Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

MANUFACTURER: 3M
DIVISION: Industrial Adhesives and Tapes Division
ADDRESS: 3M Center, St. Paul, MN 55144-1000

EMERGENCY PHONE: 1-800-364-3577 or (651) 737-6501 (24 hours)

Issue Date: 09/13/12
Supercedes Date: 08/24/11
Document Group: 10-0381-3

Product Use:
Intended Use: Adhesive
Specific Use: hot-melt adhesive

SECTION 2: INGREDIENTS

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethylene-Vinyl Acetate Polymer</td>
<td>Trade Secret</td>
<td>30 - 50</td>
</tr>
<tr>
<td>Hydrocarbon Resin</td>
<td>68478-07-9</td>
<td>20 - 40</td>
</tr>
<tr>
<td>Polyolefin Wax</td>
<td>8002-74-2</td>
<td>10 - 20</td>
</tr>
<tr>
<td>Hydrocarbon Resin</td>
<td>Trade Secret</td>
<td>10 - 30</td>
</tr>
</tbody>
</table>

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Specific Physical Form: Waxy Solid
Odor, Color, Grade: tan, odorless.
General Physical Form: Solid
Immediate health, physical, and environmental hazards: May cause thermal burns.

3.2 POTENTIAL HEALTH EFFECTS
**Eye Contact:**
Thermal Burns: Signs/symptoms may include severe pain, redness and swelling, and tissue destruction.

Vapors from heated material may cause eye irritation. Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

**Skin Contact:**
Thermal Burns: Signs/symptoms may include intense pain, redness and swelling, and tissue destruction.

**Inhalation:**
Vapors from heated material may cause irritation of the respiratory system. Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

**Ingestion:**
Physical Blockage: Signs/symptoms may include cramping, abdominal pain, and constipation.

**3.3 POTENTIAL ENVIRONMENTAL EFFECTS**

Intended use, foreseeable potential misuses, and proper disposal of this preparation are unlikely to result in the release of preparation substances to air, water, or soil.

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**SECTION 4: FIRST AID MEASURES**

**4.1 FIRST AID PROCEDURES**

The following first aid recommendations are based on an assumption that appropriate personal and industrial hygiene practices are followed.

**Eye Contact:** Immediately flush eyes with large amounts of water for at least 15 minutes. DO NOT ATTEMPT TO REMOVE MOLTEN MATERIAL. Get immediate medical attention.

**Skin Contact:** Immediately flush skin with large amounts of cold water for at least 15 minutes. DO NOT ATTEMPT TO REMOVE MOLTEN MATERIAL. Cover affected area with a clean dressing. Get immediate medical attention.

**Inhalation:** If signs/symptoms develop, remove person to fresh air. If signs/symptoms persist, get medical attention. No need for first aid is anticipated.

**If Swallowed:** Do not induce vomiting unless instructed to do so by medical personnel. Give victim two glasses of water. Never give anything by mouth to an unconscious person. Get medical attention.

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**SECTION 5: FIRE FIGHTING MEASURES**

**5.1 FLAMMABLE PROPERTIES**

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autoignition temperature</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>500 °F [Test Method: Cleveland Open Cup]</td>
</tr>
<tr>
<td></td>
<td>[Details: CONDITIONS: ASTM D-92-72]</td>
</tr>
<tr>
<td>Flammable Limits(LEL)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Flammable Limits(UEL)</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>

**5.2 EXTINGUISHING MEDIA**

Use fire extinguishers with class B extinguishing agents (e.g., dry chemical, carbon dioxide).

**5.3 PROTECTION OF FIRE FIGHTERS**
Special Fire Fighting Procedures: Wear full protective equipment (Bunker Gear) and a self-contained breathing apparatus (SCBA).

Unusual Fire and Explosion Hazards: Not applicable.

**Note:** See STABILITY AND REACTIVITY (SECTION 10) for hazardous combustion and thermal decomposition information.

### SECTION 6: ACCIDENTAL RELEASE MEASURES

**6.1. Personal precautions, protective equipment and emergency procedures**
Evacuate unprotected and untrained personnel from hazard area. The spill should be cleaned up by qualified personnel.

**6.2. Environmental precautions**
Reclaim undamaged product.

**Clean-up methods**
Collect as much of the spilled material as possible.

*In the event of a release of this material, the user should determine if the release qualifies as reportable according to local, state, and federal regulations.*

### SECTION 7: HANDLING AND STORAGE

**7.1 HANDLING**
Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Avoid prolonged or repeated skin contact. Avoid skin contact with hot material. For industrial or professional use only.

**7.2 STORAGE**
Store away from heat.

### SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**8.1 ENGINEERING CONTROLS**
Not applicable. Use in a well-ventilated area.

**8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)**

**8.2.1 Eye/Face Protection**
Avoid eye contact.
The following eye protection(s) are recommended: Indirect Vented Goggles.

**8.2.2 Skin Protection**
Avoid prolonged or repeated skin contact. Avoid skin contact with hot material. Gloves not normally required. Wear heat insulating gloves when handling this material to prevent thermal burns.

**8.2.3 Respiratory Protection**
Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection.
8.2.4 Prevention of Swallowing
Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water.

