Safety Data Sheet

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Issue Date: 04/16/15
Version Number: 1.01
Supercedes Date: 06/25/13

Product identifier
3M™ ESPE™ ADPER™ SCOTCHBOND MULTIPURPOSE PLUS ADHESIVE SYSTEM with UNIVERSAL ETCHANT

ID Number(s): 70-2010-9404-5

Recommended use
Dental Product, Dental Adhesive System

Restrictions on use
For use only by dental professionals.

Supplier's details

MANUFACTURER: 3M
DIVISION: 3M ESPE Dental Products
ADDRESS: 3M Center, St. Paul, MN 55144-1000, USA
Telephone: 1-888-3M HELPS (1-888-364-3577)

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

This product is a kit or a multipart product which consists of multiple, independently packaged components. A Safety Data Sheet (SDS), Article Information Sheet (AIS), or Article Information Letter (AIL) for each of these components is included. Please do not separate the component documents from this cover page. The document numbers for components of this product are:
18-3819-2, 18-3855-6, 10-7892-2, 05-4869-3, 29-8286-6, 05-4866-9

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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

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.

2.3. Hazards not otherwise classified
None.

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 DIMETHACRYLATE (BISGMA)</td>
<td>1565-94-2</td>
<td>60 - 70</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.

### 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>Not Applicable</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>&gt;=95 °F</td>
</tr>
<tr>
<td>Flash 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>
</tbody>
</table>
Partition coefficient: n-octanol/ water: Not Applicable
Autoignition temperature: Not Applicable
Decomposition temperature: No Data Available
Viscosity: 250 centipoise [Test Method: Brookfield]
Molecular weight: No Data Available
Volatile Organic Compounds: No Data Available
Percent volatile: No Data Available
VOC Less H2O & Exempt Solvents: No Data Available

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></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.

### Acute Toxicity

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall product</td>
<td>Ingestion</td>
<td></td>
<td>No data available; calculated ATE 2,000 - 5,000 mg/kg</td>
</tr>
<tr>
<td>BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)</td>
<td>Ingestion</td>
<td></td>
<td>LD50 estimated to be 2,000 - 5,000 mg/kg</td>
</tr>
<tr>
<td>BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)</td>
<td>Dermal</td>
<td>Professio nal judgment</td>
<td>LD50 estimated to be 2,000 - 5,000 mg/kg</td>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>Dermal</td>
<td>Rabbit</td>
<td>LD50 &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 5.564 mg/kg</td>
</tr>
<tr>
<td>TRIPHENYLANTIMONY</td>
<td>Inhalation- Dust/Mist</td>
<td></td>
<td>LC50 estimated to be 1 - 5 mg/l</td>
</tr>
<tr>
<td>TRIPHENYLANTIMONY</td>
<td>Dermal</td>
<td>Rat</td>
<td>LD50 &gt; 2,000 mg/kg</td>
</tr>
<tr>
<td>TRIPHENYLANTIMONY</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 82.5 mg/kg</td>
</tr>
</tbody>
</table>

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

<table>
<thead>
<tr>
<th>Name</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>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>Rabbit</td>
<td>Minimal irritation</td>
</tr>
</tbody>
</table>

### Serious Eye Damage/Irritation

<table>
<thead>
<tr>
<th>Name</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>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>Rabbit</td>
<td>Moderate irritant</td>
</tr>
</tbody>
</table>

### Skin Sensitization

<table>
<thead>
<tr>
<th>Name</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>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>Human and animal</td>
<td>Sensitizing</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
Name | Route | Value
---|---|---
BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA) | In Vitro | Some positive data exist, but the data are not sufficient for classification
2-HYDROXYETHYL METHACRYLATE (HEMA) | In vivo | Not mutagenic
2-HYDROXYETHYL METHACRYLATE (HEMA) | In Vitro | Some positive data exist, but the data are not sufficient for classification

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 toxic to 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 toxic to 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 toxic to 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 toxic to 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 toxic to 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 toxic to 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>Target Organ(s)</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>All data are negative</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.

Incinerate in a permitted waste incineration facility.

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.

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

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.
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Safety Data Sheet

1.1. Product identifier

3008/ 7542 3M™ ESPE™ ADPER™ SCOTCHBOND™ MULTIPURPOSE PRIMER

Product Identification Numbers
LE-F100-0351-0, 70-2010-1610-5, 70-2010-3500-6, FH-5000-3628-7, FH-5000-3629-5

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)

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2.1. Hazard classification

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

2.2. Label elements

Signal word
Warning

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.

2.3. Hazards not otherwise classified
None.

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>WATER</td>
<td>7732-18-5</td>
<td>40 - 50 Trade Secret *</td>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>868-77-9</td>
<td>35 - 45 Trade Secret *</td>
</tr>
<tr>
<td>COPOLYMER OF ACRYLIC AND ITACONIC ACIDS</td>
<td>25948-33-8</td>
<td>10 - 20 Trade Secret *</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>
</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. For large spill, or spills in confined spaces, provide mechanical ventilation to disperse or exhaust vapors, in accordance with good industrial hygiene practice. 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.

---

**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. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage including any incompatibilities
Store away from strong bases.

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
General Physical Form: Liquid
Specific Physical Form: Liquid
Odor, Color, Grade: Slight acrylate odor, Clear to slightly yellowish
Odor threshold: No Data Available
pH: 2.9 - 4
Melting point: Not Applicable
Boiling Point: >= 212 °F
Flash Point: > 214 °F [Test Method: Closed Cup]
Evaporation rate: No Data Available
Flammability (solid, gas): Not Applicable
Flammable Limits(LEL): Not Applicable
Flammable Limits(UEL): Not Applicable
Vapor Pressure: <=16 psi [Ref Std: AIR=1]
Vapor Density: No Data Available
Density: 1.08 g/ml
Specific Gravity: 1.08 [Ref Std: WATER=1]
Solubility in Water: Appreciable
Solubility- non-water: No Data Available
Partition coefficient: n-octanol/ water: Not Applicable
10.1. Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

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
Strong bases

10.6. Hazardous decomposition products

<table>
<thead>
<tr>
<th>Substance</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>None known.</td>
<td></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. The information below represents toxicological information associated with the individual components of the uncured product. Once properly mixed and/or cured, the product is safe for its intended use.

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:**
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.

### Acute Toxicity

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall product</td>
<td>Ingestion</td>
<td></td>
<td>No data available; calculated ATE &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>Dermal</td>
<td>Rabbit</td>
<td>LD50 &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 5,564 mg/kg</td>
</tr>
<tr>
<td>COPOLYMER OF ACRYLIC AND ITACONIC ACIDS</td>
<td>Dermal</td>
<td>Professio nal judgement</td>
<td>LD50 estimated to be &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>COPOLYMER OF ACRYLIC AND ITACONIC ACIDS</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 5,000 mg/kg</td>
</tr>
</tbody>
</table>

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>Rabbit</td>
<td>Minimal irritation</td>
</tr>
</tbody>
</table>

### Serious Eye Damage/Irritation

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>Rabbit</td>
<td>Moderate irritant</td>
</tr>
</tbody>
</table>

### Skin Sensitization

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>Human and animal</td>
<td>Sensitizing</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

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>In vivo</td>
<td>Not mutagenic</td>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>In Vitro</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
</tbody>
</table>

### 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>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>Ingestion</td>
<td>Not toxic to female reproduction</td>
<td>Rat</td>
<td>NOAEL 1,000 mg/kg/day</td>
<td>premating &amp; during gestation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>Ingestion</td>
<td>Not toxic to male reproduction</td>
<td>Rat</td>
<td>NOAEL 1,000 mg/kg/day</td>
<td>49 days</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>Ingestion</td>
<td>Not toxic to 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

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Target Organ(s)</th>
<th>Value</th>
<th>Species</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>COPOLYMER OF ACRYLIC AND ITACONIC ACIDS</td>
<td>Ingestion</td>
<td>nervous system</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>NOAEL 5,000 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

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

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.

