Material Safety Data Sheet

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SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 3M(TM) Fastbond(TM) Contact Adhesive 30-NF Green
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: 11/15/11
Supercedes Date: 11/30/10
Document Group: 10-2979-2

Product Use:
Intended Use: waterbased contact adhesive
Specific Use: CONTACT 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>WATER</td>
<td>7732-18-5</td>
<td>40 - 50</td>
</tr>
<tr>
<td>POLYCHLOROPRENE</td>
<td>9010-98-4</td>
<td>30 - 40</td>
</tr>
<tr>
<td>GLYCEROL ESTERS OF ROSIN ACIDS</td>
<td>8050-31-5</td>
<td>5 - 10</td>
</tr>
<tr>
<td>ROSIN, POLYMER WITH PHENOL</td>
<td>68083-03-4</td>
<td>3 - 7</td>
</tr>
<tr>
<td>TOLUENE</td>
<td>108-88-3</td>
<td>1 - 3</td>
</tr>
<tr>
<td>METHYL ALCOHOL</td>
<td>67-56-1</td>
<td>1 - 2.5</td>
</tr>
<tr>
<td>ZINC OXIDE</td>
<td>1314-13-2</td>
<td>1 - 2</td>
</tr>
</tbody>
</table>

SECTION 3: HAZARDS IDENTIFICATION

3.1 EMERGENCY OVERVIEW

Odor, Color, Grade: green, slight odor of ammonia
General Physical Form: Liquid
Immediate health, physical, and environmental hazards: May cause allergic skin reaction. May cause target organ effects. Contains a chemical or chemicals which can cause birth defects or other reproductive harm.
3.2 POTENTIAL HEALTH EFFECTS

Eye Contact:
Moderate Eye Irritation: Signs/symptoms may include redness, swelling, pain, tearing, and blurred or hazy vision.

Skin Contact:
Moderate Skin Irritation: Signs/symptoms may include localized redness, swelling, itching, and dryness.

Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

May be absorbed through skin and cause target organ effects.

Inhalation:
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

Prolonged or repeated exposure may cause:
Respiratory Effects: Signs/symptoms may include cough, shortness of breath, chest tightness, wheezing, increased heart rate, bluish colored skin (cyanosis), sputum production, changes in lung function tests, and/or respiratory failure.

May be absorbed following inhalation and cause target organ effects.

Ingestion:
Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

May be absorbed following ingestion and cause target organ effects.

Target Organ Effects:
May cause blindness.

Prolonged or repeated exposure may cause:
Ocular Effects: Signs/symptoms may include blurred or significantly impaired vision.

Auditory Effects: Signs/symptoms may include hearing impairment, balance dysfunction and ringing in the ears.

Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

Olfactory Effects: Signs/symptoms may include decreased ability to detect odors and/or complete loss of smell.

Neurological Effects: Signs/symptoms may include personality changes, lack of coordination, sensory loss, tingling or numbness of the extremities, weakness, tremors, and/or changes in blood pressure and heart rate.

Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

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: Flush eyes with large amounts of water. If signs/symptoms persist, get medical attention.

Skin Contact: Remove contaminated clothing and shoes. Immediately flush skin with large amounts of water. Get medical
attention. Wash contaminated clothing and clean shoes before reuse.

**Inhalation:** Remove person to fresh air. If signs/symptoms develop, get medical attention.

**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.

### SECTION 5: FIRE FIGHTING MEASURES

#### 5.1 FLAMMABLE PROPERTIES

- **Autoignition temperature:** No Data Available
- **Flash Point:** Not Applicable
- **Flammable Limits (LEL):** Not Applicable
- **Flammable Limits (UEL):** Not Applicable

#### 5.2 EXTINGUISHING MEDIA

Material will not burn.

#### 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:** Closed containers exposed to heat from fire may build pressure and explode.

*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

#### 6.2 Environmental precautions

Dispose of collected material as soon as possible.

**Clean-up methods**

Observe precautions from other sections. Call 3M-HELPs line (1-800-364-3577) for more information on handling and managing the spill.

*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 breathing of vapors, mists or spray. Avoid eye contact with vapors, mists, or spray. Keep out of the reach of children.

#### 7.2 STORAGE

Store away from acids. Keep container in well-ventilated area. Keep container tightly closed. Keep from freezing.
SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 ENGINEERING CONTROLS
Use with appropriate local exhaust ventilation. Provide appropriate local exhaust ventilation on open containers. Use with functioning spray booth or local exhaust. Use general dilution ventilation and/or local exhaust ventilation to control airborne exposures to below Occupational Exposure Limits and/or control mist, vapor, or spray. If ventilation is not adequate, use respiratory protection equipment.

