



# Safety Data Sheet

## 1. Product and company identification

|                              |  |  |
|------------------------------|--|--|
| <b>Product Name</b>          | <b>Poly-Tron - Part B</b>  |  |
| <b>Internal Code(s)</b>      | 261120; 261163   |  |
| <b>Product Type</b>          | Aromatic MDI Isocyanate  |  |
| <b>Product Use</b>           | Two-Component Elastomeric Concrete   |  |
| <b>Manufacturer/Supplier</b> | RJ Watson, Inc.<br>11035 Walden Ave.<br>Alden, NY 14004<br>U.S.A.  | www.rjwatson.com<br>sales@rjwatson.com |
| <b>Revision Date</b>         | 24-AUG-2015  |  |
| <b>Telephone</b>             | <b>For 24-Hour Emergency Response Information</b><br>Call ChemTel: (800) 255-3924 (U.S./Canada)<br>+1-813-248-0585 (International) |  |
|                              | <b>For Other Product or Technical Information</b><br>Call RJ Watson, Inc.: (716) 901-7020  |  |

## 2. Hazards identification

|                        |   |
|------------------------|---|
| <b>Product Form</b>    | Dark Amber Liquid   |
| <b>OSHA/HCS status</b> | This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200). |

|  |  |    |   |
|--|--|----|---|
| <b>Hazard Category Classification:</b> | Acute Toxicity   | 4  | Acute Toxicity (Inhalation – Mist)  |
|  | Skin Corrosion / Irritation                                  | 2  | Skin Irritant   |
|  | Eye Damage / Irritation                                      | 2B | Mildly Irritating to Eyes   |
|  | Respiratory Sensitizer                                       | 1  | Respiratory Sensitizer  |
|  | Skin Sensitizer  | 1B | Low to Moderate Frequency Skin Sensitizer   |
|  | Carcinogenicity  | 2  | Suspected Human Carcinogen  |
|  | Specific Target Organ Toxicity – Single Exposure             | 3  | Transient Target Organ Effects (Irritating to Respiratory System)                     |
|  | Specific Target Organ Toxicity – Repeated/Prolonged Exposure | 2  | Potential to be Harmful to Human Health Following Repeated/Prolonged Use (Inhalation) |

GHS Pictogram(s):



Signal Word: **DANGER**

|                          |      |   |
|--------------------------|------|---|
| <b>Hazard Statement:</b> | H320 | Causes eye irritation.  |
|                          | H315 | Causes skin irritation.   |
|                          | H332 | Harmful if inhaled.   |
|                          | H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled.                        |
|                          | H317 | May cause an allergic skin reaction.  |
|                          | H335 | May cause respiratory irritation.   |
|                          | H351 | Suspected of causing cancer.  |
|                          | H373 | May cause damage to organs (Olfactory organs) through prolonged or repeated exposure (inhalation) |

**Precautionary Statements:**

|                    |      |  |
|--------------------|------|--|
| <b>Prevention:</b> | P280 | Wear protective gloves / protective clothing / eye protection / face protection. |
|                    | P271 | Use only outdoors or in a well-ventilated area.                                  |
|                    | P260 | Do not breathe mist / vapors.  |
|                    | P201 | Obtain special instructions before use.  |
|                    | P261 | Avoid breathing mist.  |
|                    | P202 | Do not handle until all safety precautions have been read and understood.        |
|                    | P284 | (In case of inadequate ventilation) wear respiratory protection.                 |
|                    | P272 | Contaminated work clothing should not be allowed out of the workplace.           |
|                    | P264 | Wash hands and exposed skin thoroughly after handling.                           |

|                  |                    |  |
|------------------|--------------------|--|
| <b>Response:</b> | P312               | Call a POISON CENTER or doctor/physician if you feel unwell.   |
|                  | P305 + P351 + P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue Rinsing. |
|                  | P304 + P340        | IF INHALED: Remove person to fresh air and keep comfortable for breathing.   |
|                  | P308 + P313        | IF exposed or concerned: Get medical advice/attention.   |
|                  | P314               | Get medical advice/attention if you feel unwell.   |
|                  | P303 + P352        | IF ON SKIN (or hair): Wash with plenty of soap and water.  |
|                  | P333 + P313        | If skin irritation or rash occurs: Get medical advice/attention.   |
|                  | P362               | Take off contaminated clothing and wash before reuse.  |
|                  | P332 + P313        | If skin irritation occurs: Get medical advice/attention.   |
|                  | P337 + P313        | If eye irritation persists, Get medical advice/attention.  |

|                 |             |  |
|-----------------|-------------|--|
| <b>Storage:</b> | P403 + P233 | Store in a well-ventilated place. Keep container tightly closed. |
|                 | P405        | Store locked up.   |

|                  |      |   |
|------------------|------|---|
| <b>Disposal:</b> | P501 | Dispose of contents/container to hazardous or chemical waste disposal facility in accordance with all local/national/international regulations. |
|------------------|------|---|

**Hazards not otherwise classified:**

None known.