Incinerate in a permitted waste incineration facility.

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.

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

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.

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Issue Date: 02/25/16  Supercedes Date: 12/01/14

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3M USA SDSs are available at www.3M.com
SECTION 1: Identification

1.1. Product identifier
7546 3M™ ESPE™ ADPER™ SCOTCHBOND™ MULTI PURPOSE PLUS ACTIVATOR

Product Identification Numbers
70-2010-3503-0

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
Flammable Liquid: Category 2.
Serious Eye Damage/Irritation: Category 2B.
Specific Target Organ Toxicity (central nervous system): Category 3.

2.2. Label elements
Signal word
Danger
Symbols
Flame | Exclamation mark |

Pictograms

Hazard Statements
Highly flammable liquid and vapor.
Causes eye irritation.
May cause drowsiness or dizziness.

Precautionary Statements

Prevention:
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep container tightly closed.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Use only in a well-ventilated area.
Wear protective gloves and eye/face protection.
Wash thoroughly after handling.

Response:
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
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.
Call a POISON CENTER or doctor/physician if you feel unwell.
In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

Storage:
Store in a well-ventilated place. Keep cool.
Keep container tightly closed.

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

2.3. Hazards not otherwise classified
Although ethyl alcohol is classified as a central nervous system depressant, exposures associated with this health effect are not expected during normal, intended use of this product.

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>ETHYL ALCOHOL</td>
<td>64-17-5</td>
<td>&gt; 95 Trade Secret *</td>
</tr>
<tr>
<td>SODIUM BENZENESULFINATE</td>
<td>873-55-2</td>
<td>&lt; 5 Trade Secret</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 flammable liquids such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture
Closed containers exposed to heat from fire may build pressure and explode.

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>
</tbody>
</table>

5.3. Special protective actions for fire-fighters
Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Use only non-sparking tools. Ventilate the area with fresh air. Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode. 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 using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with water. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid prolonged or repeated skin contact. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Avoid breathing dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Avoid release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.) Do not get in eyes.

7.2. Conditions for safe storage including any incompatibilities

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>Agency</th>
<th>Limit type</th>
<th>Additional Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYL ALCOHOL</td>
<td>64-17-5</td>
<td>ACGIH</td>
<td>STEL:1000 ppm</td>
<td>A3: Confirmed animal carcin.</td>
</tr>
<tr>
<td>ETHYL ALCOHOL</td>
<td>64-17-5</td>
<td>OSHA</td>
<td>TWA:1900 mg/m3(1000 ppm)</td>
<td></td>
</tr>
</tbody>
</table>

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA : Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

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>Liquid</td>
</tr>
<tr>
<td>Odor, Color, Grade:</td>
<td>Clear, characteristic odor</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No Data Available</td>
</tr>
<tr>
<td>pH</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>173 °F</td>
</tr>
<tr>
<td>Flash Point</td>
<td>55 °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>3.28 %</td>
</tr>
<tr>
<td>Flammable Limits(UEL)</td>
<td>19 %</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>&lt;=27 psia [@ 131 °F]</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>1.59 g/ml</td>
</tr>
<tr>
<td>Density</td>
<td>0.81 g/ml</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.81 [Ref Std: WATER=1]</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Complete</td>
</tr>
<tr>
<td>Solubility- non-water</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/ water</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>1,400 centistoke [@ 73.4 °F ]</td>
</tr>
<tr>
<td>Volatile Organic Compounds</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Percent volatile</td>
<td>No Data Available</td>
</tr>
<tr>
<td>VOC Less H2O &amp; Exempt Solvents</td>
<td>No Data Available</td>
</tr>
</tbody>
</table>

**SECTION 10: Stability and reactivity**

10.1. Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability
Stable.

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

10.4. Conditions to avoid
Heat
Sparks and/or flames

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></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. The information below represents toxicological information associated with the individual components of the uncured product. Once properly mixed and/or cured, the product is safe for its intended use.

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.

May cause additional health effects (see below).

Skin Contact:
Contact with the skin during product use is not expected to result in significant irritation.

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

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

May cause additional health effects (see below).

Additional Health Effects:

Single exposure may cause target organ effects:
Exposures needed to cause the following health effect(s) are not expected during normal, intended use:

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

Carcinogenicity:

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>CAS No.</th>
<th>Class Description</th>
<th>Regulation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Generic: ALCOHOLIC BEVERAGES</td>
<td>64-17-5</td>
<td>Grp. 1: Carcinogenic to humans</td>
<td>International Agency for Research on Cancer</td>
</tr>
<tr>
<td>Generic: ALCOHOLIC BEVERAGES</td>
<td>64-17-5</td>
<td>Known human carcinogen</td>
<td>National Toxicology Program Carcinogens</td>
</tr>
</tbody>
</table>

Additional Information:
This product contains ethanol. Alcoholic beverages and ethanol in alcoholic beverages have been classified by the International Agency for Research on Cancer as carcinogenic to humans. There are also data associating human consumption of alcoholic beverages with developmental toxicity and liver toxicity. Exposure to ethanol during the foreseeable use of this product is not expected to cause cancer, developmental toxicity, or liver toxicity.
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.

### Acute Toxicity

<table>
<thead>
<tr>
<th>Name</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 &gt; 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Dermal</td>
<td>Rabbit</td>
<td>LD50 &gt; 15,800 mg/kg</td>
</tr>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Inhalation-Vapor (4 hours)</td>
<td>Rat</td>
<td>LC50 124.7 mg/l</td>
</tr>
<tr>
<td>SODIUM BENZENESULFINATE</td>
<td>Ingestion</td>
<td>similar compounds</td>
<td>LD50 estimated to be 300 - 2,000 mg/kg</td>
</tr>
</tbody>
</table>

ATE = acute toxicity estimate

### Skin Corrosion/Irritation

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Rabbit</td>
<td>No significant irritation</td>
</tr>
</tbody>
</table>

### Serious Eye Damage/Irritation

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Rabbit</td>
<td>Moderate irritant</td>
</tr>
</tbody>
</table>

### Skin Sensitization

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Human</td>
<td>Some positive data exist, but the data are not sufficient for classification</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

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYL ALCOHOL</td>
<td>In Vitro</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
<tr>
<td>ETHYL ALCOHOL</td>
<td>In vivo</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
</tbody>
</table>

### Carcinogenicity

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Ingestion</td>
<td>Multiple animal species</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
</tbody>
</table>

### 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>ETHYL ALCOHOL</td>
<td>Inhalation</td>
<td>Not toxic to development</td>
<td>Rat</td>
<td>NOAEL 38 mg/l</td>
<td>during gestation</td>
</tr>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Ingestion</td>
<td>Some positive developmental data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>NOAEL 5,200 mg/kg/day</td>
<td>premating &amp; during gestation</td>
</tr>
</tbody>
</table>
### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Target Organ(s)</th>
<th>Value</th>
<th>Species</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Inhalation</td>
<td>central nervous system depression</td>
<td>May cause drowsiness or dizziness</td>
<td>Human</td>
<td>LOAEL 2.6 mg/l</td>
<td>30 minutes</td>
</tr>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Inhalation</td>
<td>respiratory irritation</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Human</td>
<td>LOAEL 9.4 mg/l</td>
<td>not available</td>
</tr>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Ingestion</td>
<td>central nervous system depression</td>
<td>May cause drowsiness or dizziness</td>
<td>Multiple animal species</td>
<td>NOAEL not available</td>
<td></td>
</tr>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Ingestion</td>
<td>kidney and/or bladder</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Dog</td>
<td>NOAEL 3,000 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

#### Specific Target Organ Toxicity - repeated exposure

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Target Organ(s)</th>
<th>Value</th>
<th>Species</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Inhalation</td>
<td>liver</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Rabbit</td>
<td>LOAEL 124 mg/l</td>
<td>365 days</td>
</tr>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Inhalation</td>
<td>hematopoietic system</td>
<td>immune system</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>NOAEL 25 mg/l</td>
</tr>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Ingestion</td>
<td>liver</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>LOAEL 8,000 mg/kg/day</td>
<td>4 months</td>
</tr>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Ingestion</td>
<td>kidney and/or bladder</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Dog</td>
<td>NOAEL 3,000 mg/kg/day</td>
<td>7 days</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.

