worn by firefighters.

**UNUSUAL FIRE AND EXPLOSION HAZARDS:** During a fire, MDI vapors and other irritating, highly toxic gases may be generated by thermal decomposition or combustion. At temperatures greater than 400° F, polymeric MDI can polymerize and decompose which can cause pressure build up in closed containers. Use cold water to cool fire exposed containers.

**SECTION 5: REACTIVITY DATA**

**STABILITY:** Normally Stable

**CONDITIONS TO AVOID:** Contamination with water.

**INCOMPATIBILITY (MATERIALS TO AVOID):** Avoid contact with water, amines, strong bases, and alcohols. Will cause some corrosion to copper alloys and aluminum.

**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:** By high heat and fire: carbon monoxide, oxides of nitrogen, traces of HCN, MDI vapors or aerosols.

**HAZARDOUS POLYMERIZATION:** Will not occur.

## SECTION 6: HEALTH HAZARD DATA

### HEALTH RISKS AND SYMPTOMS OF EXPOSURE (ACUTE):

**INHALATION:** MDI vapors or mist at concentrations above the TLV can irritate the mucus membranes in the respiratory tract causing runny nose, sore throat, coughing, chest discomfort, shortness of breath, and reduced lung function. Persons with preexisting, nonspecific bronchial hyperreactivity can respond to concentrations below the TLV with similar symptoms as well as asthma attack. Exposure well above TLV may lead to bronchitis, bronchial spasm, and pulmonary edema. These effects are usually reversible. Chemical or hypersensitive pneumonitis, with flu-like symptoms has also been reported. These symptoms can be delayed up to several hours after exposure.

**EYE:** Liquid, aerosols, or vapors are irritating and can cause tearing, reddening, and swelling. If left untreated, corneal damage can occur and injury is slow to heal. However, damage is usually reversible.

**SKIN:** Isocyanates react with skin protein and moisture and can cause irritation which may include the following symptoms: reddening, swelling, rash, scaling or blistering. Cured material is difficult to remove.

**INGESTION:** Can result in irritation and corrosive action in the mouth, stomach tissue, and digestive tract. Symptoms can include sore throat, abdominal pain, nausea, vomiting, and diarrhea.

### HEALTH HAZARDS (CHRONIC):

**INHALATION:** As a result of previous repeated overexposures or a single large dose, certain individuals develop isocyanate sensitization which will cause them to react to a later exposure to isocyanate at levels below the TLV. These symptoms which can include chest tightness, wheezing, cough, shortness of breath, or asthma attack, could be immediate or delayed. Similar to many nonspecific 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 several years. Overexposure to isocyanates has also been reported to cause lung damage which may be permanent. Sensitization can either be temporary or permanent.

**SKIN:** Prolonged contact can cause reddening, swelling, rash, scaling, blistering, and in some cases, skin sensitization. Individuals who have skin sensitization can develop these symptoms from contact with liquid or vapors. Animal tests have indicated that respiratory sensitization can result from skin contact with MDI. This data reinforces the need to prevent direct skin contact with MDI.

## SECTION 6: HEALTH HAZARD DATA (CON'T)

### CARCINOGENICITY:

**NTP CARCINOGEN:** NO **IARC MONOGRAPHS:** NO **OSHA REGULATED:** NO  
**MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE:** Asthma, other respiratory disorders (bronchitis, ephysema, bronchial hyperreactivity), skin allergies, eczema.

### EMERGENCY AND FIRST AID PROCEDURES:

**EYES:** Flush with copious amounts of lukewarm water for at least 15 minutes, holding eyelids open all the time. Get medical attention.

**SKIN:** Remove contaminated clothes. Wash affected skin thoroughly with soap and water. Wash contaminated clothing thoroughly before reuse. For severe exposures, get under a safety shower after removing clothing, then get medical attention. For lesser exposures, seek medical attention if irritation develops or persists after the area is washed.

**INGESTION:** Do not induce vomiting. Give 1 to 2 cups of milk or water to drink. Do not give anything by mouth to an unconscious person. Get medical attention.

**INHALATION:** Move to an area free from risk of further exposure. Administer oxygen or artificial respiration as needed. Obtain medical attention. Asthmatic-type symptoms may develop and may be immediate or delayed up to several hours. Consult a physician should this occur.

### SECTION 7: PRECAUTIONS FOR SAFE HANDLING AND USE

**STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED:** Evacuate and ventilate spill area; dike spill to prevent entry into water system; wear full protective equipment including respiratory equipment during cleanup. If temporary control of isocyanate vapors is required, a blanket of protein foam (available at most fire departments) may be placed over the spill. Absorb isocyanates with sawdust or other absorbent, shovel into suitable unsealed containers, transport to well ventilated area (outside) and treat with neutralizing solution: mixture of 80% water, 20% non-ionic surfactant Tergitol TMN-10, or; 90% water, 3-8% concentrated ammonia, and 2% detergent. Add about 10 parts neutralizer per part of isocyanate with mixing. Allow to stand 48 hours to let CO<sub>2</sub> escape. Decontaminate floor with decontamination solution letting stand for at least 15 minutes.

