MATERIAL SAFETY DATA SHEET

I STRATA TECH INC PRODUCT: STRATATHANE ST-504

VARI-LOC INJECTION RESIN

DES MOINES, IA 50322 FAMILY: Isocyanate Prepolymer

INFO PHONE (515) 251-7770 REV: January 1, 2000

II HAZARDOUS INGREDIENTS

3601 104th STREET

| HAZARDOUS INGREDIENTS | OSHA | ACGIH | CONCEN- | |
|---|-----------|-------|---------|---------|
| | CAS | PEL | TLV | TRATION |
| 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% |

Ш 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 10-5 mm Hg at 77°F (25°C) for MDI

Appearance & Odor: Brown liquid; sweet odor.

Solubility in Water: Soluble. Reacts with water to liberate CO2 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.

\mathbf{V} REACTIVITY DATA

Stable under normal handling conditions. Stability:

Water, amines, strong bases, alcohols. Will corrode to copper alloys and aluminum. Incompatibilities:

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 o | CARGO | PASSENGER | NFPA 704M RATINGS | HMIS RATINGS | CATEGORY | NFPA | HMIS |
|--------|-------|-----------|-------------------|--------------|---------------|------|-------------|
| 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 | | | |