Incinerate in a permitted waste incineration facility. As a disposal alternative, utilize an acceptable permitted waste disposal facility.

**EPA Hazardous Waste Number (RCRA):** D001 (Ignitable)
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.

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

15.2. State Regulations
Contact 3M for more information.

15.3. Chemical Inventories
The components of this product are in compliance with the new substance notification requirements of CEPA.

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: 1  Flammability: 3  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.

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Issue Date: 02/25/16  Supercedes Date: 02/06/15

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Safety Data Sheet

1.1. Product identifier
7547 3M™ ESPE™ ADPER™ SCOTCHBOND™ MULTI-PURPOSE PLUS CATALYST 3.5

Product Identification Numbers
70-2010-3504-8

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 2A.
Skin Sensitizer: Category 1B.

2.2. Label elements
Signal word
Warning

Symbols
Exclamation mark |

Pictograms

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

Precautionary Statements

Prevention:
Avoid breathing dust/fume/gas/mist/vapors/spray.
Wear eye/face protection.
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.

2.3. Hazards not otherwise classified
None.

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 DIMETHACRYLATE (BISGMA)</td>
<td>1565-94-2</td>
<td>55 - 65 Trade Secret *</td>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>868-77-9</td>
<td>30 - 40 Trade Secret *</td>
</tr>
<tr>
<td>BENZOYL PEROXIDE</td>
<td>94-36-0</td>
<td>&lt; 2.5 Trade Secret *</td>
</tr>
<tr>
<td>TRIPHENYLANTIMONY</td>
<td>603-36-1</td>
<td>&lt; 0.5 Trade Secret *</td>
</tr>
<tr>
<td>TRIPHENYLPHOSPHINE</td>
<td>603-35-0</td>
<td>&lt; 0.5 Trade Secret *</td>
</tr>
<tr>
<td>HYDROQUINONE</td>
<td>123-31-9</td>
<td>&lt; 0.05 Trade Secret *</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:**
Immediately flush with large amounts of water. Remove contact lenses if easy to do. Continue rinsing. Get medical attention.

**If Swallowed:**
Rinse mouth. If you feel unwell, get 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>
</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. Seal the container. Dispose of collected material as soon as possible.

### 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. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities
Store away from heat. Store away from oxidizing agents.

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**Occupational exposure limits**
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>Agency</th>
<th>Limit type</th>
<th>Additional Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYDROQUINONE</td>
<td>123-31-9</td>
<td>ACGIH</td>
<td>TWA:1 mg/m³</td>
<td>A3: Confirmed animal carcin., Dermal Sensitizer</td>
</tr>
<tr>
<td>HYDROQUINONE</td>
<td>123-31-9</td>
<td>CMRG</td>
<td>STEL:4 mg/m³</td>
<td></td>
</tr>
<tr>
<td>HYDROQUINONE</td>
<td>123-31-9</td>
<td>OSHA</td>
<td>TWA:2 mg/m³</td>
<td></td>
</tr>
<tr>
<td>TRIPHENYLPHOSPHINE</td>
<td>603-35-0</td>
<td>CMRG</td>
<td>TWA:0.5 mg/m³; CEIL:0.05 mg/m³</td>
<td></td>
</tr>
<tr>
<td>BENZOYL PEROXIDE</td>
<td>94-36-0</td>
<td>ACGIH</td>
<td>TWA:5 mg/m³</td>
<td>A4: Not class. as human carcin</td>
</tr>
<tr>
<td>BENZOYL PEROXIDE</td>
<td>94-36-0</td>
<td>OSHA</td>
<td>TWA:5 mg/m³</td>
<td></td>
</tr>
</tbody>
</table>

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

**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

**General Physical Form:** Liquid

**Specific Physical Form:** Liquid

**Odor, Color, Grade:** Clear to slightly yellow in color, slight acrylate odor

**Odor threshold:** No Data Available

**pH**
Not Applicable

**Melting point**
Not Applicable

**Boiling Point**
Not Applicable

**Flash Point**
214 °F [Test Method: Closed Cup]

**Evaporation rate**
No Data Available

**Flammability (solid, gas)**
Not Applicable

**Flammable Limits(LEL)**
Not Applicable

**Flammable Limits(UEL)**
Not Applicable

**Vapor Pressure**
No Data Available

**Vapor Density**
No Data Available

**Density**
1.16 g/ml

**Specific Gravity**
1.16 [Ref Std: WATER=1]

**Solubility in Water**
Negligible

**Solubility- non-water**
No Data Available

**Partition coefficient: n-octanol/ water**
No Data Available

**Autoignition temperature**
No Data Available

**Decomposition temperature**
No Data Available

**Viscosity**
320 - 460 centistoke

**Volatile Organic Compounds**
No Data Available

**Percent volatile**
No Data Available

**VOC Less H2O & Exempt Solvents**
No Data Available

---

**SECTION 10: Stability and reactivity**

10.1. Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability
Stable.

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

10.4. Conditions to avoid
Heat

10.5. Incompatible materials
Strong oxidizing agents

10.6. Hazardous decomposition products

<table>
<thead>
<tr>
<th>Substance</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>None known.</td>
<td></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. The information below represents toxicological information associated with the individual components of the uncured product. Once properly mixed and/or cured, the product is safe for its intended use.

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:**
Severe Eye Irritation: Signs/symptoms may include significant redness, swelling, pain, tearing, cloudy appearance of the cornea, and impaired 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.

#### Acute Toxicity

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall product</td>
<td>Ingestion</td>
<td></td>
<td>No data available; calculated ATE 2,000 - 5,000 mg/kg</td>
</tr>
<tr>
<td>BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)</td>
<td>Ingestion</td>
<td></td>
<td>LD50 estimated to be 2,000 - 5,000 mg/kg</td>
</tr>
<tr>
<td>BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)</td>
<td>Dermal</td>
<td>Professio nal judgement</td>
<td>LD50 estimated to be 2,000 - 5,000 mg/kg</td>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>Dermal</td>
<td>Rabbit</td>
<td>LD50 &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>BENZOYL PEROXIDE</td>
<td>Ingestion - Dust/Mist (4 hours)</td>
<td>Rat</td>
<td>LD50 &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>BENZOYL PEROXIDE</td>
<td>Ingestion</td>
<td></td>
<td>LD50 &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>TRIPHENYLANTIMONY</td>
<td>Inhalation - Dust/Mist</td>
<td>Rat</td>
<td>LC50 &gt; 24.3 mg/l</td>
</tr>
<tr>
<td>TRIPHENYLANTIMONY</td>
<td>Ingestion</td>
<td></td>
<td>LC50 estimated to be 1 - 5 mg/l</td>
</tr>
<tr>
<td>TRIPHENYLANTIMONY</td>
<td>Dermal</td>
<td>Rat</td>
<td>LD50 &gt; 2,000 mg/kg</td>
</tr>
<tr>
<td>TRIPHENYLANTIMONY</td>
<td>Ingestion</td>
<td></td>
<td>LD50 82.5 mg/kg</td>
</tr>
</tbody>
</table>
TRIPHENYLPHOSPHINE

| Dermal | Rabbit | LD50 > 4,000 mg/kg |

TRIPHENYLPHOSPHINE

| Inhalation-Dust/Mist (4 hours) | Rat | LC50 12.5 mg/l |

TRIPHENYLPHOSPHINE

| Ingestion | Rat | LD50 700 mg/kg |

HYDROQUINONE

| Dermal | Rat | LD50 > 4,800 mg/kg |

HYDROQUINONE

| Ingestion | Rat | LD50 302 mg/kg |

ATE = acute toxicity estimate

Skin Corrosion/Irritation

<table>
<thead>
<tr>
<th>Name</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>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>Rabbit</td>
<td>Minimal irritation</td>
</tr>
<tr>
<td>BENZOYL PEROXIDE</td>
<td>Rabbit</td>
<td>Minimal irritation</td>
</tr>
<tr>
<td>TRIPHENYLPHOSPHINE</td>
<td>Rabbit</td>
<td>No significant irritation</td>
</tr>
<tr>
<td>HYDROQUINONE</td>
<td>Human and animal</td>
<td>Minimal irritation</td>
</tr>
</tbody>
</table>

