MANNINGTON®

MATERIAL SAFETY DATA SHEET

SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: MT-800

Chemical Name: Mixture of adhesive resins in solvent

Product Use/Class: Solvent based vinyl seam sealer.

Company Information: **Mannington Mills, Inc.**
P.O. Box 30 - Route 45
75 Mannington Mills Road
Salem, New Jersey 08079

Phone Numbers: **General: (856) 935-3000**
Product Emergency: (866) 359-5602
Spill Response: (800) 424-9300

Effective Date: Jan 6, 2009 [Rev. 2] **Supercedes Date:** November 18, 2003

Reason for Revision: Product review and information updating.

SECTION 2 - COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS Number	Weight %	Exposure Guidelines				
			ACGIH - TLV		OSHA - PEL		Other
			TWA	STEL	TWA	Ceiling	
Tetrahydrofuran	109-99-9	27-32	50 ppm	100 ppm	200 ppm		
Methyl Ethyl Ketone	78-93-3	32-37	200 ppm	300 ppm	200 ppm		
Cyclohexanone	108-94-1	4-9	20 ppm	50 ppm	50 ppm		

Remaining ingredients are not considered hazardous per OSHA Hazard Communication Standard.

SECTION 3 - HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW
Form: Clear liquid
Color: Colorless
Odor: Sweet ketone odor

WARNING STATEMENTS
DANGER! Extremely flammable liquid and vapor. Vapor harmful. Harmful or fatal if swallowed. Vapors may cause flash fire of explosion. Aspiration hazard if swallowed – can enter lungs and cause damage. Harmful if inhaled.

POTENTIAL HEALTH EFFECTS

Primary Routes of Exposure: Eyes, skin, respiratory system.

- **Eye Contact:** Can cause moderate to severe irritation, including discomfort, swelling, corneal damage, and blindness. Vapors can cause slight to moderate irritation.
- **Skin Contact:** Can cause moderate irritation, swelling, de-fatting, and dermatitis. Ingredients in Section 2 are absorbed through the skin into the blood upon contact.
- **Inhalation:** Can cause nasal and respiratory irritation, including dizziness, weakness, fatigue, nausea, coughing, difficulty in breathing, headache, possible unconsciousness, and asphyxiation at high exposure levels.
- **Ingestion:** Can cause gastrointestinal irritation, nausea, vomiting, and diarrhea. The possibility of aspiration of vapors into the lungs can lead to serious damage and chemical pneumonia.
- **Chronic:** Chronic exposure by inhalation and skin absorption can cause damage to lungs, kidneys, liver, and central nervous system, and produce effects on the heart.
- **Other:** No information.

Refer to Section 11 for toxicological information.

SECTION 4 - FIRST AID MEASURES

If in Eyes: Flush with water for 15 minutes. Get immediate medical attention.
If on Skin: Wash with soap and water. Call physician if irritation occurs.
If Inhaled: Move person to fresh air. Call physician immediately. If breathing stops administer artificial respiration.
If Swallowed: Do not induce vomiting. Call physician immediately.

SECTION 5 - FIRE FIGHTING MEASURES

Flash Point (° F): 23, Setaflash CC.
Lower Explosive Limit (LEL) %: 2.6
Upper Explosive Limit (UEL) %: 12.8
Auto-Ignition Temperature: 759 ° F.
OSHA Flammability Classification: Class 1B Flammable liquid.
Hazardous Products of Combustion: Material may produce CO, CO_2, H_2O, hydrocarbons, smoke, and materials listed in Section 2.
Extinguishing Media: Alcohol foam, CO_2, and dry chemical.
Unusual Fire and Explosion Hazards: Material is highly volatile and readily gives off vapors which may travel along the ground and be ignited by pilot lights, sparks, or other sources of ignition.
Fire Fighting Equipment: Wear self contained breathing apparatus with a full face piece operated in positive pressure demand mode.
Miscellaneous Advice: None

Refer to Section 10 for additional information.

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear protective clothing including appropriate respiratory gear.
Methods for Clean-up: Eliminate all ignition sources. Use spark proof tools and equipment. Dike and pump liquid to waste containers. Dispense sand, sawdust, or vermiculite and absorb spill residue. Shovel into secure containers of solvent proof construction. Do not allow into waterways, sewers, or storm drains.