8.2 PERSONAL PROTECTIVE EQUIPMENT (PPE)

8.2.1 Eye/Face Protection
Avoid eye contact with vapors, mists, or spray.
The following eye protection(s) are recommended: Safety Glasses with side shields
Indirect Vented Goggles

8.2.2 Skin Protection
Avoid skin contact.
Select and use gloves and/or protective clothing to prevent skin contact based on the results of an exposure assessment. Consult with your glove and/or protective clothing manufacturer for selection of appropriate compatible materials.
Gloves made from the following material(s) are recommended: Nitrile Rubber
Polymer laminate

8.2.3 Respiratory Protection
Under normal use conditions, airborne exposures are not expected to be significant enough to require respiratory protection. Avoid breathing of vapors, mists or spray.
Select one of the following NIOSH approved respirators based on airborne concentration of contaminants and in accordance with OSHA regulations: Half facepiece or full face air-purifying respirator with organic vapor cartridges and N95 particulate prefilter
Select and use respiratory protection to prevent an inhalation exposure based on the results of an exposure assessment. Consult with your respirator manufacturer for selection of appropriate types of respirators.

8.2.4 Prevention of Swallowing
Do not eat, drink or smoke when using this product. Wash exposed areas thoroughly with soap and water. Not applicable.

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>METHYL ALCOHOL</td>
<td>ACGIH</td>
<td>TWA</td>
<td>200 ppm</td>
<td>Skin Notation*</td>
</tr>
<tr>
<td>METHYL ALCOHOL</td>
<td>ACGIH</td>
<td>STEL</td>
<td>250 ppm</td>
<td>Skin Notation*</td>
</tr>
<tr>
<td>METHYL ALCOHOL</td>
<td>OSHA</td>
<td>TWA</td>
<td>260 mg/m3</td>
<td></td>
</tr>
<tr>
<td>TOLUENE</td>
<td>ACGIH</td>
<td>TWA</td>
<td>20 ppm</td>
<td></td>
</tr>
<tr>
<td>TOLUENE</td>
<td>CMRG</td>
<td>STEL</td>
<td>75 ppm</td>
<td>Skin Notation*</td>
</tr>
<tr>
<td>TOLUENE</td>
<td>OSHA</td>
<td>TWA</td>
<td>200 ppm</td>
<td></td>
</tr>
<tr>
<td>TOLUENE</td>
<td>OSHA</td>
<td>CEIL</td>
<td>300 ppm</td>
<td></td>
</tr>
<tr>
<td>ZINC OXIDE</td>
<td>ACGIH</td>
<td>TWA, respirable fraction</td>
<td>2 mg/m3</td>
<td></td>
</tr>
<tr>
<td>ZINC OXIDE</td>
<td>ACGIH</td>
<td>STEL, respirable fraction</td>
<td>10 mg/m3</td>
<td></td>
</tr>
<tr>
<td>ZINC OXIDE</td>
<td>OSHA</td>
<td>TWA, as fume</td>
<td>5 mg/m3</td>
<td></td>
</tr>
<tr>
<td>ZINC OXIDE</td>
<td>OSHA</td>
<td>TWA, respirable fraction</td>
<td>5 mg/m3</td>
<td></td>
</tr>
<tr>
<td>ZINC OXIDE</td>
<td>OSHA</td>
<td>TWA, as total dust</td>
<td>15 mg/m3</td>
<td></td>
</tr>
</tbody>
</table>
* Substance(s) refer to the potential contribution to the overall exposure by the cutaneous route including mucous membrane and eye, either by airborne or, more particularly, by direct contact with the substance. Vehicles can alter skin absorption.

**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

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Odor, Color, Grade:</td>
<td>green, slight odor of ammonia</td>
</tr>
<tr>
<td>General Physical Form:</td>
<td>Liquid</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Flammable Limits (LEL)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Flammable Limits (UEL)</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>147.00 °F [Details: CONDITIONS: (methanol)]</td>
</tr>
<tr>
<td>Density</td>
<td>1.1 g/cm³</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>1.10 [Ref Std: AIR=1]</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>17.5 mmHg [@ 20 ºC]</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.100 [Ref Std: WATER=1]</td>
</tr>
<tr>
<td>pH</td>
<td>Approximately 10 Units not avail. or not appl.</td>
</tr>
<tr>
<td>Melting point</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>1.00 [Ref Std: WATER=1]</td>
</tr>
<tr>
<td>Hazardous Air Pollutants</td>
<td>&lt;=4.7 % weight [Test Method: Calculated]</td>
</tr>
<tr>
<td>Volatile Organic Compounds</td>
<td>37 g/l [Details: EU VOC content]</td>
</tr>
<tr>
<td>Kow - Oct/Water partition coef</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Percent volatile</td>
<td>50.00 % weight</td>
</tr>
<tr>
<td>VOC Less H2O &amp; Exempt Solvents</td>
<td>37 g/l [Test Method: tested per EPA method 24]</td>
</tr>
<tr>
<td>VOC Less H2O &amp; Exempt Solvents</td>
<td>0.31 lb/gal [Test Method: tested per EPA method 24]</td>
</tr>
<tr>
<td>VOC Less H2O &amp; Exempt Solvents</td>
<td>3.4 % [Test Method: tested per EPA method 24]</td>
</tr>
<tr>
<td>Viscosity</td>
<td>200.0 - 600.0 centipoise</td>
</tr>
</tbody>
</table>