**WASTE DISPOSAL METHOD:** Waste must be disposed of in accordance with federal, state, and local environmental control regulations. Incineration is the preferred method.

## **SECTION 7: PRECAUTIONS FOR SAFE HANDLING AND USE (cont.)**

**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING:** Store in tightly closed containers to prevent moisture contamination. Do not reseal if contamination is suspected. Avoid contact with skin and eyes. Do not breath aerosols or vapors. Warning properties are not adequate to prevent chronic overexposure from inhalation. This material can produce asthmatic sensitization upon either single inhalation exposure to a relatively high concentration or upon repeated exposures to lower concentrations. Exposure to vapors of heated MDI can be extremely dangerous. Employee education and training in the safe use and handling of this compound are required under OSHA Hazard Communication Standard.

**TRANSPORTATION EMERGENECIES:** Key Resin Company requires that CHEMTREC be immediately notified (800-424-9300) when this product is unintentionally released from its container during the course of its distribution. 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.

### **SECTION 8: CONTROL MEASURES**

**RESPIRATORY PROTECTION:** Concentrations greater than the TLV can occur when MDI is sprayed, heated, or used in a poorly ventilated area. In such cases, or whenever concentrations of MDI exceed the TLV or are not known, respiratory protection must be worn. A supplied air respirator is required. In an emergency situation, a self-contained breathing apparatus may be used. MDI has poor warning properties, since the concentration at which MDI can be smelled is substantially higher than the maximum exposure limit. Observe OSHA regulations for respirator use.

**VENTILATION:** Local exhaust should be used to maintain levels below the TLV whenever MDI is processed, heated, or spray applied. Standard reference sources regarding industrial ventilation should be consulted for guidance about adequate ventilation.

**PROTECTIVE GLOVES:** Wear impervious gloves.

**EYE PROTECTION:** Wear splash-proof chemical goggles. Vapor resistant goggles should be worn when contact lenses are in use. In a splash hazard environment, chemical goggles should be used in combination with a full face-shield.

**OTHER PROTECTIVE CLOTHING OR EQUIPMENT:** Cover as much of exposed skin area as possible with appropriate clothing. If skin creams are used, keep the area covered with the cream to a minimum. Safety showers and eyewash stations should be available. Educate and train employees in safe use of product. Follow all label instructions.

**WORK/HYGIENIC PRACTICES:** Practice good industrial hygiene. Wash with soap and water before eating, smoking, or using the restroom.

**SECTION 9: REGULATORY INFORMATION**

This product is hazardous under the criteria of the Federal OSHA Hazard Communication Standard 29 CFR 1910.1200.

It listed on the TSCA Inventory.

**CERCLA REPORTABLE QUANTITY:** 5,000lba for 4,4'-Diphenylmethane Diisocyanate, CAS# 101-68-8

**SARA TITLE III SECTION 302:** Unless shown below, this product does not contain the following toxic chemicals subject to the reporting requirements of section 302 of the Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR 372:

CAS #	Chemical Name	Percent by Weight
	None	

**SARA TITLE III SECTION 311/312:** This product fits the following hazard categories subject to the reporting requirements of sections 311 & 312 of the Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR 372:

**Immediate Health Hazard; Delayed Health Hazard; Reactive Hazard**

**SARA TITLE III SECTION 313:** Unless shown below, this product does not contain the following toxic chemicals subject to the reporting requirements of section 313 of the Emergency Planning and Community Right to Know Act of 1986 and of 40 CFR 372:

CAS #	Chemical Name	%
9016-87-9	Polymeric Diphenylmethane Diisocyanate	100%

**HAZARDOUS WASTE INFORMATION:** Unless shown below, this product is not a hazardous waste according to definitions found in CFR-40.

**DOT PROPER SHIPPING NAME:** \*Other Regulated Substances, NOS \*SEE NOTE\*

**HAZARDOUS SUBSTANCE:** MDI (Methylene diphenyl Diisocyanate)

**HAZARD CLASS:** 9

**UN/NA ID NUMBER:** NA-3082

**PACKING GROUP:** III

**DOT PRODUCT RQ lbs (kgs):** 15625 lbs (7087.5 kgs)

**\*When in individual containers of less than the product RQ, this material ships as Non-Regulated.**

**SECTION 10: DISCLAIMER**

Data and recommendations presented herein are based upon our and other researchers and are believed to be accurate. The products discussed are distributed without warranty (expressed or implied) and the customer shall make his own determination of suitability for his particular purpose.