3M Filtek™ One Bulk Fill Restorative

Safety Data Sheet

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Version Number: 1.09

SECTION 1: Identification

1.1. Product identifier
3M™ Filtek™ One Bulk Fill Restorative

Product Identification Numbers

1.2. Recommended use and restrictions on use

Recommended use
Dental Restorative, Restrictions on Use: For use only by dental professionals in approved indications

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
Skin Sensitizer: Category 1B.
Reproductive Toxicity: Category 1B.

2.2. Label elements
Signal word
Danger

Symbols
Exclamation mark | Health Hazard |

Pictograms

Hazard Statements
May cause an allergic skin reaction.
May damage fertility or the unborn child.

Precautionary Statements

Prevention:
Obtain special instructions before use.
Do not handle until all safety precautions have been read and understood.
Avoid breathing dust.
Wear protective gloves.
Contaminated work clothing must not be allowed out of the workplace.

Response:
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.
IF exposed or concerned: Get medical advice/attention.

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

SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>% by Wt</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silane Treated Ceramic</td>
<td>444758-98-9</td>
<td>60 - 70</td>
</tr>
<tr>
<td>Aromatic Urethane Dimethacrylate</td>
<td>1431303-59-1</td>
<td>10 - 20</td>
</tr>
<tr>
<td>1,12-Dodecane Dimethacrylate (DDDMA)</td>
<td>72829-09-5</td>
<td>&lt; 10</td>
</tr>
<tr>
<td>Diurethane Dimethacrylate (UDMA)</td>
<td>72869-86-4</td>
<td>1 - 10</td>
</tr>
<tr>
<td>Silane Treated Silica</td>
<td>248596-91-0</td>
<td>1 - 10</td>
</tr>
</tbody>
</table>
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

Allergic skin reaction (redness, swelling, blistering, and itching)

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
Wear full protective clothing, including helmet, self-contained, positive pressure or pressure demand breathing apparatus, bunker coat and pants, bands around arms, waist and legs, face mask, and protective covering for exposed areas of the head.

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

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Avoid breathing of dust created by cutting, sanding, grinding or machining. 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. Do not handle until all safety precautions have been read and understood. Do not breathe dust/fume/gas/mist/vapors/spray. 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.) Do not get in eyes. Use personal protective equipment (gloves, respirators, etc.) as required.

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
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
Appearance
- Physical state: Solid
- Color: White

Specific Physical Form:
- Paste

Odor: Slight Acrylate
Odor threshold: Not Data Available

pH: Not Applicable

Melting point: No Data Available

Boiling Point: NotApplicable

Flash Point: No flash point

Evaporation rate: No Data Available

Flammability (solid, gas): Not Classified

Flammable Limits(LEL): Not Applicable

Flammable Limits(UEL): Not Applicable

Vapor Pressure: Not Applicable

Vapor Density: Not Applicable

Density: 1.9 g/cm³

Specific Gravity: 1.9  [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: No Data Available

Molecular weight: Not Applicable

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.

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

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:

Reproductive/Developmental Toxicity:
Contains a chemical or chemicals which can cause birth defects or other reproductive harm.

