Safety Data Sheet

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Document Group: 30-2310-8
Issue Date: 02/28/20
Version Number: 4.01
Supercedes Date: 05/22/18

SECTION 1: Identification

1.1. Product identifier
3M™ Lava™ Plus High Translucency Zirconia Mill Blank 20, 40, Multi L, Multi XL

Product Identification Numbers
70-2011-3803-2, 70-2011-3804-0, 70-2011-3935-2, 70-2011-3943-6
7100004995, 7100005011, 7100005027, 7100005005

1.2. Recommended use and restrictions on use

Recommended use
Dental Product, Zirconia ceramic block

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

2.2. Label elements
Signal word
Not applicable.
Symbols
Not applicable.

Pictograms
Not applicable.

SECTION 3: Composition/information on ingredients

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>C.A.S. No.</th>
<th>% by Wt</th>
</tr>
</thead>
</table>
| ZIRCONIA CERAMIC     | 66402-68-4  | > 99 Trade Secret *

*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:
Wash with soap and water. 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 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.

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
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 prolonged or repeated skin contact. Avoid breathing of dust created by cutting, sanding, grinding or machining. Do not eat, drink or smoke when using this product. Wash thoroughly after handling.

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
No protective gloves required. 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: Solid Block or Slab
Odor: Odorless
Odor threshold: No Data Available
pH: Not Applicable
Melting point: Approximately 2700 °C
Boiling Point: Approximately 4300 °C
Flash Point: No flash point
Evaporation rate: Not Applicable
Flammability (solid, gas): Not Classified
Flammable Limits (LEL): Not Applicable
Flammable Limits (UEL): Not Applicable
Vapor Pressure: Not Applicable
Vapor Density: Not Applicable
Density: No Data Available
Specific Gravity: No Data Available
Solubility in Water: Nil
Solubility - non-water: No Data Available
Partition coefficient: n-octanol/ water: Not Applicable
Autoignition temperature: Not Applicable
Decomposition temperature: No Data Available
Viscosity: Not Applicable
Molecular weight: 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>Not Specified</td>
</tr>
</tbody>
</table>

**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:**
Mechanical Skin irritation: Signs/symptoms may include abrasion, redness, pain, and itching.

**Eye Contact:**
Mechanical eye irritation: Signs/symptoms may include pain, redness, tearing and corneal abrasion.

**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 ATE2,000 - 5,000 mg/kg</td>
</tr>
<tr>
<td>ZIRCONIA CERAMIC</td>
<td>Dermal</td>
<td></td>
<td>LD50 estimated to be &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>ZIRCONIA CERAMIC</td>
<td>Ingestion</td>
<td></td>
<td>LD50 estimated to be 2,000 - 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>ZIRCONIA CERAMIC</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>ZIRCONIA CERAMIC</td>
<td>Rabbit</td>
<td>Mild irritant</td>
</tr>
</tbody>
</table>

### Skin Sensitization

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

### 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>ZIRCONIA CERAMIC</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>ZIRCONIA CERAMIC</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.

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>ZIRCONIA CERAMIC</td>
<td>Inhalation</td>
<td>pulmonary fibrosis</td>
<td>Not classified</td>
<td>Multiple animal species</td>
<td>NOAEL not available</td>
<td>occupational exposure</td>
</tr>
<tr>
<td>ZIRCONIA CERAMIC</td>
<td>Inhalation</td>
<td>respiratory system</td>
<td>Not classified</td>
<td>Human</td>
<td>NOAEL not available</td>
<td></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): Not regulated

SECTION 14: Transport Information

For Transport Information, please visit http://3M.com/Transportinfo or call 1-800-364-3577 or 651-737-6501.
SECTION 15: Regulatory information

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

EPCRA 311/312 Hazard Classifications:

Physical Hazards
Not applicable

Health Hazards
Not applicable

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.

The components of this material are in compliance with the China "Measures on Environmental Management of New Chemical Substance". Certain restrictions may apply. Contact the selling division for additional information.

The components of this product are in compliance with the chemical notification requirements of TSCA. All required components of this product are listed on the active portion of the TSCA Inventory.

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: 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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