8.3 EXPOSURE GUIDELINES

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Authority</th>
<th>Type</th>
<th>Limit</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Polyolefin Wax</td>
<td>ACGIH</td>
<td>TWA, as fume</td>
<td>2 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

SOURCE OF EXPOSURE LIMIT DATA:
ACGIH: American Conference of Governmental Industrial Hygienists
CMRG: Chemical Manufacturer Recommended Guideline
OSHA: Occupational Safety and Health Administration
AIHA: American Industrial Hygiene Association Workplace Environmental Exposure Level (WEEL)

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

- Specific Physical Form: Waxy Solid
- Odor, Color, Grade: tan, odorless.
- General Physical Form: Solid
- Autoignition temperature: No Data Available
- Flash Point: 500 °F [Test Method: Cleveland Open Cup] [Details: CONDITIONS: ASTM D-92-72]
- Flammable Limits(LEL): Not Applicable
- Flammable Limits(UEL): Not Applicable
- Boiling Point: Not Applicable
- Density: 0.95 g/ml
- Vapor Density: Not Applicable
- Vapor Pressure: Nil
- Specific Gravity: 0.95 [Ref Std: WATER=1]
- pH: Not Applicable
- Melting point: No Data Available
- Solubility In Water: No Data Available
- Solubility in Water: Nil
- Evaporation rate: Not Applicable
- Hazardous Air Pollutants: 0 % weight [Test Method: Calculated]
- Volatile Organic Compounds: 0 g/l [Details: EU VOC content]
- Kow - Oct/Water partition coef: No Data Available
- Percent volatile: 0 % weight
- VOC Less H2O & Exempt Solvents: 0 g/l [Test Method: calculated SCAQMD rule 443.1]
- VOC Less H2O & Exempt Solvents: 0 lb/gal [Test Method: calculated SCAQMD rule 443.1]
- VOC Less H2O & Exempt Solvents: 0 % [Test Method: calculated per CARB title 2]
- Viscosity: Not Applicable
- Solids Content: 100 %

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable.

Materials and Conditions to Avoid:
10.1 Conditions to avoid
None known

10.2 Materials to avoid
None known

Hazardous Polymerization: Hazardous polymerization will not occur.

**Hazardous Decomposition or By-Products**

<table>
<thead>
<tr>
<th>Substance</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Carbon monoxide</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Toxic Vapor, Gas, Particulate</td>
<td>During Combustion</td>
</tr>
</tbody>
</table>

**SECTION 11: TOXICOLOGICAL INFORMATION**

Please contact the address listed on the first page of the MSDS for Toxicological Information on this material and/or its components.

**SECTION 12: ECOLOGICAL INFORMATION**

ECOTOXICOLOGICAL INFORMATION

Not determined.

CHEMICAL FATE INFORMATION

Not determined.

**SECTION 13: DISPOSAL CONSIDERATIONS**

Waste Disposal Method: Reclaim if feasible. If product can't be reclaimed, dispose of waste product in a sanitary landfill. Alternatively, incinerate the waste product in an industrial, commercial, or municipal incinerator. As a disposal alternative, incinerate in an industrial or commercial facility.

Since regulations vary, consult applicable regulations or authorities before disposal.

**SECTION 14: TRANSPORT INFORMATION**

ID Number(s):

Not regulated per U.S. DOT, IATA or IMO.
These transportation classifications are provided as a customer service. As the shipper YOU remain responsible for complying with all applicable laws and regulations, including proper transportation classification and packaging. 3M transportation classifications are based on product formulation, packaging, 3M policies and 3M understanding of applicable current regulations. 3M does not guarantee the accuracy of this classification information. This information applies only to transportation classification and not the packaging, labeling, or marking requirements. The original 3M package is certified for U.S. ground shipment only. If you are shipping by air or ocean, the package may not meet applicable regulatory requirements.

SECTION 15: REGULATORY INFORMATION

US FEDERAL REGULATIONS
Contact 3M for more information.

311/312 Hazard Categories:
Fire Hazard - No  Pressure Hazard - No  Reactivity Hazard - No  Immediate Hazard - Yes  Delayed Hazard - No

STATE REGULATIONS
Contact 3M for more information.

CHEMICAL INVENTORIES
The components of this product are in compliance with the chemical notification requirements of TSCA.

All applicable chemical ingredients in this material are listed on the European Inventory of Existing Chemical Substances (EINECS), or are exempt polymers whose monomers are listed on EINECS.  Contact 3M for more information.

INTERNATIONAL REGULATIONS
Contact 3M for more information.

This MSDS has been prepared to meet the U.S. OSHA Hazard Communication Standard, 29 CFR 1910.1200.

SECTION 16: OTHER INFORMATION

NFPA Hazard Classification
Health: 1  Flammability: 1  Reactivity: 0  Special Hazards: None

National Fire Protection Association (NFPA) hazard ratings are designed for use by emergency response personnel to address the hazards that are presented by short-term, acute exposure to a material under conditions of fire, spill, or similar emergencies. Hazard ratings are primarily based on the inherent physical and toxic properties of the material but also include the toxic properties of combustion or decomposition products that are known to be generated in significant quantities.

Revision Changes:
Section 1: Product name was modified.
Section 3: Potential effects from eye contact was modified.
Section 7: Handling information was modified.
Section 8: Skin protection phrase was modified.
Section 8: Prevention of swallowing information was modified.
Page Heading: Product name was modified.
Section 14: ID Number(s) Template 1 was modified.
Section 2: Ingredient table was modified.
Section 8: Hand protection information was modified.
Copyright was modified.
Section 4: First aid for inhalation - none - was added.
Section 8: Exposure guidelines ingredient information was added.
Section 8: Exposure guidelines data source legend was added.
Section 8: Exposure guidelines information - none - was deleted.

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