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>Professional</td>
<td>LD50 Not applicable</td>
</tr>
<tr>
<td></td>
<td></td>
<td>judgement</td>
<td></td>
</tr>
<tr>
<td>Overall product</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 2,000 mg/kg</td>
</tr>
<tr>
<td>Silane Treated Ceramic</td>
<td>Dermal</td>
<td></td>
<td>LD50 estimated to be &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>Silane Treated Ceramic</td>
<td>Ingestion</td>
<td></td>
<td>LD50 estimated to be 2,000 - 5,000 mg/kg</td>
</tr>
<tr>
<td>Aromatic Urethane Dimethacrylate</td>
<td>Dermal</td>
<td>Professi</td>
<td>LD50 estimated to be 2,000 - 5,000 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>onal judgement</td>
<td></td>
</tr>
<tr>
<td>Aromatic Urethane Dimethacrylate</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 2,000 mg/kg</td>
</tr>
<tr>
<td>Silane Treated Zirconia</td>
<td>Dermal</td>
<td></td>
<td>LD50 estimated to be &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>Silane Treated Zirconia</td>
<td>Ingestion</td>
<td></td>
<td>LD50 estimated to be 2,000 - 5,000 mg/kg</td>
</tr>
<tr>
<td>Diurethane Dimethacrylate (UDMA)</td>
<td>Dermal</td>
<td>Professi</td>
<td>LD50 estimated to be &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td></td>
<td></td>
<td>onal judgement</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Species</td>
<td>Value</td>
<td></td>
</tr>
<tr>
<td>------------------------------------------------</td>
<td>-----------------------</td>
<td>------------------------</td>
<td></td>
</tr>
<tr>
<td>Diurethane Dimethacrylate (UDMA)</td>
<td>Ingestion Rat</td>
<td>LD50 &gt; 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Ytterbium Fluoride (YbF3)</td>
<td>Dermal Professio nal judgeme nt</td>
<td>LD50 estimated to be &gt; 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Ytterbium Fluoride (YbF3)</td>
<td>Ingestion Rat</td>
<td>LD50 &gt; 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>1,12-Dodecane Dimethacrylate (DDDMA)</td>
<td>Dermal Professio nal judgeme nt</td>
<td>LD50 estimated to be 2,000 - 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>1,12-Dodecane Dimethacrylate (DDDMA)</td>
<td>Ingestion similar compoun ds</td>
<td>LD50  2000-5000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Silane Treated Silica</td>
<td>Dermal</td>
<td>LD50 estimated to be &gt; 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>Silane Treated Silica</td>
<td>Ingestion</td>
<td>LD50 estimated to be &gt; 5,000 mg/kg</td>
<td></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>Silane Treated Ceramic</td>
<td>similar compoun ds</td>
<td>No significant irritation</td>
</tr>
<tr>
<td>Aromatic Urethane Dimethacrylate</td>
<td>In vitro data</td>
<td>No significant irritation</td>
</tr>
<tr>
<td>Silane Treated Zirconia</td>
<td>Rabbit</td>
<td>No significant irritation</td>
</tr>
<tr>
<td>Silane Treated Silica</td>
<td>Professio nal judgeme nt</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>Silane Treated Ceramic</td>
<td>similar compoun ds</td>
<td>Mild irritant</td>
</tr>
<tr>
<td>Aromatic Urethane Dimethacrylate</td>
<td>In vitro data</td>
<td>No significant irritation</td>
</tr>
<tr>
<td>Silane Treated Zirconia</td>
<td>Rabbit</td>
<td>Mild irritant</td>
</tr>
<tr>
<td>Ytterbium Fluoride (YbF3)</td>
<td>Professio nal judgeme nt</td>
<td>Mild irritant</td>
</tr>
<tr>
<td>Silane Treated Silica</td>
<td>Professio nal judgeme nt</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>Silane Treated Ceramic</td>
<td>similar compoun ds</td>
<td>Not classified</td>
</tr>
<tr>
<td>Aromatic Urethane Dimethacrylate</td>
<td>Professio nal judgeme nt</td>
<td>Sensitizing</td>
</tr>
<tr>
<td>Diurethane Dimethacrylate (UDMA)</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>Aromatic Urethane Dimethacrylate</td>
<td>In Vitro</td>
<td>Not mutagenic</td>
</tr>
<tr>
<td>Silane Treated Zirconia</td>
<td>In Vitro</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>Silane Treated Ceramic</td>
<td>Inhalation</td>
<td>similar compounds</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
<tr>
<td>Silane Treated Zirconia</td>
<td>Inhalation</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**
For the component/components, either no data are currently available or the data are not sufficient for classification.

**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.

<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>Silane Treated Ceramic</td>
<td>Inhalation</td>
<td>pulmonary fibrosis</td>
<td>Not classified</td>
<td>similar compounds</td>
<td>NOAEL Not available</td>
<td></td>
</tr>
<tr>
<td>Silane Treated Zirconia</td>
<td>Inhalation</td>
<td>pulmonary fibrosis</td>
<td>Not classified</td>
<td>Multiple animal species</td>
<td>NOAEL Not available</td>
<td></td>
</tr>
<tr>
<td>Silane Treated Zirconia</td>
<td>Inhalation</td>
<td>respiratory system</td>
<td>Not classified</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.

Dispose of completely cured (or polymerized) material in a permitted industrial waste facility. As a disposal alternative, incinerate uncured product in a permitted waste incineration facility. If no other disposal options are available, waste product that has been completely cured or polymerized may be placed in a landfill properly designed for industrial waste.

EPA Hazardous Waste Number (RCRA): Not regulated

SECTION 14: Transport Information

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

SECTION 15: Regulatory information

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

EPCRA 311/312 Hazard Classifications:

<table>
<thead>
<tr>
<th>Physical Hazards</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Not applicable</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Health Hazards</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Reproductive toxicity</td>
<td></td>
</tr>
<tr>
<td>Respiratory or Skin Sensitization</td>
<td></td>
</tr>
</tbody>
</table>

Additional TSCA Information

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS No</th>
<th>Additional Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Silane Treated Silica</td>
<td>248596-91-0</td>
<td>Allowed use(s): Coating additive.</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.

3M™ Filtek™ One Bulk Fill Restorative

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