Serious Eye Damage/Irritation

<table>
<thead>
<tr>
<th>Name</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>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>Rabbit</td>
<td>Moderate irritant</td>
</tr>
<tr>
<td>BENZOYL PEROXIDE</td>
<td>Rabbit</td>
<td>Severe irritant</td>
</tr>
<tr>
<td>TRIPHENYLPHOSPHINE</td>
<td>Rabbit</td>
<td>Mild irritant</td>
</tr>
<tr>
<td>HYDROQUINONE</td>
<td>Human</td>
<td>Corrosive</td>
</tr>
</tbody>
</table>

Skin Sensitization

<table>
<thead>
<tr>
<th>Name</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>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>Human and animal</td>
<td>Sensitizing</td>
</tr>
<tr>
<td>BENZOYL PEROXIDE</td>
<td>Human and animal</td>
<td>Sensitizing</td>
</tr>
<tr>
<td>TRIPHENYLPHOSPHINE</td>
<td>Guinea pig</td>
<td>Sensitizing</td>
</tr>
<tr>
<td>HYDROQUINONE</td>
<td>Guinea pig</td>
<td>Sensitizing</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

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)</td>
<td>In Vitro</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>In vivo</td>
<td>Not mutagenic</td>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>In Vitro</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
<tr>
<td>BENZOYL PEROXIDE</td>
<td>In Vitro</td>
<td>Not mutagenic</td>
</tr>
<tr>
<td>BENZOYL PEROXIDE</td>
<td>In vivo</td>
<td>Not mutagenic</td>
</tr>
<tr>
<td>HYDROQUINONE</td>
<td>In Vitro</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
<tr>
<td>HYDROQUINONE</td>
<td>In vivo</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
</tbody>
</table>
## Carcinogenicity

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>BENZOYL PEROXIDE</td>
<td>Ingestion</td>
<td>Multiple animal species</td>
<td>Not carcinogenic</td>
</tr>
<tr>
<td>BENZOYL PEROXIDE</td>
<td>Dermal</td>
<td>Mouse</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
<tr>
<td>HYDROQUINONE</td>
<td>Dermal</td>
<td>Mouse</td>
<td>Not carcinogenic</td>
</tr>
<tr>
<td>HYDROQUINONE</td>
<td>Ingestion</td>
<td>Multiple animal species</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
</tbody>
</table>

## 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 toxic to 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 toxic to 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 toxic to 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 toxic to female 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 toxic to male reproduction</td>
<td>Rat</td>
<td>NOAEL 1,000 mg/kg/day</td>
<td></td>
</tr>
<tr>
<td>2-HYDROXYETHYL METHACRYLATE (HEMA)</td>
<td>Ingestion</td>
<td>Not toxic to development</td>
<td>Rat</td>
<td>NOAEL 1,000 mg/kg/day</td>
<td>premating &amp; during gestation</td>
</tr>
<tr>
<td>BENZOYL PEROXIDE</td>
<td>Ingestion</td>
<td>Not toxic to female reproduction</td>
<td>Rat</td>
<td>NOAEL 1,000 mg/kg/day</td>
<td>premating &amp; during gestation</td>
</tr>
<tr>
<td>BENZOYL PEROXIDE</td>
<td>Ingestion</td>
<td>Some positive male reproductive data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>NOAEL 500 mg/kg/day</td>
<td>premating &amp; during gestation</td>
</tr>
<tr>
<td>BENZOYL PEROXIDE</td>
<td>Ingestion</td>
<td>Some positive developmental data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>NOAEL 500 mg/kg/day</td>
<td>premating &amp; during gestation</td>
</tr>
<tr>
<td>HYDROQUINONE</td>
<td>Ingestion</td>
<td>Not toxic to female reproduction</td>
<td>Rat</td>
<td>NOAEL 150 mg/kg/day</td>
<td>2 generation</td>
</tr>
<tr>
<td>HYDROQUINONE</td>
<td>Ingestion</td>
<td>Not toxic to male reproduction</td>
<td>Rat</td>
<td>NOAEL 150 mg/kg/day</td>
<td></td>
</tr>
<tr>
<td>HYDROQUINONE</td>
<td>Ingestion</td>
<td>Some positive developmental data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>NOAEL 100 mg/kg/day</td>
<td>during organogenesis</td>
</tr>
</tbody>
</table>

## Target Organ(s)

### Specific Target Organ Toxicity - single exposure

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Target Organ(s)</th>
<th>Value</th>
<th>Species</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>HYDROQUINONE</td>
<td>Ingestion</td>
<td>nervous system</td>
<td>May cause damage to organs</td>
<td>Rat</td>
<td>NOAEL, Not available</td>
<td>not applicable</td>
</tr>
<tr>
<td>HYDROQUINONE</td>
<td>Ingestion</td>
<td>kidney and/or bladder</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>NOAEL 400 mg/kg</td>
<td>not applicable</td>
</tr>
</tbody>
</table>

### Specific Target Organ Toxicity - repeated exposure

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Target Organ(s)</th>
<th>Value</th>
<th>Species</th>
<th>Test Result</th>
<th>Exposure</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Component</th>
<th>Route</th>
<th>Organ(s)</th>
<th>Toxicity</th>
<th>NOAEL</th>
<th>Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISPHENOL A DIGLYCIDYL ETHER DIMETHACRYLATE (BISGMA)</td>
<td>Ingestion</td>
<td>endocrine system</td>
<td>All data are negative</td>
<td>Mouse</td>
<td>NOAEL 0.8 mg/kg/day premating &amp; during gestation</td>
</tr>
<tr>
<td></td>
<td>Inhalation</td>
<td>nervous system</td>
<td>May cause damage to organs though prolonged or repeated exposure</td>
<td>Dog</td>
<td>NOAEL 0.0097 mg/l 5 weeks</td>
</tr>
<tr>
<td></td>
<td>Ingestion</td>
<td>nervous system</td>
<td>May cause damage to organs though prolonged or repeated exposure</td>
<td>Dog</td>
<td>NOAEL 1 mg/kg/day 5 weeks</td>
</tr>
<tr>
<td>TRIPHENYLPHOSPHINE</td>
<td>Inhalation</td>
<td>nervous system</td>
<td>May cause damage to organs though prolonged or repeated exposure</td>
<td>Dog</td>
<td>NOAEL 0.0097 mg/l 5 weeks</td>
</tr>
<tr>
<td></td>
<td>Ingestion</td>
<td>nervous system</td>
<td>May cause damage to organs though prolonged or repeated exposure</td>
<td>Dog</td>
<td>NOAEL 1 mg/kg/day 5 weeks</td>
</tr>
<tr>
<td>HYDROQUINONE</td>
<td>Ingestion</td>
<td>blood</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>NOAEL Not available 40 days</td>
</tr>
<tr>
<td></td>
<td>Ingestion</td>
<td>bone marrow</td>
<td>May cause damage to organs though prolonged or repeated exposure</td>
<td>Rat</td>
<td>NOAEL Not available 9 weeks</td>
</tr>
<tr>
<td></td>
<td>Ingestion</td>
<td>kidney and/or bladder</td>
<td>May cause damage to organs though prolonged or repeated exposure</td>
<td>Rat</td>
<td>LOAEL 50 mg/kg/day 15 months</td>
</tr>
<tr>
<td></td>
<td>Ocular</td>
<td>eyes</td>
<td>May cause damage to organs though prolonged or repeated exposure</td>
<td>Human</td>
<td>NOAEL Not available occupational exposure</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.