**Supplemental Label Information:**

Contains isocyanates. Inhalation of isocyanate mists or vapors may cause respiratory irritation, breathlessness, chest discomfort and reduced pulmonary function. Overexposure well above the PEL may result in bronchitis, bronchial spasms and pulmonary edema. Long-term exposure to isocyanates has been reported to cause lung damage, including reduced lung function which may be permanent. Acute or chronic overexposure to isocyanates may cause sensitization in some individuals, resulting in allergic respiratory reactions including wheezing, shortness of breath and difficulty breathing. Animal tests indicate that skin contact may play a role in causing respiratory sensitization.

**3. Composition/Information on ingredients**

| <b>Ingredient name</b>                  | <b>CAS number</b> | <b>WT %</b>         |
|---|-------------------|---------------------|
| Polymeric MDI                           | 9016-87-9         | <b>50.0 – 75.0%</b> |
| Diphenylmethane-4,4'-diisocyanate (MDI) | 101-68-8          | <b>25.0 – 50.0%</b> |
| Methylenediphenyl diisocyanate          | 26447-40-5        | <b>1.0 – 7.0%</b>   |

**4. First aid measures**

|                    |   |
|--------------------|---|
| <b>Eye contact</b> | In case of contact with the eyes, rinse immediately for at least 15 minutes with plenty of water. Immediate medical attention required. |
|--------------------|---|

**Skin contact** Remove contaminated clothing. Wash affected areas thoroughly with soap and water. If irritation develops, seek medical attention.

**Inhalation** Remove the affected individual into fresh air and keep the person calm. Assist in breathing if necessary. Immediate medical attention required.

**Ingestion** Rinse mouth and then drink plenty of water. Do not induce vomiting. Never induce vomiting or give anything by mouth if the victim is unconscious or having convulsions. Immediate medical attention required.

**Other Hazards** Symptoms can appear later. Isocyanate respiratory sensitization may result in allergic (asthma-like) signs in the lower respiratory tract including wheezing, shortness of breath and difficulty breathing, the onset of which may be delayed. Repeated inhalation of high concentrations may cause lung damage, including reduced lung function, which may be permanent. Substances eliciting lower respiratory tract irritation may worsen the asthma-like reactions that may be produced by product exposures.

**Notes to physician** Specific antidotes or neutralizers to isocyanates do not exist. Treatment should be supportive and based on the judgment of the physician in response to the reaction of the patient. Symptoms can appear later.

**Potential acute health effects**

**Inhalation** Of moderate toxicity after short-term inhalation.

**Ingestion** Virtually nontoxic after a single ingestion.

**Skin** Virtually nontoxic after a single skin contact. Skin contact may cause irritation. Sensitization after skin contact is possible.

**Eyes** Eye contact causes irritation.

**Potential chronic health effects**

**Chronic effects** Repeated exposure to the substance by dermal administration leads to effects similar to those found after single exposure. Repeated exposure to the substance by inhalative administration leads to effects similar to those found after single exposure. Repeated exposure to the substance by oral administration leads to effects similar to those found after single exposure.

**Carcinogenicity** This product contains MDI, which is considered to have a possible carcinogenic effect in animal tests. However, the relevance of this result for humans is unclear.

**Developmental effects** The substance (MDI) did not cause malformations in animal studies; however, toxicity to development was observed at high doses that were toxic to the parental animals.

