

# MATERIAL SAFETY DATA SHEET

I STRATA TECH INC  
3601 104<sup>th</sup> STREET  
DES MOINES, IA 50322  
INFO PHONE (515) 251-7770

HEALTH: 3  
FLAMMABILITY: 1  
REACTIVITY: 1

PRODUCT: STRATATHANE ST-504  
VARI-LOC INJECTION RESIN  
FAMILY: Isocyanate Prepolymer  
REV: January 10, 2004

## II HAZARDOUS INGREDIENTS

|   | CAS       | OSHA PEL | ACGIH TLV | CONCENTRATION |
|---|-----------|----------|-----------|---------------|
| Diisobutyl Phthalate                    | 84-69-5   |          |           | < 10.0%       |
| Dimethyl Glutarate                      | 1119-40-0 |          |           | < 6.0%        |
| Diphenylmethane 4,4'-Diisocyanate (MDI) | 101-68-8  |          |           | < 5.0%        |
| Higher Oligomers of MDI                 | 9016-87-9 |          |           | < 6.0%        |
| Dimethyl Adipate                        | 627-93-0  |          |           | < 2.0%        |
| Dimethyl Succinate                      | 106-65-0  |          |           | < 3.0%        |

## III PHYSICAL AND CHEMICAL CHARACTERISTICS

Physical State: Liquid Density: 9.163 lbs/gal  
Boiling Point: Not Determined 45 lbs net: 18.56 liters  
Freezing Point: Below 32°F (0°C) for MDI 8 lbs net: 3.43 liters  
Vapor density: 8.5 (MDI) (Air=1) Viscosity:  
Specific Gravity: 1.1 at 77°F (25°C) Volatile %: Negligible  
Vapor Pressure: < 1 x 10<sup>-5</sup> mm Hg at 77°F (25°C) for MDI  
Appearance & Odor: Brown liquid; sweet odor.  
Solubility in Water: Soluble. Reacts with water to liberate CO<sub>2</sub> gas.

## IV FIRE AND EXPLOSION HAZARD DATA

Flash Point: >212°F (100°C)  
Extinguishing Media: Dry chemical, carbon dioxide, foam, water spray for large fires.  
Fire Fighting: Wear self-contained positive pressure breathing apparatus and full fire fighting clothing. Vapors & other irritating highly toxic gases may be generated by thermal decomposition or combustion. At temperatures greater than 400°F, isocyanates can polymerize and decompose which can cause pressure build-up in closed containers. Explosive rupture is possible. Use cold water to cool fire-exposed containers.

## V REACTIVITY DATA

Stability: Stable under normal handling conditions.  
Incompatibilities: Water, amines, strong bases, alcohols. Will corrode to copper alloys and aluminum.  
Hazardous  
Polymerization: May occur; avoid temperature above 400°F (204°C), avoid contact with moisture or other materials which react with isocyanates.  
Hazardous  
Decomposition: By heat and fire: carbon monoxide, oxides of nitrogen, traces of HCN, MDI and TDI vapors or aerosols.

**VI HEALTH HAZARD DATA**      *EFFECTS OF OVEREXPOSURE AND PRIMARY ROUTES OF ENTRY*

Eyes: Irritating causing tearing, reddening and swelling. If untreated, corneal damage can occur and injury is slow to heal.  
 Skin: May cause some irritation such as reddening, swelling, rash, scaling or blistering.  
 Ingestion: Can result in sore throat, abdominal pain, nausea, vomiting and diarrhea.  
 Inhalation: Burning in nose, throat and lungs causing breathing difficulty; possible asthma attack, bronchitis, bronchial spasm, pulmonary edema and chemical or hypersensitive pneumonitis.

**VII EMERGENCY AND FIRST AID PROCEDURES**

Eyes: Flush open eyes immediately with lukewarm water for 15 minutes; see Physician.  
 Skin: Remove contaminated clothing; wash thoroughly, wash with soap & water. Contact physician.  
 Ingestion: **Do not induce vomiting.** Give 2 cups of milk or water to drink. Contact Physician immediately.  
 Inhalation: Remove to fresh air. Give oxygen if breathing becomes difficult. See Physician.

**VIII PRECAUTIONS FOR SAFE HANDLING AND USE**

Spills: Evacuate and ventilate spill area; dike spill; blanket with protein foam; pumped into closed but not sealed containers; absorb isocyanates with sawdust or other absorbent, shovel into suitable unsealed containers, transport outside and treat with large amounts of water, let stand uncovered for 48 hours; decontaminate floor with water.  
 Disposal: Incinerate or landfill waste in accordance with Local, State, and Federal regulations.  
 Handling: Sensitive to humidity; close container tightly after use. Do not reseal - can be contaminated by moisture. Avoid eye and skin contact. Wash thoroughly after handling. Remove contaminated clothing immediately and launder completely or discard.  
 Storage: Stored between 64°F and 86°F. Shelf life is 6 months. If exposed to high heat, 400°F (204°C), container may become pressurized and possibly rupture.

**IX CONTROL MEASURES**

General: No special control measures at ambient conditions where work area is adequately ventilated. When airborne concentrations exceed the Federal OSHA exposure standard (0.02 ppm TLV) wear MSHA/NIOSH approved respirator.  
 Ventilation: As required to maintain work area below TLV.  
 Respiratory: If ventilation is insufficient, wear breathing apparatus or vapor respirator.  
 Eyes: Liquid chemical goggles, vapor resistant goggles or full face shield as required.  
 Skin: Permeation resistant gloves and clean body-covering clothing.

**X SHIPPING AND LABEL DATA**

DOT Shipping Name: Plastic Material, Liquid, NOS      Hazard Class: N/A

Labels / Placards: ST-504 not regulated as a USDOT hazardous material

| IATA   | <u>CARGO</u> | <u>PASSENGER</u> | <u>NFPA 704M RATINGS</u> | <u>HMIS RATINGS</u> | <u>CATEGORY</u> | <u>NFPA</u> | <u>HMIS</u> |
|--------|--------------|------------------|--------------------------|---------------------|-----------------|-------------|-------------|
| UN #:  | N/A          | N/A              | 0= Insignificant         | 0= Minimal          | Health          | 3           | 3           |
| Limit: | N/A          | N/A              | 1= Slight                | 1= Slight           | Flammability:   | 1           | 1           |
| Class: | N/A          | N/A              | 2= Moderate              | 2= Moderate         | Reactivity:     | 1           | 1           |
| Instr: | N/A          | N/A              | 3= High                  | 3= Serious          | Other:          | -           | -           |
|        |              |                  | 4= Extreme               | 4= Severe           |                 |             |             |