Incinerate in a permitted waste incineration facility.

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

### SECTION 14: Transport Information

For Transport Information, please visit [http://3M.com/Transportinfo](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.

311/312 Hazard Categories:

Fire Hazard - No  Pressure Hazard - No  Reactivity Hazard - No  Immediate Hazard - Yes  Delayed Hazard - No

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>BENZOYL PEROXIDE</td>
<td>94-36-0</td>
<td>Trade Secret &lt; 2.5</td>
</tr>
</tbody>
</table>

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.

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Safety Data Sheet

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SECTION 1: Identification

1.1. Product identifier
3M™ ESPE™ Scotchbond™ Universal Etchant

Product Identification Numbers
LE-F100-1014-5, LE-F100-1040-4, 70-2011-3906-3, 70-2011-4006-1, 70-2011-4007-9

1.2. Recommended use and restrictions on use

Recommended use
Dental Product, Etching gel

Restrictions on use
For use only by dental professionals

1.3. Supplier’s details

<table>
<thead>
<tr>
<th>MANUFACTURER:</th>
<th>3M</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIVISION:</td>
<td>Oral Care Solutions Division</td>
</tr>
<tr>
<td>ADDRESS:</td>
<td>3M Center, St. Paul, MN 55144-1000, USA</td>
</tr>
<tr>
<td>Telephone:</td>
<td>1-888-3M HELPS (1-888-364-3577)</td>
</tr>
</tbody>
</table>

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
Corrosive to metal: Category 1.
Serious Eye Damage/Irritation: Category 1.
Skin Corrosion/Irritation: Category 1.

2.2. Label elements
Signal word
Danger
Symbols
Corrosion |

Pictograms

Hazard Statements
May be corrosive to metals.
Causes severe skin burns and eye damage.

Precautionary Statements

Prevention:
Keep only in original container.
Do not breathe dust/fume/gas/mist/vapors/spray.
Wear protective gloves, protective clothing, and eye/face protection.
Wash thoroughly after handling.

Response:
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do.
Continue rinsing.
Immediately call a POISON CENTER or doctor/physician.
Wash contaminated clothing before reuse.
IF SWALLOWED: Rinse mouth. Do NOT induce vomiting.
Absorb spillage to prevent material damage.

Storage:
Store in a corrosive resistant container with a resistant inner liner.

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

2.3. Hazards not otherwise classified
May cause chemical gastrointestinal burns.

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>WATER</td>
<td>7732-18-5</td>
<td>50 - 65</td>
</tr>
<tr>
<td>PHOSPHORIC ACID</td>
<td>7664-38-2</td>
<td>30 - 40</td>
</tr>
<tr>
<td>SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE</td>
<td>112945-52-5</td>
<td>5 - 10</td>
</tr>
<tr>
<td>POLYETHYLENE GLYCOL</td>
<td>25322-68-3</td>
<td>1 - 5</td>
</tr>
<tr>
<td>ALUMINUM OXIDE</td>
<td>1344-28-1</td>
<td>&lt; 2</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 flush with large amounts of water for at least 15 minutes. Remove contaminated clothing. Get immediate medical attention. Wash clothing before reuse.

**Eye Contact:**
Immediately flush with large amounts of water for at least 15 minutes. Remove contact lenses if easy to do. Continue rinsing. Immediately 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>
</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
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 metal container approved for use in transportation by appropriate authorities. The container must be lined with polyethylene plastic or contain a plastic drum liner made of polyethylene. Clean up residue with water. Cover, but do not seal for 48 hours. Dispose of collected material...
as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid prolonged or repeated skin contact. Do not breathe dust/fume/gas/mist/vapors/spray. Do not eat, drink or smoke when using this product. Wash thoroughly after handling. Wash contaminated clothing before reuse. Do not get in eyes.

7.2. Conditions for safe storage including any incompatibilities
Store away from heat. Keep only in original container. Store in a corrosive resistant container with a resistant inner liner. Store away from strong bases.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>Agency</th>
<th>Limit type</th>
<th>Additional Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>ALUMINUM OXIDE</td>
<td>1344-28-1</td>
<td>CMRG</td>
<td>TWA:1 fiber/cc</td>
<td></td>
</tr>
<tr>
<td>ALUMINUM OXIDE</td>
<td>1344-28-1</td>
<td>OSHA</td>
<td>TWA(as total dust):15 mg/m3; TWA(respirable fraction):5 mg/m3</td>
<td></td>
</tr>
<tr>
<td>POLYETHYLENE GLYCOL</td>
<td>25322-68-3</td>
<td>AIHA</td>
<td>TWA(as particulate):10 mg/m3</td>
<td></td>
</tr>
<tr>
<td>PHOSPHORIC ACID</td>
<td>7664-38-2</td>
<td>ACGIH</td>
<td>TWA:1 mg/m3; STEL:3 mg/m3</td>
<td></td>
</tr>
<tr>
<td>PHOSPHORIC ACID</td>
<td>7664-38-2</td>
<td>OSHA</td>
<td>TWA:1 mg/m3</td>
<td></td>
</tr>
</tbody>
</table>

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

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>Gel</td>
</tr>
<tr>
<td>Odor, Color, Grade</td>
<td>Slight characteristic odor, Blue</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No Data Available</td>
</tr>
<tr>
<td>pH</td>
<td>&lt; 1</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Flash Point</td>
<td>&gt; 100 °C [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>No Data Available</td>
</tr>
<tr>
<td>Flammable Limits(UEL)</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Density</td>
<td>1.1 g/ml - 1.2 g/ml</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>1.1 - 1.2 [Ref Std: WATER=1]</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Complete</td>
</tr>
<tr>
<td>Solubility- non-water</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Partition coefficient: n-octanol/ water</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Autoignition temperature</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Molecular weight</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Volatile Organic Compounds</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Percent volatile</td>
<td>No Data Available</td>
</tr>
<tr>
<td>VOC Less H2O &amp; Exempt Solvents</td>
<td>No Data Available</td>
</tr>
</tbody>
</table>

SECTION 10: Stability and reactivity

10.1. Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability
Stable.

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

10.4. Conditions to avoid
Heat

10.5. Incompatible materials
Strong bases

10.6. Hazardous decomposition products

<table>
<thead>
<tr>
<th>Substance</th>
<th>Condition</th>
</tr>
</thead>
<tbody>
<tr>
<td>None known.</td>
<td></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. The information below represents toxicological information associated with the individual components of the uncured product. Once properly mixed and/or cured, the product is safe for its intended use.

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:
This product may have a characteristic odor; however, no adverse health effects are anticipated.

Skin Contact:
Corrosive (Skin Burns): Signs/symptoms may include localized redness, swelling, itching, intense pain, blistering, ulceration, and tissue destruction.

Eye Contact:
Corrosive (Eye Burns): Signs/symptoms may include cloudy appearance of the cornea, chemical burns, severe pain, tearing, ulcerations, significantly impaired vision or complete loss of vision.