**Fertility effects** See "Developmental effects."

**Target organs** Eye, Skin, Respiratory Tract.

**Over-exposure signs/symptoms**

**Inhalation** Irritation of respiratory tract; Shortness of breath.

**Ingestion** Irritation, nausea

**Skin** Irritation, redness, itching, swelling.

**Eyes** Irritation, redness, tearing.

**Medical conditions aggravated by over-exposure** The isocyanate component is a respiratory sensitizer. It may cause allergic reaction leading to asthma-like spasms of the bronchial tubes and difficulty in breathing. Medical supervision of all employees who handle or come into contact with isocyanates is recommended. Contact may aggravate pulmonary disorders. Persons with history of respiratory disease or hypersensitivity should

not be exposed to this product. Pre-employment and periodic medical examinations with respiratory function tests (FEV<sub>1</sub>, FVC as a minimum) are suggested. An animal study indicated that MDI may induce respiratory hypersensitivity following dermal exposure. Persons with asthmatic conditions, chronic bronchitis, other chronic respiratory diseases, recurrent eczema or pulmonary sensitization should be excluded from working with isocyanates. Once a person is diagnosed as having pulmonary sensitization (allergic asthma) to isocyanates, further exposure is not recommended.

See section 11 for more detailed information on health effects and symptoms.

## 5. Fire-fighting measures

**Flammability properties of the product**      **Flash Point:** 220°C (428°F)  
**Flash Point Method Used:** Open cup  
**Flammable Limits in Air (Lower - % by volume):** Not Determined  
**Flammable Limits in Air (Upper - % by volume):** Not Determined

### Extinguishing media

**Suitable**      Water spray, dry extinguishing media, carbon dioxide, foam

**Not suitable**      None.

**Special exposure hazards**      Isocyanates slowly react with water to release carbon dioxide gas.

**Hazardous combustion products**      Nitrous gases, fumes/smoke, isocyanate, vapor.

**Unusual Fire and Explosion Hazards**      Sealed, fire-exposed containers may build up dangerous pressure, potentially resulting in explosive rupture.

**Special protective equipment for fire-fighters**      Fire-fighters should wear appropriate protective equipment, including self-contained breathing apparatus and turn-out gear.

## 6. Accidental release measures

**Personal precautions**      No action shall be taken involving any personal risk or without suitable training. Clear area. Ensure adequate ventilation. Put on appropriate personal protective equipment (see section 8).

**Environmental precautions**      Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).

**Spill Response**      Dike spillage.  
**For small amounts:** Absorb isocyanate with suitable absorbent material (see § 40 CFR, sections 260, 264 and 265 for further information). Shovel into open container. Do not make container pressure tight. Move container to a well-ventilated area (outside). Spill area can be decontaminated with the following recommended decontamination solution: Mixture of 90 % water, 8 % concentrated ammonia, 2 % detergent. Add at a 10 to 1 ratio. Allow to stand for at least 48 hours to allow escape of evolved carbon dioxide.  
**For large amounts:** If temporary control of isocyanate vapor is required, a blanket of protein foam or other suitable foam (available from most fire departments) may be placed over the spill. Transfer as much liquid as possible via pump or vacuum device into closed but not sealed containers for disposal.  
**For residues:** The following measures should be taken for final cleanup: Wash down spill area with decontamination solution. Allow solution to stand for at least 10 minutes..

## 7. Handling and storage

|                 |  |
|-----------------|--|
| <b>Handling</b> | Put on appropriate personal protective equipment when handling (Section 8). Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Avoid breathing vapor or mist. Avoid contact with eyes, skin, and clothing. Avoid tasting or swallowing. Keep container closed when not in use. Use with adequate ventilation. Wash thoroughly after handling.<br>If bulging of drum occurs, transfer to well-ventilated area, puncture to relieve pressure, open vent and let stand for 48 hours before resealing. |
| <b>Storage</b>  | Store in accordance with all local and government regulations. Keep in the original container or an approved alternative made from a compatible material, kept tightly sealed when not in use. Formation of CO <sub>2</sub> and build up of pressure possible if moisture is introduced. Keep container tightly closed and in a well-ventilated place. Outage of containers should be filled with dry inert gas at atmospheric pressure to avoid reaction with moisture. Recommended storage temperature: 59 - 95°F (15 - 35°C).                                 |

