1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

- **Product Code**: 35506
- **Trade Name**: MICROPOSIT PRIMER
- **Manufacturer/Supplier**: Shipley Company
- **Address**: 455 Forest St. Marlborough, Massachusetts 01752
- **Phone Number**: (508) 481-7950
- **Emergency Phone Number**: (508) 481-7950
- **Chemtrec #**: (800) 424-9300
- **MSDS first issued**: 8 July 1996
- **MSDS data revised**: 7 August 1997
- **Prepared By**: Gregory S. Dripps
- **Local Sales Company**: Shipley Company, 455 Forest Street, Marlboro, MA 01752

2. COMPOSITION/INFORMATION ON THE INGREDIENTS

<table>
<thead>
<tr>
<th>Component Name</th>
<th>CAS# / Codes</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hexamethyldisilazane</td>
<td>999-97-3</td>
<td>95.00 - 99.00</td>
</tr>
<tr>
<td>Siloxane Compound</td>
<td></td>
<td>1.00 - 5.00</td>
</tr>
<tr>
<td>Ammonia</td>
<td>7664-41-7</td>
<td>0.10 - 1.00</td>
</tr>
</tbody>
</table>

3. HAZARD IDENTIFICATION

- **Main Hazards**: Flammable - Water Reactive - Nervous System - Skin - Eye - Respiratory System
- **Routes of Entry**: Inhalation, ingestion, eye and skin contact, absorption.
- **Carcinogenic Status**: Not considered carcinogenic by NTP, IARC and OSHA
- **Target Organs**: Nervous System - Skin - Eye - Lung
- **Health Effects - Eyes**: Liquid or vapor may cause pain, transient irritation and superficial corneal effects. Liquid, mist or vapor at high concentrations will cause conjunctival irritation and possibly corneal damage.
- **Health Effects - Skin**: Repeated or prolonged contact may cause chemical burns. Repeated or prolonged contact may produce defatting of the skin leading to irritation and dermatitis. Vapor may be absorbed through the skin in toxicologically significant amounts.
- **Health Effects - Ingestion**: Exposure to vapor at high concentrations may have the following effects:
- **Health Effects - Inhalation**: Exposure to vapor at high concentrations may have the following effects:

4. FIRST AID MEASURES

- **First Aid - Eyes**: Immediately flush the eye with plenty of water for at least 15 minutes, holding the eye open. Obtain medical attention if soreness or redness persists.
- **First Aid - Skin**: Wash skin with water. Obtain medical attention if blistering occurs or redness persists.
- **First Aid - Ingestion**: Wash out mouth with water. Obtain medical attention.
- **First Aid - Inhalation**: Remove from exposure. If there is difficulty in breathing, give oxygen. Seek medical attention if symptoms persist.
- **Advice to Physicians**: Treat symptomatically.

5. FIRE FIGHTING MEASURES

- **Extinguishing Media**: Use alcohol resistant foam.
- **Special Fire-Fighting Procedures**: This product may give rise to hazardous vapors in a fire. Vapors can travel a considerable distance to a source of ignition and result in flashback.
- **Unusual Fire & Explosion Hazards**: Pressure may build up in closed containers with possible liberation of combustible vapors. Ammonia will be generated from reaction with water.
- **Protective Equipment for Fire-Fighting**: Wear full protective clothing and self-contained breathing apparatus.

6. ACCIDENTAL RELEASE MEASURES

- **Spill Procedures**: Contain and absorb using earth, sand or other inert material. Transfer into suitable containers for recovery or disposal.
- **Personal Precautions**: Wear appropriate protective clothing. Wear respiratory protection. Eliminate all sources of ignition.
- **Environmental Precautions**: Prevent the material from entering drains or water courses.

7. HANDLING AND STORAGE

- **Handling**: Use local exhaust ventilation. Avoid contact with eyes, skin and clothing. Keep container tightly closed when not in use.
- **Storage**: Store in original containers. Store away from sources of heat or ignition. Storage area should be:
- **Other**: None known.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- **Occupational Exposure Standards**: None assigned.
- **Hexamethyldisilazane**: ACGIH: TLV 25ppm (17mg/m3) 8h TWA. ACGIH: STEL 35ppm (24mg/m3) 15min TWA. OSHA: PEL 50ppm (35mg/m3) 8h TWA. UK EH40: OES 25ppm (17mg/m3) 8h TWA. UK EH40: OES 35ppm (24mg/m3) 15min TWA.
- **Engineering Control Measures**: Engineering methods to prevent or control exposure are preferred. Methods include process or personal enclosure, mechanical ventilation (local exhaust), and control of process conditions.
- **Respiratory Protection**: Respiratory protection if there is a risk of exposure to high vapor concentrations. The specific respirator selected must be based on the airborne concentration found in the workplace and must not exceed the working limits of the respirator.
- **Hand Protection**: Butyl rubber or nitrile gloves.
9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid
Color: Clear
Odor: Mild Amine
VOC (g/l): 443.1
Specific Gravity: 0.773
pH: Neutral
Boiling Range/Point (°C/F): 126 / 259
Flash Point (PMCC) (°C/F): 9 / 48
Explosion Limits (%): Lower limit 0.7 at 40 °C. Upper limit 31 at 120 C.
Solubility in Water: Reacts with water.
Vapor Density (Air = 1): Heavier than air.
Evaporation Rate: Slower than ether
Vapor Pressure: Hexamethyldisilazane: 23 mmHg at 20 °C.