Ingestion:
May be harmful if swallowed.
Gastrointestinal Corrosion: Signs/symptoms may include severe mouth, throat and abdominal pain; nausea; vomiting; and diarrhea; blood in the feces and/or vomitus may also be seen.

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.

### Acute Toxicity

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overall product</td>
<td>Dermal</td>
<td>No data available; calculated ATE &gt; 5,000 mg/kg</td>
<td></td>
</tr>
<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>PHOSPHORIC ACID</td>
<td>Dermal</td>
<td>Rabbit</td>
<td>LD50 2,740 mg/kg</td>
</tr>
<tr>
<td>PHOSPHORIC ACID</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 1,530 mg/kg</td>
</tr>
<tr>
<td>SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE</td>
<td>Dermal</td>
<td>Rabbit</td>
<td>LD50 &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LC50 &gt; 0.691 mg/l</td>
</tr>
<tr>
<td>SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE</td>
<td>Inhalation-</td>
<td>Rat</td>
<td>LD50 &gt; 5,110 mg/kg</td>
</tr>
<tr>
<td>POLYETHYLENE GLYCOL</td>
<td>Dermal</td>
<td>Rabbit</td>
<td>LD50 &gt; 20,000 mg/kg</td>
</tr>
<tr>
<td>POLYETHYLENE GLYCOL</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 32.770 mg/kg</td>
</tr>
</tbody>
</table>
### Skin Corrosion/Irritation

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHOSPHORIC ACID</td>
<td>Rabbit</td>
<td>Corrosive</td>
</tr>
<tr>
<td>SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE</td>
<td>Rabbit</td>
<td>No significant irritation</td>
</tr>
<tr>
<td>POLYETHYLENE GLYCOL</td>
<td>Rabbit</td>
<td>Minimal irritation</td>
</tr>
<tr>
<td>ALUMINUM OXIDE</td>
<td>Rabbit</td>
<td>No significant irritation</td>
</tr>
</tbody>
</table>

### Serious Eye Damage/Irritation

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHOSPHORIC ACID</td>
<td>official classifica tion</td>
<td>Corrosive</td>
</tr>
<tr>
<td>SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE</td>
<td>Rabbit</td>
<td>No significant irritation</td>
</tr>
<tr>
<td>POLYETHYLENE GLYCOL</td>
<td>Rabbit</td>
<td>Mild irritant</td>
</tr>
<tr>
<td>ALUMINUM OXIDE</td>
<td>Rabbit</td>
<td>No significant irritation</td>
</tr>
</tbody>
</table>

### Skin Sensitization

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHOSPHORIC ACID</td>
<td>Human</td>
<td>Not sensitizing</td>
</tr>
<tr>
<td>SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE</td>
<td>Human and animal</td>
<td>Not sensitizing</td>
</tr>
<tr>
<td>POLYETHYLENE GLYCOL</td>
<td>Guinea pig</td>
<td>Not sensitizing</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

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHOSPHORIC ACID</td>
<td>In Vitro</td>
<td>Not mutagenic</td>
</tr>
<tr>
<td>SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE</td>
<td>In Vitro</td>
<td>Not mutagenic</td>
</tr>
<tr>
<td>POLYETHYLENE GLYCOL</td>
<td>In Vitro</td>
<td>Not mutagenic</td>
</tr>
<tr>
<td>POLYETHYLENE GLYCOL</td>
<td>In vivo</td>
<td>Not mutagenic</td>
</tr>
<tr>
<td>ALUMINUM OXIDE</td>
<td>In Vitro</td>
<td>Not mutagenic</td>
</tr>
</tbody>
</table>

### Carcinogenicity

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE</td>
<td>Not Specified</td>
<td>Mouse</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
<tr>
<td>POLYETHYLENE GLYCOL</td>
<td>Ingestion</td>
<td>Rat</td>
<td>Not carcinogenic</td>
</tr>
<tr>
<td>ALUMINUM OXIDE</td>
<td>Inhalation</td>
<td>Rat</td>
<td>Not carcinogenic</td>
</tr>
</tbody>
</table>

### 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>PHOSPHORIC ACID</td>
<td>Ingestion</td>
<td>Not toxic to female reproduction</td>
<td>Rat</td>
<td>NOAEL 750 mg/kg/day</td>
<td>2 generation</td>
</tr>
<tr>
<td>PHOSPHORIC ACID</td>
<td>Ingestion</td>
<td>Not toxic to male reproduction</td>
<td>Rat</td>
<td>NOAEL 750 mg/kg/day</td>
<td>2 generation</td>
</tr>
<tr>
<td>Name</td>
<td>Route</td>
<td>Target Organ(s)</td>
<td>Value</td>
<td>Species</td>
<td>Test Result</td>
</tr>
<tr>
<td>------------------------------------------</td>
<td>----------------</td>
<td>-----------------------</td>
<td>--------------------------------------------</td>
<td>---------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>PHOSPHORIC ACID</td>
<td>Ingestion</td>
<td>Not toxic to development</td>
<td>Rat NOAEL 750 mg/kg/day</td>
<td>2 generation</td>
<td></td>
</tr>
<tr>
<td>SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE</td>
<td>Ingestion</td>
<td>Not toxic to female reproduction</td>
<td>Rat NOAEL 509 mg/kg/day</td>
<td>1 generation</td>
<td></td>
</tr>
<tr>
<td>SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE</td>
<td>Ingestion</td>
<td>Not toxic to male reproduction</td>
<td>Rat NOAEL 497 mg/kg/day</td>
<td>1 generation</td>
<td></td>
</tr>
<tr>
<td>SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE</td>
<td>Ingestion</td>
<td>Not toxic to development</td>
<td>Rat NOAEL 1,350 mg/kg/day</td>
<td>during organogenesis</td>
<td></td>
</tr>
<tr>
<td>POLYETHYLENE GLYCOL</td>
<td>Ingestion</td>
<td>Not toxic to female reproduction</td>
<td>Rat NOAEL 1,125 mg/kg/day</td>
<td>during gestation</td>
<td></td>
</tr>
<tr>
<td>POLYETHYLENE GLYCOL</td>
<td>Ingestion</td>
<td>Not toxic to male reproduction</td>
<td>Rat NOAEL 5699 +/- 1341 mg/kg/day</td>
<td>5 days</td>
<td></td>
</tr>
<tr>
<td>POLYETHYLENE GLYCOL</td>
<td>Ingestion</td>
<td>Not toxic to male reproduction</td>
<td>Rat NOEL N/A</td>
<td></td>
<td></td>
</tr>
<tr>
<td>POLYETHYLENE GLYCOL</td>
<td>Ingestion</td>
<td>Some positive developmental data exist, but the data are not sufficient for classification</td>
<td>Mouse NOAEL 562 mg/animal/day</td>
<td>during gestation</td>
<td></td>
</tr>
</tbody>
</table>

**Target Organ(s)**

**Specific Target Organ Toxicity - single exposure**

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Target Organ(s)</th>
<th>Value</th>
<th>Species</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>PHOSPHORIC ACID</td>
<td>Inhalation</td>
<td>respiratory irritation</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Human</td>
<td>NOAEL Not available</td>
<td>occupational exposure</td>
</tr>
<tr>
<td>POLYETHYLENE GLYCOL</td>
<td>Inhalation</td>
<td>respiratory irritation</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>NOAEL 1.008 mg/l</td>
<td>2 weeks</td>
</tr>
</tbody>
</table>

**Specific Target Organ Toxicity - repeated exposure**

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Target Organ(s)</th>
<th>Value</th>
<th>Species</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>SYNTHETIC AMORPHOUS SILICA, FUMED, CRYSTALLINE FREE</td>
<td>Inhalation</td>
<td>respiratory system</td>
<td>All data are negative</td>
<td>Human</td>
<td>NOAEL Not available</td>
<td>occupational exposure</td>
</tr>
<tr>
<td>POLYETHYLENE GLYCOL</td>
<td>Inhalation</td>
<td>respiratory system</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>NOAEL 1.008 mg/l</td>
<td>2 weeks</td>
</tr>
<tr>
<td>POLYETHYLENE GLYCOL</td>
<td>Ingestion</td>
<td>kidney and/or bladder</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>NOAEL 5,640 mg/kg/day</td>
<td>13 weeks</td>
</tr>
<tr>
<td>POLYETHYLENE GLYCOL</td>
<td>Ingestion</td>
<td>heart</td>
<td>endocrine system</td>
<td>hematopoietic system</td>
<td>liver</td>
<td>nervous system</td>
</tr>
<tr>
<td>ALUMINUM OXIDE</td>
<td>Inhalation</td>
<td>pneumoconiosis</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Human</td>
<td>NOAEL Not available</td>
<td>occupational exposure</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.

