Safety Data Sheet

Copyright, 2017, 3M Company. All rights reserved. Copying and/or downloading of this information for the purpose of properly utilizing 3M products is allowed provided that: (1) the information is copied in full with no changes unless prior written agreement is obtained from 3M, and (2) neither the copy nor the original is resold or otherwise distributed with the intention of earning a profit thereon.

Document Group: 05-4869-3
Issue Date: 12/29/17
Version Number: 24.01
Supercedes Date: 02/25/16

SECTION 1: Identification

1.1. Product identifier
3009/ 7543 3M™ ESPE™ ADPER™ SCOTCHBOND™ MULTI-PURPOSE ADHESIVE

Product Identification Numbers
LE-F100-0350-9, 70-2010-0402-8, 70-2010-1235-1, 70-2010-1611-3, 70-2010-3501-4, FH-5000-3626-1, FH-5000-3627-9

1.2. Recommended use and restrictions on use

Recommended use
Dental Product, Adhesive

Restrictions on use
For use only by dental professionals

1.3. Supplier’s details
MANUFACTURER: 3M
DIVISION: Oral Care Solutions Division
ADDRESS: 3M Center, St. Paul, MN 55144-1000, USA
Telephone: 1-888-3M HELPS (1-888-364-3577)

1.4. Emergency telephone number
1-800-364-3577 or (651) 737-6501 (24 hours)

SECTION 2: Hazard identification

This document has been prepared in accordance with the U.S. OSHA Hazard Communication Standard, which requires the inclusion of all known hazards of the product or ingredients regardless of the potential risk. The risks of the hazards communicated in this document may vary depending on the potential for exposure.

2.1. Hazard classification
Serious Eye Damage/Irritation: Category 2B.
Skin Sensitizer: Category 1B.

2.2. Label elements
Signal word
Warning

Page 1 of 9
Symbols
Exclamation mark |

Pictograms

Hazard Statements
Causes eye irritation.
May cause an allergic skin reaction.

Precautionary Statements

Prevention:
Avoid breathing dust/fume/gas/mist/vapors/spray.
Wear protective gloves.
Wash thoroughly after handling.
Contaminated work clothing must not be allowed out of the workplace.

Response:
IF IN EYES:  Rinse cautiously with water for several minutes.  Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists:  Get medical advice/attention.
IF ON SKIN:  Wash with plenty of soap and water.
If skin irritation or rash occurs:  Get medical advice/attention.
Wash contaminated clothing before reuse.

Disposal:
Dispose of contents/container in accordance with applicable local/regional/national/international regulations.

SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISPHENOL A DIGLYCIDYL ETHER</td>
<td>1565-94-2</td>
<td>60 - 70</td>
</tr>
<tr>
<td>DIMETHACRYLATE (BISGMA)</td>
<td></td>
<td>Trade Secret *</td>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>868-77-9</td>
<td>30 - 40</td>
</tr>
<tr>
<td>TRIPHENYLANTIMONY</td>
<td>603-36-1</td>
<td>&lt; 0.5</td>
</tr>
</tbody>
</table>

*The specific chemical identity and/or exact percentage (concentration) of this composition has been withheld as a trade secret.

SECTION 4: First aid measures

4.1. Description of first aid measures

Inhalation:
Remove person to fresh air.  If you feel unwell, get medical attention.

Skin Contact:
Immediately wash with soap and water.  Remove contaminated clothing and wash before reuse.  If signs/symptoms develop, get medical attention.
Eye Contact:
Flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. If signs/symptoms persist, get medical attention.

If Swallowed:
Rinse mouth. Do not induce vomiting. Get immediate medical attention.

4.2. Most important symptoms and effects, both acute and delayed
See Section 11.1. Information on toxicological effects.

4.3. Indication of any immediate medical attention and special treatment required
Not applicable

SECTION 5: Fire-fighting measures

5.1. Suitable extinguishing media
In case of fire: Use a fire fighting agent suitable for ordinary combustible material such as water or foam to extinguish.

5.2. Special hazards arising from the substance or mixture
None inherent in this product.

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>Irritant Vapors or Gases</td>
<td>During Combustion</td>
</tr>
</tbody>
</table>

5.3. Special protective actions for fire-fighters
No special protective actions for fire-fighters are anticipated.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Ventilate the area with fresh air. Refer to other sections of this SDS for information regarding physical and health hazards, respiratory protection, ventilation, and personal protective equipment.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Contain spill. Collect as much of the spilled material as possible. Place in a closed container approved for transportation by appropriate authorities. Clean up residue with detergent and water. Seal the container. Dispose of collected material as soon as possible in accordance with applicable local/regional/national/international regulations.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
A no-touch technique is recommended. If skin contact occurs, wash skin with soap and water. Acrylates may penetrate commonly-used gloves. If product contacts glove, remove and discard glove, wash hands immediately with soap and water and then re-glove. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not get in eyes, on skin, or on clothing. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Contaminated work clothing should not be allowed out of the workplace. Avoid release to the environment. Wash contaminated clothing before reuse.
7.2. Conditions for safe storage including any incompatibilities
No special storage requirements.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
No occupational exposure limit values exist for any of the components listed in Section 3 of this SDS.