## 8. Exposure controls/personal protection

| CAS Number | Chemical Identity                       | Exposure Limits |      |                                  |      |       |
|------------|---|-----------------|------|----------------------------------|------|-------|
|            |   | ACGIH           |      | OSHA                             |      | Other |
|            |   | TWA             | STEL | PEL                              | STEL |       |
| 9016-87-9  | Polymeric MDI                           | 0.005 ppm       | N.E. | 0.2 mg/m <sup>3</sup><br>Ceiling | N.E. | N.E.  |
| 101-68-8   | Diphenylmethane-4,4'-diisocyanate (MDI) | 0.005 ppm       | N.E. | 0.2 mg/m <sup>3</sup><br>Ceiling | N.E. | N.E.  |
| 26447-40-5 | MDI Mixed Isomers                       | N.E.            | N.E. | N.E.                             | N.E. | N.E.  |

|  |  |
|--|--|
| <b>Recommended monitoring procedures</b> | If this product contains ingredients with exposure limits, personal, workplace atmosphere or biological monitoring may be required to determine the effectiveness of the ventilation or other control measures and/or the necessity to use respiratory protective equipment.   |
| <b>Engineering measures</b>              | Use only with adequate ventilation. If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.   |
| <b>Hygiene measures</b>                  | Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated equipment or clothing should be cleaned after each use or disposed of. Ensure that eyewash stations and safety showers are located in the work area.            |
| <b>Respiratory</b>                       | Use a properly fitted, air-purifying or air-supplied respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.   |
| <b>Eyes</b>                              | Chemical splash goggles are recommended. Wear face shield if splashing hazard exists.  |
| <b>Skin</b>                              | Chemical resistant protective gloves are required. Suitable materials include: chloroprene rubber (Neoprene), nitrile rubber (Buna N), chlorinated polyethylene, polyvinylchloride (Pylox), butyl rubber, fluoroelastomer (Viton). Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. |

## 9. Physical and chemical properties

|                     |                                   |
|---------------------|-----------------------------------|
| Form                | Liquid                            |
| Color               | Dark Amber                        |
| pH                  | Not applicable                    |
| Boiling point       | > 200°C (> 392°F)                 |
| Freezing Point      | < 3°C (< 38°F)                    |
| Specific gravity    | 1.23                              |
| Vapor pressure      | 0.00001 mmHg (at 25°C)            |
| Odor threshold      | Slight, aromatic odor             |
| Solubility in water | Not applicable; Reacts with water |
| Evaporation rate    | Not Determined                    |
| Vapor density       | Not Determined                    |

## 10. Stability and reactivity

|                                  |  |
|----------------------------------|--|
| Stability                        | The product is stable when properly stored and handled.  |
| Conditions to avoid              | Avoid contact with water or alcohols in sealed containers. Risk of bursting.   |
| Materials to avoid               | Reactive or incompatible with the following materials: water, alcohols, strong bases, substances/products that react with isocyanates.<br>Reacts with water, with formation of carbon dioxide. Risk of bursting. Reacts with alcohols. Reacts with acids. Reacts with alkalis. Reacts with amines. Risk of exothermic reaction. Risk of violent reaction. Risk of polymerization. Contact with certain rubbers and plastics can cause brittleness of the substance/product with subsequent loss in strength. |
| Other hazards                    | Thermal decomposition at temperatures > 260°C.   |
| Hazardous decomposition products | Decomposition products may include the following materials: carbon monoxide, hydrogen cyanide, nitrogen oxides, aromatic isocyanates, gases/vapors   |

## 11. Toxicological information

### Acute toxicity

|                      |                 |        |                    |
|----------------------|-----------------|--------|--------------------|
| MDI (CAS # 101-68-8) | LD50 Oral       | Rat    | > 2,000 mg/kg      |
|                      | LC50 Inhalation | Rat    | 2.0 mg/L (aerosol) |
|                      | LD50 Dermal     | Rabbit | >9,400 mg/kg       |

### Carcinogenicity Classification

Diphenylmethane-4,4'-diisocyanate (MDI): Indication of possible carcinogenic effect in animal tests. However, the relevance of this result for humans is unclear.

### Ingredient name

|   |  |
|---|--|
| Diphenylmethane-4,4'-diisocyanate (MDI) (CAS # 101-68-8): |  |
| IARC  | Group 3 (Not classifiable as to carcinogenicity to humans) |
| NTP   | Not listed   |
| OSHA  | Not regulated as a carcinogen                              |
| EU  | Category 2 (H351: Suspected of causing cancer.)            |

## 12. Ecological information

### Environmental effects

#### Fish

Acute: static *Brachydanio rerio*/LC50 (24 h): > 500 mg/l

Practically nontoxic.