Incinerate in a permitted waste incineration facility.

EPA Hazardous Waste Number (RCRA): D002 (Corrosive)

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.

311/312 Hazard Categories:

Fire Hazard - No  Pressure Hazard - No  Reactivity Hazard - No  Immediate Hazard - Yes  Delayed Hazard - No

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>ALUMINUM OXIDE</td>
<td>1344-28-1</td>
<td>Trade Secret &lt; 2</td>
</tr>
</tbody>
</table>

15.2. State Regulations
Contact 3M for more information.

15.3. Chemical Inventories
The components of this product are in compliance with the new substance notification requirements of CEPA.

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: 3  Flammability: 1  Instability: 0  Special Hazards: None  
Corrosive: Yes

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.

Document Group: 29-8286-6  
Issue Date: 02/25/16  
Version Number: 3.00  
Supercedes Date: 02/11/15

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Safety Data Sheet

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Document Group: 10-7892-2
Issue Date: 02/25/16
Version Number: 29.00
Supercedes Date: 12/01/14

SECTION 1: Identification

1.1. Product identifier
2721 3M™ ESPE™ RELYX™ CERAMIC PRIMER

Product Identification Numbers
70-2010-1748-3, 70-2010-2492-7

1.2. Recommended use and restrictions on use

Recommended use
Dental Product, Primer

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
Flammable Liquid: Category 2.
Serious Eye Damage/Irritation: Category 2B.
Specific Target Organ Toxicity (central nervous system): Category 3.
Specific Target Organ Toxicity (repeated exposure): Category 2.

2.2. Label elements
Signal word
Danger
Symbols
Flame | Exclamation mark | Health Hazard |

Pictograms

Hazard Statements
Highly flammable liquid and vapor.
Causes eye irritation.
May cause drowsiness or dizziness.
May cause damage to organs through prolonged or repeated exposure: respiratory system |

Precautionary Statements

Prevention:
Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Take precautionary measures against static discharge.
Keep container tightly closed.
Do not breathe dust/fume/gas/mist/vapors/spray.
Use only in a well-ventilated area.
Wear protective gloves and eye/face protection.
Wash thoroughly after handling.

Response:
IF INHALED: Remove person to fresh air and keep comfortable for breathing.
IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
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.
Get medical advice/attention if you feel unwell.
In case of fire: Use a fire fighting agent suitable for flammable liquids such as dry chemical or carbon dioxide to extinguish.

Storage:
Store in a well-ventilated place. Keep cool.
Keep container tightly closed.

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

2.3. Hazards not otherwise classified
None.

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>ETHYL ALCOHOL</td>
<td>64-17-5</td>
<td>70 - 80</td>
</tr>
</tbody>
</table>

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. If you feel unwell, get 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 flammable liquids such as dry chemical or carbon dioxide to extinguish.

5.2. Special hazards arising from the substance or mixture
Closed containers exposed to heat from fire may build pressure and explode.

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>
</tbody>
</table>

5.3. Special protective actions for fire-fighters
Water may not effectively extinguish fire; however, it should be used to keep fire-exposed containers and surfaces cool and prevent explosive rupture.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Evacuate area. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Ventilate the area with fresh air.

Warning! A motor could be an ignition source and could cause flammable gases or vapors in the spill area to burn or explode.

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
Cover spill area with a fire-extinguishing foam designed for use on solvents, such as alcohols and acetone, that can dissolve in water. An AR - AFFF type foam is recommended. Working from around the edges of the spill inward, cover with bentonite, vermiculite, or commercially available inorganic absorbent material. Mix in sufficient absorbent until it appears dry. Remember, adding an absorbent material does not remove a physical, health, or environmental hazard. Collect as much of the spilled material as possible using non-sparking tools. Place in a metal container approved for transportation by appropriate authorities. Clean up residue with water. Seal the container. Dispose of collected material as soon as possible.

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid prolonged or repeated skin contact. Keep away from heat/sparks/open flames/hot surfaces. No smoking. Take precautionary measures against static discharge. Do not breathe 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. Avoid release to the environment. Avoid contact with oxidizing agents (eg. chlorine, chromic acid etc.)

7.2. Conditions for safe storage including any incompatibilities
Store in a well-ventilated place. Keep container tightly closed. Store away from heat. Store away from acids. Store away from oxidizing agents.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits
If a component is disclosed in section 3 but does not appear in the table below, an occupational exposure limit is not available for the component.

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>Agency</th>
<th>Limit type</th>
<th>Additional Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYL ALCOHOL</td>
<td>64-17-5</td>
<td>ACGIH</td>
<td>STEL:1000 ppm</td>
<td>A3: Confirmed animal carcin.</td>
</tr>
<tr>
<td>ETHYL ALCOHOL</td>
<td>64-17-5</td>
<td>OSHA</td>
<td>TWA:1900 mg/m3(1000 ppm)</td>
<td></td>
</tr>
</tbody>
</table>

ACGIH : American Conference of Governmental Industrial Hygienists
AIHA : American Industrial Hygiene Association
CMRG : Chemical Manufacturer's Recommended Guidelines
OSHA : United States Department of Labor - Occupational Safety and Health Administration
TWA: Time-Weighted-Average
STEL: Short Term Exposure Limit
CEIL: Ceiling

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
Respiratory protection is not 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>Liquid</td>
</tr>
<tr>
<td>Odor, Color, Grade:</td>
<td>Characteristic odor, Clear</td>
</tr>
<tr>
<td>Odor threshold</td>
<td>No Data Available</td>
</tr>
<tr>
<td>pH</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Melting point</td>
<td>Not Applicable</td>
</tr>
<tr>
<td>Boiling Point</td>
<td>180 °F</td>
</tr>
<tr>
<td>Flash Point</td>
<td>70 °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>3.3 % [Details: for Ethanol]</td>
</tr>
<tr>
<td>Flammable Limits (UEL)</td>
<td>19 % [Details: for Ethanol]</td>
</tr>
<tr>
<td>Vapor Pressure</td>
<td>55 mmHg [@ 25 °C]</td>
</tr>
<tr>
<td>Vapor Density</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Density</td>
<td>0.86 g/ml</td>
</tr>
<tr>
<td>Specific Gravity</td>
<td>0.86 [Ref Std: WATER=1]</td>
</tr>
<tr>
<td>Solubility in Water</td>
<td>Complete</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>No Data Available</td>
</tr>
<tr>
<td>Decomposition temperature</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Viscosity</td>
<td>1.1 centipoise</td>
</tr>
<tr>
<td>Molecular weight</td>
<td>No Data Available</td>
</tr>
<tr>
<td>Percent volatile</td>
<td>No Data Available</td>
</tr>
</tbody>
</table>

SECTION 10: Stability and reactivity

10.1. Reactivity
This material may be reactive with certain agents under certain conditions - see the remaining headings in this section.

