# Safety Data Sheet

## Section 1, Identification

Identity: Tartan® MCP 1336B
Synonym: Isocyanate terminated polypropylene oxide pre-polymer.
Manufacturer's Name: MCPU Polymer Engineering LLC
Address: 826 E. 4th Street, Pittsburg, KS 66762
Emergency Tel. Number: 1-800-535-5053
Information Tel. Number: 1-620-231-4239

## Section 2, Hazard Identification

Warning: Contains Isocyanates. Do not breathe vapors or mists. Use with adequate ventilation. This is a contact sensitizer. Avoid contact with skin or eyes.

## Section 3, Composition Information on Ingredients

| Hazardous Ingredients | CAS Number | OHSA PEL | ACGIH TLV | Weight % |
|---|---|---|---|---|
| Methylene-bis-isocyanatobenzene (MDI) | 101-68-8 | 0.02 ppm | 0.005 ppm | ~50% |

## Section 4, First Aid Measures

**Route(s) of Entry:** **Inhalation:** 3 **Skin:** 2 **Ingestion:** 1
**Health Hazards (acute and chronic):** This material is a respiratory and skin sensitizer
**Carcinogenicity:** At very high concentrations, MDI has caused cancer in rats.
**Signs and Symptoms of Exposure:** Repeated inhalation of mists (during spraying operations) or vapors, at elevated temperatures, may cause flu like symptoms, the onset of which may be delayed by several hours. Extreme overexposure may result in permanent lung damage and/or death. In the event of exposure, consult a physician. Repeated skin exposure may cause irritation and possible skin sensitization.
**Medical Conditions Aggravated by Exposure:** Asthma and rash, persons already sensitized to isocyanate
**Emergency First Aid Procedures:** Contact a physician. If skin is contaminated, remove any contaminated clothing and wash skin with soap and water.
**Eye Contact**: flush with copious amounts of water for at least 15 min, consult a physician.
**Inhalation:** Remove to clean air, assist in breathing, if necessary, and consult a physician.

## Section 5, Fire and Explosion Hazard Data

**Flash Point (method used):** above 250°F **Flammable Limits:** NA
**LEL:** NA **UEL:** NA
**Extinguishing Media:** $CO_2$, Foam, dry chemical.

**Special Fire Fighting Procedures:** **If water is needed, use copious amounts because the reaction of water with hot isocyanate is vigorous and gives off large amounts of gas.**
**Unusual Fire and Explosion Hazards:** May release large quantities of gas. Vapors may contain isocyanates, which may be toxic. Vapors may also contain CO and nitrogen oxides, which are also toxic. Fire fighters must be equipped with self-contained breathing apparatus.

## Section 6, Accidental Release Measures

**Steps to be taken in Case Material is Released or Spilled:** Immediately confine the spill using absorbent materials and collect with a solid absorbent. After the bulk of the spill is absorbed, shovel the absorbent into open top drums. Decontaminate the area with the following solution:
**Decontamination Solution:** 0.5% liquid detergent and 3% aqueous ammonia in water.
**Waste Disposal Method:** Remove the top of empty drums and decontaminate with the above solution. The residue is not a Hazardous Waste under RCRA 40 CFR 261. Solidify and decontaminate any residues. Dispose of in a landfill following Federal and State guidelines.

## Section 7, Handling and Storage

**Ventilation: Local Exhaust:** Sufficient for general use. **Special:** Not needed
**Mechanical (General):** Sufficient for general use **Other:** None
**Protective Gloves:** Needed **Eye Protection:** Needed
**Other Protective Clothing or Equipment:** Not Normally Needed
**Work/Hygienic Practices-** Use Normal Good Housekeeping Practices; Keep out of Reach of Children. Wash exposed skin with soap and water during any breaks.
**Storage Temperature:** Keep between 20°C (68°F) and 40°C (104°F)

## Section 8, Exposure Controls/Personal Protection

**Respiratory Protection:** If the material is at an elevated temperature or in aerosol form, wear an approved organic cartridge respirator. Note that the odor threshold is above the ACGIH value and odor cannot be used as a determinator of respirator "break through".
**Protective Gloves:** Needed **Eye Protection:** Needed
**Other Protective Clothing or Equipment:** Not Normally Needed
**Precautions to be taken in Handling and Storage:** Always wear chemical gloves and eye protection. If the material is heated or sprayed wear an approved organic cartridge respirator,

## Section 9, Physical and Chemical Properties

| | | | |
|---|---|---|---|
| Boiling Point: | NA | Specific Gravity: | 1.20 |
| Vapor Pressure: | NA | Melting Point: | NA |
| Vapor Density: | NA | Evaporation Rate: (Butyl Acetate = 1) | NA |

**Solubility in water:** Reacts with water to evolve voluminous amounts of $CO_2$ gas
**Appearance and odor:** Colorless to amber viscous liquid. Very minimal aromatic odor at room temperature

## Section 10, Reactivity Data

**Stability:** ___ Unstable **Conditions to avoid:** Temperatures above 120°F
_X_ Stable _____

**Incompatibilities (materials to avoid contact with):** Water, ammonia, alcohols, amines, acids and alkalis
**Hazardous Polymerization:** ___ May Occur _X_ Will Not Occur.
**Hazardous Decomposition Products:** isocyanates, carbon monoxide, nitrogen oxides

## Section 11, Toxicological Information

**Product LD50 (Oral)** : Polymeric MDI- Rat >10000 mg/kg
**(Dermal)** : Polymeric MDI- Rabbit > 5000 mg/kg
**LC50 Inhalation** : Polymeric MDI- Rat = 490 mg/$m^3$ 4 hours (respirable aerosol)

## Section 12, Ecological Information

**Environmental Fate and Distribution**: It is unlikely that significant environmental exposure in the air or water will arise.
**Persistence ad Degradation:** Immiscible with water, but will react with water to produce an inert plastic product and copious amounts of $CO_2$ gas..
**Toxicity:** (For polymeric MDI): LC50 (Zebra Fish) > 1000 mg/l, EC50 (Daphnia magna) > 1000 mg/l, EC50 (E. Coli) > 100 mg/l.

## Section 13, Disposal Considerations

Do not pour into waterways or down drains or sewers. Small amounts and empty drums should be treated with the decontamination solution (see Section 6). Solidify any liquids with an absorbent solid and dispose of in a landfill following state and federal regulations.

## Section 14, Transportation Information

**Land Transport (DOT): Not regulated.**
**Sea Transport (IMDG): Not regulated**
**Air Transport (ICAO/IATA): Not regulated**

## Section 15, Regulatory Information

**US Regulations**
**OSHA:** This material is considered a hazardous material under the criteria outlined in the OSHA Hazard Communication Standard (HCS) (29 CFR 1910.1200)
**SARA Section 313:** This product contains diisocyanates and is reportable under Sara Section 313. This material contains about 40% diisocyanates (C120). The reportable quantity is over 50,000 lb.
**Toxic Substances Control Act:** All substances in this product are listed on the TSCA inventory.
**CERCLA** (Comprehensive Environmental Response, Compensation and Liability Act):
Any spill above 5,000 lb. Should be reported to the appropriate authorities.
**State Regulations**: No specific state regulations are known for this material.

## Section 16, Other Information

**HMIS Ratings:** Health-2 Flammability- 0 Reactivity- 1