Information on: *Diphenylmethane-4,4'-diisocyanate (MDI)*

Acute:

OECD Guideline 203 static

*Brachydanio rerio*/LC0 (96 h): > 1,000 mg/l

#### **Aquatic invertebrates**

Acute: Daphnia magna/EC50 (24 h): > 500 mg/l

Practically nontoxic.

Information on: Diphenylmethane-4,4'-diisocyanate (MDI)

Acute:

OECD Guideline 202, part 1 static

Daphnia magna/EC50 (24 h): > 1,000 mg/l

#### **Other adverse effects**

Poorly biodegradable.

The product is unstable in water. The elimination data also refer to products of hydrolysis.

## **13. Disposal considerations**

### **Waste disposal**

The generation of waste should be avoided or minimized wherever possible. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

## **14. Transport information**

The data provided in this section is for information only and may not be specific to each package size or mode of transport. Apply the appropriate regulations to properly classify your shipment for transportation.

### **International transport regulations**

| <b>Regulatory information</b> | <b>UN/NA number</b> | <b>Proper shipping name</b> | <b>Classes/*PG</b> | <b>Reportable Quantity (RQ)</b> |
|-------------------------------|---------------------|-----------------------------|--------------------|---------------------------------|
| <b>CFR</b>                    | N/A                 | Not dangerous goods         | N/A                | N/A.                            |
| <b>TDG</b>                    | N/A                 | Not dangerous goods         | N/A                | N/A.                            |
| <b>IMO/IMDG</b>               | N/A                 | Not dangerous goods         | N/A                | N/A.                            |
| <b>IATA</b>                   | N/A                 | Not dangerous goods         | N/A                | N/A.                            |

\*PG : Packing group

## **15. Regulatory information**

### **US regulations**

#### **HCS Classification**

When used for its intended purpose, this material is classified as hazardous in accordance with OSHA 29CFR 1910.1200.

#### **U.S. Federal regulations**

##### **SARA Title III, Section 311/312 Classification**

Immediate (Acute) health hazard  
Delayed (Chronic) health hazard

##### **SARA Title III, Section 313 - Supplier Notification**

This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372.

Diphenylmethane-4,4'-diisocyanate; CAS # 101-68-8; Diisocyanates Category (N120)  
Polymeric MDI; CAS # 9016-87-9; Diisocyanates Category (N120)

**CERCLA RQ:** Diphenylmethane-4,4'-diisocyanate (MDI) (CAS # 101-68-8): 5,000 Lbs.  
Polymeric MDI (CAS # 9016-87-9): 5,000 Lbs.

##### **SARA Section 302 Extremely Hazardous Substances**

None required.

#### **State regulations**

##### **Massachusetts RTK Substances**

Diphenylmethane-4,4'-diisocyanate (MDI) (CAS # 101-68-8)

Polymeric MDI (CAS # 9016-87-9)

**New Jersey RTK Hazardous Substances**

Diphenylmethane-4,4'-diisocyanate (MDI) (CAS # 101-68-8)

Polymeric MDI (CAS # 9016-87-9)

**Pennsylvania RTK Hazardous Substances**

Diphenylmethane-4,4'-diisocyanate (MDI) (CAS # 101-68-8)

Polymeric MDI (CAS # 9016-87-9)

**California Prop. 65:** WARNING: This product contains the following chemical(s) known to the State of California to cause cancer:

None

**California Prop. 65:** WARNING: This product contains the following chemical(s) known to the State of California to be a reproductive toxin:

None

**International regulations**

**Chemical inventories**

United States inventory (TSCA 8b) - All components are listed or exempted.

**16. Other information**

**Hazardous Material  
Information System III  
(U.S.A.)**

Health: 2  
Flammability: 1  
Physical hazards: 1  
Personal Protection: X

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. HMIS® ratings are to be used with a fully implemented HMIS® program.

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**Notice to reader**

The information provided herein was believed to be accurate at the time of preparation or prepared from sources believed to be reliable, but it is the responsibility of the user to investigate and understand other pertinent sources of information, to comply with all laws and procedures applicable to the safe handling and use of the product and to determine the suitability of the product for its intended use. All products supplied are subject to current terms and conditions of sale. NO WARRANTY, EXPRESSED OR IMPLIED, IS PROVIDED CONCERNING THE PRODUCT OR THE MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE OR CONCERNING THE ACCURACY OF ANY INFORMATION, except that the product shall conform to specifications. Nothing contained herein constitutes an offer for the sale of any product.