8.2. Exposure controls

8.2.1. Engineering controls
Use in a well-ventilated area.

8.2.2. Personal protective equipment (PPE)

Eye/face protection
Select and use eye/face protection to prevent contact based on the results of an exposure assessment. The following eye/face protection(s) are recommended:
Safety Glasses with side shields

Skin/hand protection
See Section 7.1 for additional information on skin protection.

Respiratory protection
None required.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Physical Form:</td>
<td>Liquid</td>
</tr>
<tr>
<td>Specific Physical Form:</td>
<td>Viscous Liquid</td>
</tr>
<tr>
<td>Odor, Color, Grade:</td>
<td>Slight acrylate odor, Clear to slightly yellow</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No Data Available</td>
</tr>
<tr>
<td>pH</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Melting point</td>
<td>&gt;=95 °F</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>&gt; 214 °F [Test Method: Closed Cup]</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Flammability (solid, gas)</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>Vapor Pressure</td>
<td>&lt;=16 psi [Ref Std: AIR=1]</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Density</td>
<td>1.15 g/ml</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.15 [Ref Std: WATER=1]</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Moderate</td>
</tr>
<tr>
<td>Solubility- non-water</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/ water</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>Not Applicable</td>
</tr>
</tbody>
</table>
SECTION 10: Stability and reactivity

10.1. Reactivity
This material is considered to be non reactive under normal use conditions.

10.2. Chemical stability
Stable.

10.3. Possibility of hazardous reactions
Hazardous polymerization will not occur.

10.4. Conditions to avoid
None known.

10.5. Incompatible materials
None known.

10.6. Hazardous decomposition products

<table>
<thead>
<tr>
<th>Substance</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>None known.</td>
<td>None known.</td>
</tr>
</tbody>
</table>

Refer to section 5.2 for hazardous decomposition products during combustion.

SECTION 11: Toxicological information

The information below may not be consistent with the material classification in Section 2 if specific ingredient classifications are mandated by a competent authority. In addition, toxicological data on ingredients may not be reflected in the material classification and/or the signs and symptoms of exposure, because an ingredient may be present below the threshold for labeling, an ingredient may not be available for exposure, or the data may not be relevant to the material as a whole.

This document has been prepared in accordance with the U.S. OSHA Hazard Communication Standard, which requires the inclusion of all known hazards of the product or ingredients regardless of the potential risk. The risks of the hazards communicated in this document may vary depending on the potential for exposure.

11.1. Information on Toxicological effects

Signs and Symptoms of Exposure

Based on test data and/or information on the components, this material may produce the following health effects:

Inhalation:
Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.
Skin Contact:
Contact with the skin during product use is not expected to result in significant irritation. Allergic Skin Reaction (non-photo induced): Signs/symptoms may include redness, swelling, blistering, and itching.

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

Ingestion:
May be harmful if swallowed.
  Gastrointestinal Irritation: Signs/symptoms may include abdominal pain, stomach upset, nausea, vomiting and diarrhea.

Toxicological Data
If a component is disclosed in section 3 but does not appear in a table below, either no data are available for that endpoint or the data are not sufficient for classification.

<table>
<thead>
<tr>
<th>Acute Toxicity</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall product</td>
<td>Ingestion</td>
<td>No data available; calculated ATE 2,000 - 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)</td>
<td>Ingestion</td>
<td>LD50 estimated to be 2,000 - 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)</td>
<td>Dermal Professional judgment</td>
<td>LD50 estimated to be 2,000 - 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>Dermal Rabbit</td>
<td>LD50 &gt; 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>Ingestion Rat</td>
<td>LD50 5,564 mg/kg</td>
<td></td>
</tr>
<tr>
<td>TRIPHENYLANTIMONY</td>
<td>Inhalation-Dust/Mist</td>
<td>LC50 estimated to be 1 - 5 mg/l</td>
<td></td>
</tr>
<tr>
<td>TRIPHENYLANTIMONY</td>
<td>Dermal Rat</td>
<td>LD50 &gt; 2,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>TRIPHENYLANTIMONY</td>
<td>Ingestion Rat</td>
<td>LD50 82.5 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

ATE = acute toxicity estimate

Skin Corrosion/Irritation

<table>
<thead>
<tr>
<th>Skin Corrosion/Irritation</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)</td>
<td>Not available</td>
<td>Minimal irritation</td>
<td></td>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>Rabbit</td>
<td>Minimal irritation</td>
<td></td>
</tr>
<tr>
<td>TRIPHENYLANTIMONY</td>
<td>Rabbit</td>
<td>Minimal irritation</td>
<td></td>
</tr>
</tbody>
</table>

Serious Eye Damage/Irritation

<table>
<thead>
<tr>
<th>Serious Eye Damage/Irritation</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)</td>
<td>Not available</td>
<td>Moderate irritant</td>
<td></td>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>Rabbit</td>
<td>Moderate irritant</td>
<td></td>
</tr>
<tr>
<td>TRIPHENYLANTIMONY</td>
<td>Rabbit</td>
<td>Mild irritant</td>
<td></td>
</tr>
</tbody>
</table>

Skin Sensitization

<table>
<thead>
<tr>
<th>Skin Sensitization</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)</td>
<td>Guinea pig</td>
<td>Sensitizing</td>
<td></td>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>Human and animal</td>
<td>Sensitizing</td>
<td></td>
</tr>
</tbody>
</table>

Respiratory Sensitization
For the component/components, either no data are currently available or the data are not sufficient for classification.

