Safety Data Sheet

Section 1: Identification

1.1. Product identifier
3M™ ESPE™ DURELON POWDER FAST SETTING

Product Identification Numbers
LE-F100-0990-1, 70-2011-3602-8

1.2. Recommended use and restrictions on use

Recommended use
Dental Product, Luting Cement

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
Specific Target Organ Toxicity (repeated exposure): Category 1.

2.2. Label elements

Signal word
Danger

Symbols
**Health Hazard**

**Pictograms**

![Pictogram](image)

**Hazard Statements**
Causes damage to organs through prolonged or repeated exposure:
musculoskeletal system

**Precautionary Statements**

**Prevention:**
Do not breathe dust/fume/gas/mist/vapors/spray.
Do not eat, drink or smoke when using this product.
Wash thoroughly after handling.

**Response:**
Get medical advice/attention if you feel unwell.

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

5% of the mixture consists of ingredients of unknown acute inhalation toxicity.

### 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>ZINC OXIDE</td>
<td>1314-13-2</td>
<td>85 - 95</td>
</tr>
<tr>
<td>STANNOUS FLUORIDE</td>
<td>7783-47-3</td>
<td>1 - 10</td>
</tr>
<tr>
<td>TIN DIOXIDE</td>
<td>18282-10-5</td>
<td>1 - 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:**
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
Material will not burn.

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>None known.</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
Collect as much of the spilled material as possible. Use wet sweeping compound or water to avoid dusting. Sweep up. 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. Do not breathe 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. Do not get in eyes.

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
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>ZINC OXIDE</td>
<td>1314-13-2</td>
<td>ACGIH</td>
<td>TWA(respirable fraction):2 mg/m3; STEL(respirable fraction):10 mg/m3</td>
<td></td>
</tr>
<tr>
<td>ZINC OXIDE</td>
<td>1314-13-2</td>
<td>OSHA</td>
<td>TWA(as fume):5 mg/m3; TWA(as total dust):15 mg/m3; TWA(respirable fraction):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: Solid
- Specific Physical Form: Powder
- Odor, Color, Grade: Slight characteristic odor, slightly pink in color
- Odor threshold: No Data Available
- pH: Not Applicable
- Melting point: No Data Available
- Boiling Point: Not Applicable
- 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: 4.7 [Ref Std: WATER=1]
Solubility in Water: Nil
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: Not Applicable
Volatile Organic Compounds: Not Applicable
Percent volatile: Not Applicable
VOC Less H2O & Exempt Solvents: Not Applicable

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.

May cause additional health effects (see below).

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

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

**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:**

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

Hard Tissue Effects: Signs/symptoms may include color changes in the teeth and nails; changes in development of bone, teeth or nails; weakening of the bones; and/or hair loss.

**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>Inhalation-Dust/Mist(4 hr)</td>
<td>No data available; calculated ATE &gt;12.5 mg/l</td>
<td></td>
</tr>
<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>ZINC OXIDE</td>
<td>Dermal</td>
<td>LD50 estimated to be &gt; 5,000 mg/kg</td>
<td></td>
</tr>
<tr>
<td>ZINC OXIDE</td>
<td>Inhalation-Dust/Mist (4 hours)</td>
<td>Rat</td>
<td>LC50 &gt; 5.7 mg/l</td>
</tr>
<tr>
<td>ZINC OXIDE</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 5,000 mg/kg</td>
</tr>
<tr>
<td>STANNOUS FLUORIDE</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 360 mg/kg</td>
</tr>
<tr>
<td>TIN DIOXIDE</td>
<td>Inhalation-Dust/Mist (4 hours)</td>
<td>Rat</td>
<td>LC50 &gt; 2.04 mg/l</td>
</tr>
<tr>
<td>TIN DIOXIDE</td>
<td>Ingestion</td>
<td>Rat</td>
<td>LD50 &gt; 2,000 mg/kg</td>
</tr>
<tr>
<td>TIN DIOXIDE</td>
<td>Dermal</td>
<td>similar health hazards</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>ZINC OXIDE</td>
<td>Human and animal</td>
<td>No significant irritation</td>
</tr>
<tr>
<td>STANNOUS FLUORIDE</td>
<td>official classification</td>
<td>Irritant</td>
</tr>
<tr>
<td>TIN DIOXIDE</td>
<td>In vitro data</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>ZINC OXIDE</td>
<td>Rabbit</td>
<td>Mild irritant</td>
</tr>
<tr>
<td>STANNOUS FLUORIDE</td>
<td></td>
<td>Severe irritant</td>
</tr>
<tr>
<td>TIN DIOXIDE</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>ZINC OXIDE</td>
<td>Guinea pig</td>
<td>Not classified</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>ZINC OXIDE</td>
<td>In Vitro</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
<tr>
<td>ZINC OXIDE</td>
<td>In vivo</td>
<td>Some positive data exist, but the data are not sufficient for classification</td>
</tr>
<tr>
<td>STANNOUS FLUORIDE</td>
<td>In vivo</td>
<td>Not mutagenic</td>
</tr>
<tr>
<td>STANNOUS FLUORIDE</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>ZINC OXIDE</td>
<td>Ingestion</td>
<td>Not classified for reproduction and/or development</td>
<td>Multiple animal species</td>
<td>NOAEL 125 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>STANNOUS FLUORIDE</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>
</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>ZINC OXIDE</td>
<td>Ingestion</td>
<td>nervous system</td>
<td>Not classified</td>
<td>Rat</td>
<td>NOAEL 600 mg/kg/day</td>
<td>10 days</td>
</tr>
<tr>
<td>ZINC OXIDE</td>
<td>Ingestion</td>
<td>endocrine system</td>
<td>hematopoietic system</td>
<td>kidney and/or bladder</td>
<td>Not classified</td>
<td>Other</td>
</tr>
<tr>
<td>STANNOUS FLUORIDE</td>
<td>Inhalation</td>
<td>bone, teeth, nails, and/or hair</td>
<td>Causes damage to organs through prolonged or repeated exposure</td>
<td>Human</td>
<td>NOAEL Not available</td>
<td>occupational exposure</td>
</tr>
<tr>
<td>STANNOUS FLUORIDE</td>
<td>Ingestion</td>
<td>bone, teeth, nails, and/or hair</td>
<td>Causes damage to organs through prolonged or repeated exposure</td>
<td>Human</td>
<td>NOAEL 0.33 mg/kg/day</td>
<td>environmental 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 waste product in a permitted industrial waste facility. Empty drums/barrels/containers used for transporting and handling hazardous chemicals (chemical substances/mixtures/preparations classified as Hazardous as per applicable regulations) shall be considered, stored, treated & disposed of as hazardous wastes unless otherwise defined by applicable waste regulations. Consult with the respective regulating authorities to determine the available treatment and disposal facilities.

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>Specific target organ toxicity (single or repeated exposure)</td>
<td></td>
</tr>
</tbody>
</table>

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>
</table>
15.2. State Regulations
Contact 3M for more information.

15.3. Chemical Inventories
The components of this material are in compliance with the provisions of Australia National Industrial Chemical Notification and Assessment Scheme (NICNAS). Certain restrictions may apply. Contact the selling division for additional information.

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 material are in compliance with the provisions of the Korean Toxic Chemical Control Law. Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of Japan Chemical Substance Control Law. Certain restrictions may apply. Contact the selling division for additional information.

The components of this material are in compliance with the provisions of Philippines RA 6969 requirements. Certain restrictions may apply. Contact the selling division for additional information.

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: 0 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: 12/29/17 Supercedes Date: 02/25/16

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whether it is fit for a particular purpose and suitable for user's method of use or application.

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