10.2. Chemical stability
Stable.

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

10.4. Conditions to avoid
Heat
Sparks and/or flames

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></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. The information below represents toxicological information associated with the individual components of the uncured product. Once properly mixed and/or cured, the product is safe for its intended use.

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:**
Exposures needed to cause the following health effect(s) are not expected during normal, intended use:
- Respiratory Tract Irritation: Signs/symptoms may include cough, sneezing, nasal discharge, headache, hoarseness, and nose and throat pain.

May cause additional health effects (see below).

**Skin Contact:**
Contact with the skin during product use is not expected to result in significant irritation.

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

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

May cause additional health effects (see below).

**Additional Health Effects:**

**Single exposure may cause target organ effects:**
Exposures needed to cause the following health effect(s) are not expected during normal, intended use:
- Central Nervous System (CNS) Depression: Signs/symptoms may include headache, dizziness, drowsiness, incoordination, nausea, slowed reaction time, slurred speech, giddiness, and unconsciousness.

**Prolonged or repeated exposure may cause target organ effects:**
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.

Additional Information:
This product contains ethanol. Alcoholic beverages and ethanol in alcoholic beverages have been classified by the International Agency for Research on Cancer as carcinogenic to humans. There are also data associating human consumption of alcoholic beverages with developmental toxicity and liver toxicity. Exposure to ethanol during the foreseeable use of this product is not expected to cause cancer, developmental toxicity, or liver toxicity.

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.

Acute Toxicity

<table>
<thead>
<tr>
<th>Name</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 &gt; 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Dermal</td>
<td>Rabbit</td>
<td>LD50 &gt; 15,800 mg/kg</td>
</tr>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Inhalation-Vapor (4 hours)</td>
<td>Rat</td>
<td>LC50 124.7 mg/l</td>
</tr>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 17,800 mg/kg</td>
</tr>
<tr>
<td>METHACRYLOXYPROPYLTRIMETHOXYSILANE</td>
<td>Dermal</td>
<td>Rabbit</td>
<td>LD50 &gt; 20,900 mg/kg</td>
</tr>
<tr>
<td>METHACRYLOXYPROPYLTRIMETHOXYSILANE</td>
<td>Inhalation-Dust/Mist (4 hours)</td>
<td>Rat</td>
<td>LC50 &gt; 2.28 mg/l</td>
</tr>
</tbody>
</table>

ATE = acute toxicity estimate

Skin Corrosion/Irritation

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Rabbit</td>
<td>No significant irritation</td>
</tr>
<tr>
<td>METHACRYLOXYPROPYLTRIMETHOXYSILANE</td>
<td>Rabbit</td>
<td>No significant irritation</td>
</tr>
</tbody>
</table>

Serious Eye Damage/Irritation

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Rabbit</td>
<td>Moderate irritant</td>
</tr>
<tr>
<td>METHACRYLOXYPROPYLTRIMETHOXYSILANE</td>
<td>Rabbit</td>
<td>Mild irritant</td>
</tr>
</tbody>
</table>

Skin Sensitization

<table>
<thead>
<tr>
<th>Name</th>
<th>Species</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Human</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
<tr>
<td>METHACRYLOXYPROPYLTRIMETHOXYSILANE</td>
<td>Guinea pig</td>
<td>Not sensitizing</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

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYL ALCOHOL</td>
<td>In Vitro</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
<tr>
<td>ETHYL ALCOHOL</td>
<td>In vivo</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
<tr>
<td>METHACRYLOXYPROPYLTRIMETHOXYSILANE</td>
<td>In Vitro</td>
<td>Not mutagenic</td>
</tr>
<tr>
<td>METHACRYLOXYPROPYLTRIMETHOXYSILANE</td>
<td>In vivo</td>
<td>Not mutagenic</td>
</tr>
</tbody>
</table>

Carcinogenicity
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>ETHYL ALCOHOL</td>
<td>Inhalation</td>
<td>Not toxic to development</td>
<td>Rat</td>
<td>NOAEL 38 mg/l</td>
<td>during gestation</td>
</tr>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Ingestion</td>
<td>Some positive developmental data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>NOAEL 5,200 mg/kg/day</td>
<td>preming &amp; during gestation</td>
</tr>
<tr>
<td>METHACRYLOXYPROPYLTRIMETHOXYSILANE</td>
<td>Ingestion</td>
<td>Some positive developmental data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>NOAEL 5,200 mg/kg/day</td>
<td>during organogenesis</td>
</tr>
</tbody>
</table>

### Target Organ(s)

#### Specific Target Organ Toxicity - single exposure

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Target Organ(s)</th>
<th>Species</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Inhalation</td>
<td>central nervous system depression</td>
<td>Human</td>
<td>LOAEL 2.6 mg/l</td>
<td>30 minutes</td>
</tr>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Inhalation</td>
<td>respiratory irritation</td>
<td>Human</td>
<td>LOAEL 9.4 mg/l</td>
<td>not available</td>
</tr>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Ingestion</td>
<td>central nervous system depression</td>
<td>Multiple animal species</td>
<td>NOAEL not available</td>
<td></td>
</tr>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Ingestion</td>
<td>kidney and/or bladder</td>
<td>Dog</td>
<td>NOAEL 3,000 mg/kg</td>
<td></td>
</tr>
</tbody>
</table>

#### Specific Target Organ Toxicity - repeated exposure

<table>
<thead>
<tr>
<th>Name</th>
<th>Route</th>
<th>Target Organ(s)</th>
<th>Species</th>
<th>Test Result</th>
<th>Exposure Duration</th>
</tr>
</thead>
<tbody>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Inhalation</td>
<td>liver</td>
<td>Rabbit</td>
<td>LOAEL 124 mg/l</td>
<td>365 days</td>
</tr>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Inhalation</td>
<td>hematopoietic system</td>
<td>immune</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
</tr>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Ingestion</td>
<td>liver</td>
<td>Rat</td>
<td>LOAEL 8,000 mg/kg/day</td>
<td>4 months</td>
</tr>
<tr>
<td>ETHYL ALCOHOL</td>
<td>Ingestion</td>
<td>kidney and/or bladder</td>
<td>Dog</td>
<td>NOAEL 3,000 mg/kg/day</td>
<td>7 days</td>
</tr>
<tr>
<td>METHACRYLOXYPROP YLTRIMETHOXYSILANE</td>
<td>Dermal</td>
<td>skin</td>
<td>Rabbit</td>
<td>NOAEL 2,100 mg/kg/day</td>
<td>17 days</td>
</tr>
<tr>
<td>METHACRYLOXYPROP YLTRIMETHOXYSILANE</td>
<td>Dermal</td>
<td>liver</td>
<td>kidney and/or bladder</td>
<td>All data are negative</td>
<td>Rabbit</td>
</tr>
<tr>
<td>METHACRYLOXYPROP YLTRIMETHOXYSILANE</td>
<td>Inhalation</td>
<td>respiratory system</td>
<td>May cause damage to organs though prolonged or repeated exposure</td>
<td>Rat</td>
<td>14 weeks</td>
</tr>
<tr>
<td>METHACRYLOXYPROP YLTRIMETHOXYSILANE</td>
<td>Inhalation</td>
<td>liver</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
<td>Rat</td>
<td>14 weeks</td>
</tr>
<tr>
<td>METHACRYLOXYPROP YLTRIMETHOXYSILANE</td>
<td>Inhalation</td>
<td>hematopoietic system</td>
<td>eyes</td>
<td>All data are negative</td>
<td>Rat</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.

Incinerate in a permitted waste incineration facility.

EPA Hazardous Waste Number (RCRA): D001 (Ignitable)

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.

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

15.2. State Regulations
Contact 3M for more information.

15.3. Chemical Inventories
The components of this product are in compliance with the new substance notification requirements of CEPA.

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: 2 Instability: 1 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.

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Issue Date: 02/25/16 Supercedes Date: 12/01/14

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