Refer to Section 13 for disposal information.
Refer to Sections 14 and 15 for reportable quantity information.

SECTION 7 - HANDLING AND STORAGE

Handling: Use good hygienic practices. Do not open, dispense, or use around open flames, heat sources, or other sources of ignition. Large containers should be properly grounded during dispensing to avoid static discharge potential. Do not reuse containers. Do not puncture, drag, or slide container. Avoid prolonged or repeated breathing of vapor or mist. Reports have associated repeated or prolonged overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may be harmful or fatal.

*** KEEP OUT OF THE REACH OF CHILDREN. ***

Storage: Keep closures tight and containers upright to prevent leakage. Store in a cool, dry, well ventilated location. Store between 40 and 100 ^{o}F. Do not store near heat, sparks, or flame. Extinguish pilot lights.

Consult the Mannington Professional Installation Handbook for additional information on handling and storage.

SECTION 8 - EXPOSURE CONTROLS / PERSONAL PROTECTION

Engineering Controls: Use sufficient ventilation, in volume and pattern, to keep air contaminant concentrations below PEL or TLV. Work areas must be free of all flame and ignition sources. Do not use in confined spaces without proper ventilation and personal protection.
Respiratory Protection: If PEL or TLV is exceeded, use a NIOSH/MSHA approved respirator, or a positive pressure supplied air respirator. Dust masks are not acceptable to prevent inhalation hazards.
Eye Protection: Wear splash goggles, face shield, and/or full face respirator if contact with liquid is likely.
Hand and Skin Protection: Wear solvent impermeable synthetic rubber gloves where contact with liquid is likely. Wear solvent resistant clothing where splash potential exists.
Other Protective Equipment: No information.

<u>Hygienic Practices</u>: Always wash hands before eating, smoking or using toilet facilities. Do not smoke in any chemical handling or storage area. Food or beverages should not be consumed anywhere this product is handled or stored. Wash thoroughly after handling.

SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Clear thin liquid
Physical State: Liquid
Melting Point: Not applicable
Boiling Point (° F): 175
Density: 0.83 grams/cm^3
Vapor Density (Air = 1): 2.5
Specific Gravity (Water = 1.0): 0.83
Water Solubility: Moderately soluble.
Volatiles (Wt. %): 72
VOC (Grams Per Liter): 684
Vapor Pressure (mm Hg@20°C): 78
Evaporation Rate (Butyl Acetate = 1): 5.7
pH: Not applicable
Decomposition Temperature: No information

SECTION 10 - STABILITY AND REACTIVITY

Conditions to Avoid: Open flames, sparks, ignition sources.
Materials to Avoid: Oxidizers
Stability: Stable
Hazardous Reactions: None known.
Hazardous Polymerization: Will not occur.
Hazardous Decomposition Products: See Section 5 - Products of Combustion.

SECTION 11 - TOXICOLOGICAL INFORMATION

Product LD_{50} (Oral): Tetrahydrofuran (Rat) – 1650 mg/kg. Cyclohexanone (Rat) – 1800 mg/kg. Methyl Ethyl Ketone (Rat) – 2.7 – 5.6 g/kg, slightly toxic.

Product LD_{50} (Dermal): Cyclohexanone (Rabbit) – 1 ml/kg. Methyl Ethyl Ketone (Rabbit) – 5.0 – 13 g/kg, slightly toxic.

Product LC_{50}: Tetrahydrofuran (Rat) – 12,000 ppm/3 hrs. Cyclohexanone (Rat) – 8000 ppm/4 hrs. Methyl Ethyl Ketone (Rat) – Estimated > 5000 ppm/6 hrs, based in current studies.

Immediate (Acute) Effects: Cyclohexanone – Eye Irritation (Rabbit), Draize: 20 mg – Severe. Skin Irritation (Rabbit), Open Draize: 500 mg – Mild.
Methyl Ethyl Ketone – Eye Irritation (Rabbit) 20 mg – Severe. Skin: Not a skin sensitizer based on human patch test.

Delayed (Subchronic & Chronic) Effects: Tetrahydrofuran and Cyclohexanone are ACGIH confirmed animal carcinogens (A3) with unknown relevance to humans.
Tetrahydrofuran: Mutagenicity – No genetic damage in mammalian cell cultures or in animals.
Reproductive effects - Animal testing has produced no adverse effects.