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions.
Conditions to Avoid:
- High temperatures
- Static discharge
- Exposure to water or moisture
Incompatibilities:
- Water
- Acids
Hazardous Polymerization: Will not occur.
Hazardous Decomposition Products:
- carbon monoxide
- Carbon Dioxide
- oxides of nitrogen
- Silicon

11. TOXICOLOGICAL INFORMATION

Acute Data:
Hexamethyldisilazane: Oral LD50 (rat) 850mg/kg. Inhalation LC50 (rat) 8700mg/litre/4h.
Chronic/Subchronic Data:
No relevant studies identified.
Genotoxicity:
No adverse effects are expected.
Reproductive/Developmental Toxicity:
No adverse reproductive or fetal developmental effects are expected.
Additional Data:
None known.

12. ECOLOGICAL INFORMATION

Mobility:
No data.
Persistence/Degradability:
No data.
Bio-accumulation:
No data.
Ecotoxicity:
No data.

13. DISPOSAL CONSIDERATIONS

Product Disposal:
Incineration is the recommended method of disposal. Dispose of in accordance with all applicable local and national regulations.
Container Disposal:
Labels should not be removed from containers until they have been cleaned. Empty containers may contain hazardous residues. Dispose of containers with care.

14. TRANSPORT INFORMATION

DOT Ground:
Flammable liquids, corrosive, n.o.s.
UN Proper Shipping Name:
Flammable liquids, corrosive, n.o.s.
UN Class:
(3) Flammable Liquid
UN Number:
UN2924
UN Packaging Group:
II
N.O.S. 1:
Hexamethyldisilazane
N.O.S. 2:
Subsidiary Risks:
Corrosive
ADR/RID Substance Identification Number:
CLASS 3 - 26(b)
CERCLA RQ:
Ammonia (100#)
Marine Pollutant:
No.

15. REGULATORY INFORMATION

TSCA Listed:
Yes
TSCA Exemptions:
D.2.B B.2
MA Right To Know Law:
All components have been checked for inclusion on the Massachusetts Substance List (MSL). Those components present at the de minimus concentration have been identified in the hazardous ingredients section of the MSDS.
California Proposition 65:
This product does not contain materials which the State of California has found to cause cancer, birth defects or other reproductive harm.
SARA TITLE III-Section 311/312 Categorization (40 CFR 370):
Immediate, delayed, flammability, reactive hazard
SARA TITLE III-Section 313 (40 CFR 372):
This product does not contain a chemical which is listed in Section 313 at or above de minimis concentrations.

16. OTHER INFORMATION

NFPA Rating - FIRE:
4
NFPA Rating - HEALTH:
2
NFPA Rating - REACTIVITY:
1
NFPA Rating - SPECIAL:
water reactive
Revisions Highlighted:
Composition/Information on the Components
Abbreviations

CAS#: Chemical Abstract Services Number
ACGIH: American Conference of Governmental Industrial Hygienists
OSHA: Occupational Safety and Health Administration
TLV: Threshold Limit Value
PEL: Permissible Exposure Limit
STEL: Short Term Exposure Limit
NTP: National Toxicology Program
IARC: International Agency for Research on Cancer
R: Risk
S: Safety
LD50: Lethal Dose 50%
LC50: Lethal Concentration 50%
BOD: Biological Oxygen Demand
Koc: Soil Organic Carbon Partition Coefficient
TLm: Median Tolerance Limit

Disclaimer

The data contained herein is based on information that Shipley Company believes to be reliable, but no expressed or implied warranty is made with regard to the accuracy of such data or its suitability for a given situation. Such data relates only to the specific product described and not to such products in combination with any other product and no agent of Shipley Company is authorized to vary any of such data. Shipley Company and its agents disclaim all liability for any action taken or foregone on reliance upon such data.