### SECTION 10: STABILITY AND REACTIVITY

**Stability:** Stable.

**Materials and Conditions to Avoid:**

10.1 Conditions to avoid
   Heat

10.2 Materials to avoid
   Strong acids
   Strong oxidizing agents

**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>Aldehydes</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Carbon monoxide</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Carbon dioxide</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Hydrogen Chloride</td>
<td>During Combustion</td>
</tr>
<tr>
<td>Ketones</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: Incinerate in an industrial or commercial facility in the presence of a combustible material. As a disposal alternative, dispose of waste product in a facility permitted to accept chemical waste. Combustion products will include HCl. Facility must be capable of handling halogenated materials.

EPA Hazardous Waste Number (RCRA): Not regulated

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

SECTION 14: TRANSPORT INFORMATION

<table>
<thead>
<tr>
<th>ID Number</th>
<th>UPC</th>
<th>ID Number</th>
<th>UPC</th>
</tr>
</thead>
<tbody>
<tr>
<td>62-4276-6530-2</td>
<td>00-21200-21185-0</td>
<td>62-4276-6535-1</td>
<td></td>
</tr>
<tr>
<td>62-4276-7530-1</td>
<td>00-21200-21186-7</td>
<td>62-4276-7535-0</td>
<td></td>
</tr>
<tr>
<td>62-4276-8530-0</td>
<td>00-21200-21187-4</td>
<td>62-4276-9530-9</td>
<td>00-21200-21188-1</td>
</tr>
<tr>
<td>62-4276-9932-7</td>
<td>00-21200-31344-8</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.

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 - Yes

Section 313 Toxic Chemicals subject to the reporting requirements of that section and 40 CFR part 372 (EPCRA):

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOLUENE</td>
<td>108-88-3</td>
<td>1 - 3</td>
</tr>
<tr>
<td>METHYL ALCOHOL</td>
<td>67-56-1</td>
<td>1 - 2.5</td>
</tr>
<tr>
<td>ZINC OXIDE (ZINC COMPOUNDS)</td>
<td>1314-13-2</td>
<td>1 - 2</td>
</tr>
</tbody>
</table>

STATE REGULATIONS
Contact 3M for more information.

CALIFORNIA PROPOSITION 65

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>TOLUENE</td>
<td>108-88-3</td>
<td>*Female reproductive toxin</td>
</tr>
<tr>
<td>TOLUENE</td>
<td>108-88-3</td>
<td>*Developmental Toxin</td>
</tr>
</tbody>
</table>

* WARNING: contains a chemical or chemicals which can cause birth defects or other reproductive harm.

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: 2 Flammability: 0 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 use information was modified.
Section 16: Disclaimer (second paragraph) was modified.
Section 10: Hazardous decomposition or by-products table was modified.
Section 8: Skin protection - recommended gloves information was modified.
Section 15: Inventories information was modified.
Section 9: Density information was modified.
Section 9: Vapor density value was modified.
Section 9: Vapor pressure value was modified.
Section 9: Boiling point information was modified.
Section 5: Flammable limits (UE) information was modified.
Section 5: Flammable limits (LEL) information was modified.
Section 5: Autoignition temperature information was modified.
Section 5: Flash point information was modified.
Section 9: Property description for optional properties was modified.
Section 9: Specific gravity information was modified.
Section 9: pH information was modified.
Section 9: Melting point information was modified.
Section 8: Respiratory protection - recommended respirators guide was modified.
Section 9: Flash point information was modified.
Section 9: Flammable limits (LEL) information was modified.
Section 9: Flammable limits (UEL) information was modified.
Section 9: Autoignition temperature information was modified.
Section 14: ID Number(s) and/or UPC(s) Template 1 was modified.
Section 2: Ingredient table was modified.
Section 15: EPCRA 313 information was modified.
Section 8: Exposure guidelines ingredient information was modified.
Section 15: California proposition 65 ingredient information was modified.
Section 6: 6.2. Environmental precautions heading was modified.
Section 6: 6.1. Personal precautions, protective equipment and emergency procedures heading was modified.
Section 16: Web address was added.
Section 1: Address was added.
Copyright was added.
Company logo was added.
Telephone header was added.
Company Telephone was added.
Section 1: Emergency phone information was added.
Section 1: Emergency phone information was deleted.
Company Logo was deleted.
Copyright was deleted.
Section 16: Web address heading was deleted.
Section 1: Address line 1 was deleted.
Section 1: Address line 2 was deleted.

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