SECTION 12 - ECOLOGICAL INFORMATION

Degradation: Solvent components readily volatilize when released to air, ground, or water. Bio-degradation in soil is gradual dependant on soil conditions. Degradation in air is via photochemical reaction (hydroxy radicals) with expected half lives of 1 to 3 days for tetrahydrofuran, 1 to 10 days for cyclohexanone, and 5.5 days for methyl ethyl ketone. Little to no bioaccumulation is expected.
Ecotoxicity: Tetrahydrofuran: LC_{50} (Fathead Minnows) – 2160 mg/L/96 hr. EC_{50} (Daphnia Magna – Water Flea) > 10, 000 mg/L/24 hr. Cyclohexanone: LC_{50} (Rainbow Trout) – 44 mg/L/96 hr; 20 mg/L $CaCO_3$. Methyl Ethyl Ketone: LC_{50} (Fish) = 4600 – 5600 ppm. EC_{50} (Invertebrates) = 1950 – 8890 ppm.

SECTION 13 - DISPOSAL CONSIDERATIONS

US EPA RCRA Status: This product meets the category definition of a hazardous waste. Hazardous waste number – D001; hazardous waste classification – Ignitable waste.
Disposal Considerations: Dispose of as a flammable hazardous waste.
Disposal Method: Do not dispose at landfill. Dispose by incineration at permitted facility. Disposal should be done in accordance with all local, state and federal (40 CFR Part 261) regulations. Be aware that state and local requirements differ widely depending on location and may in many cases be different from federal rules.

SECTION 14 - TRANSPORT INFORMATION

The information provided in this section is for information only. Please apply the appropriate regulations to properly classify your shipment for transport.
DOT Proper Shipping Name: Adhesives, N.O.S. (Contains Tetrahydrofuran, MEK, Cyclohexanone), Flammable Liquid
DOT Hazard Class: 3
DOT UN/NA Number: UN 1193
Packing Group: PG II
Emergency Response Guide Number: Not known.
Other: DOT LABELS / PLACARDS: Flammable

SECTION 15 - REGULATORY INFORMATION

U.S. Federal Regulations:
CERCLA: Tetrahydrofuran RQ-1000 lbs. Cyclohexanone RQ-5000 lbs. Methyl Ethyl Ketone RQ-5000 lbs.
Volatile Organic Compounds (VOC's): Tetrahydrofuran, Cyclohexanone, Methyl Ethyl Ketone.
Hazardous Air Pollutants (HAP's): Tetrahydrofuran, Cyclohexanone, Methyl Ethyl Ketone.
SARA Section 311/312: Immediate (acute) health hazard; Delayed (chronic) health hazard; Fire hazard.
SARA Section 313: No components at or above EPA reporting thresholds.
Toxic Substances Control Act: All components are listed on the TSCA inventory.
Inventory Status: Listed
Export Notification: None
Other: California Proposition 65: Contains no components requiring notification.

SECTION 16 - OTHER INFORMATION

Hazard Ratings	Health	Fire	Reactivity	Additional Information
Suggested NFPA Rating	2	3	0	
Suggested HMIS Rating	2	3	0	

Disclaimer:

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Legend:

N.E. - Not Established
N.A. - Not Available
N/A - Not Applicable
C - Ceiling (Exposure Levels)
PEL - Permissible Exposure Limits
OEL - Occupational Exposure Limit
TSCA - Toxic Substances Control Act
NFPA - National Fire Protection Association
TLV - Exposure Limits Developed by ACCIH
MSHA - Mine Safety and Health Administration
NIOSH - National Institute for Occupational Safety
OSHA - Occupational Safety and Health Administration
HAZCOM - Hazard Communication Standard (29CFR1910.1200)
ACGIH - American Conference of Government Industrial Hygienists
CERCLA - Comprehensive Environmental Response, Comprehensive and Liability Act
S - Skin
ppm - Parts per Million
° F. - Degrees Fahrenheit
° C. - Degrees Centigrade
STEL - Short-Term Exposure Limit
CIH - Certified Industrial Hygienist
TWA - Time Weighted Average