Germ Cell Mutagenicity
Carcinogenicity
For the component/components, either no data are currently available or the data are not sufficient for classification.

Reproductive Toxicity

Reproductive and/or Developmental Effects

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Value</th>
<th>Species</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)</td>
<td>Ingestion</td>
<td>Not classified for female reproduction</td>
<td>Mouse</td>
<td>NOAEL 0.8 mg/kg/day</td>
<td>premating &amp; during gestation</td>
</tr>
<tr>
<td>BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)</td>
<td>Ingestion</td>
<td>Not classified for male reproduction</td>
<td>Mouse</td>
<td>NOAEL 0.8 mg/kg/day</td>
<td>premating &amp; during gestation</td>
</tr>
<tr>
<td>BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)</td>
<td>Ingestion</td>
<td>Not classified for development</td>
<td>Mouse</td>
<td>NOAEL 0.8 mg/kg/day</td>
<td>premating &amp; during gestation</td>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>Ingestion</td>
<td>Not classified for female reproduction</td>
<td>Rat</td>
<td>NOAEL 1,000 mg/kg/day</td>
<td>premating &amp; during gestation</td>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>Ingestion</td>
<td>Not classified for male reproduction</td>
<td>Rat</td>
<td>NOAEL 1,000 mg/kg/day</td>
<td>49 days</td>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>Ingestion</td>
<td>Not classified for development</td>
<td>Rat</td>
<td>NOAEL 1,000 mg/kg/day</td>
<td>premating &amp; during gestation</td>
</tr>
</tbody>
</table>

Target Organ(s)

Specific Target Organ Toxicity - single exposure
For the component/components, either no data are currently available or the data are not sufficient for classification.

Specific Target Organ Toxicity - repeated exposure

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Value</th>
<th>Species</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)</td>
<td>Ingestion</td>
<td>endocrine system</td>
<td>Mouse</td>
<td>NOAEL 0.8 mg/kg/day</td>
<td>premating &amp; during gestation</td>
</tr>
</tbody>
</table>

Aspiration Hazard
For the component/components, either no data are currently available or the data are not sufficient for classification.

Please contact the address or phone number listed on the first page of the SDS for additional toxicological information on this material and/or its components.

SECTION 12: Ecological information

Ecotoxicological information
Please contact the address or phone number listed on the first page of the SDS for additional ecotoxicological information on this material and/or its components.

Chemical fate information
Please contact the address or phone number listed on the first page of the SDS for additional chemical fate information on this material and/or its components.

### SECTION 13: Disposal considerations

**13.1. Disposal methods**
Dispose of contents/container in accordance with the local/regional/national/international regulations.

Dispose of waste product in a permitted industrial waste facility. As a disposal alternative, incinerate in a permitted waste incineration facility. Proper destruction may require the use of additional fuel during incineration processes.

**EPA Hazardous Waste Number (RCRA):** Not regulated

### SECTION 14: Transport Information

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

### SECTION 15: Regulatory information

**15.1. US Federal Regulations**
Contact 3M for more information.

**EPCRA 311/312 Hazard Classifications:**

**Physical Hazards**
Not applicable

**Health Hazards**
Respiratory or Skin Sensitization
Serious eye damage or eye irritation

**15.2. State Regulations**
Contact 3M for more information.

**15.3. Chemical Inventories**
This material contains one or more substances not listed on the TSCA Inventory. Commercial use of this material is regulated by the FDA.

Contact 3M for more information.

**15.4. International Regulations**
Contact 3M for more information.

This SDS 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:** 1  **Instability:** 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.

DISCLAIMER: The information in this Safety Data Sheet (SDS) is believed to be correct as of the date issued. 3M MAKES NO WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR COURSE OF PERFORMANCE OR USAGE OF TRADE. User is responsible for determining whether the 3M product is fit for a particular purpose and suitable for user's method of use or application. Given the variety of factors that can affect the use and application of a 3M product, some of which are uniquely within the user's knowledge and control, it is essential that the user evaluate the 3M product to determine whether it is fit for a particular purpose and suitable for user's method of use or application.

3M provides information in electronic form as a service to its customers. Due to the remote possibility that electronic transfer may have resulted in errors, omissions or alterations in this information, 3M makes no representations as to its completeness or accuracy. In addition, information obtained from a database may not be as current as the information in the SDS available directly from 3M.

3M USA SDSs are available at www.3M.com