# SAFETY DATA SHEET
## ESTELITE BULK FILL Flow

### 1. Identification

**Product identifier**

**Product name** ESTELITE BULK FILL Flow

**Recommended use of the chemical and restrictions on use**

**Application** Resin-based dental restorative material. For dental professionals only.

**Details of the supplier of the safety data sheet**

**Supplier** Tokuyama Dental America, Inc.
740 Garden View CT., Suite 200 Encinitas,
CA 92024 U.S.A.
Tel: (877) 378 3548 (Toll-Free)
Tel: (760)942-7211
Fax: (760)942-7212

**Contact Person** http://www.tokuyama-dental.com/tdc/contact.html

**Manufacturer** Tokuyama Dental Corporation
38-9, Taitou 1-chome, Taitou-ku, Tokyo
110-0016, Japan
TEL: +81-3-3835-2261
FAX: +81-3-3835-2265

**Emergency telephone number**

**Emergency telephone** California Poison Control System - San Francisco Division
San Francisco General Hospital
Bldg 5 Rm 2A21,1001 Potrero Ave, San Francisco
Emergency telephone number:+1 800 222 1222
www.calpoison.org

National Capital Poison Center
3201 New Mexico Ave, Ste 310, Washington DC
Emergency telephone number: +1 800 222 1222
Telephone number: +1 202 362 3867
Facsimile number:+1 202 362 8377
www.poison.org

### 2. Hazard(s) Identification

**Classification of the substance or mixture**

**Physical hazards** Not Classified

**Health hazards** Skin Irrit. 2 - H315 Eye Irrit. 2A - H319 Skin Sens. 1 - H317

**Environmental hazards** Not Classified

**Label elements**

**Pictogram**

[Exclamation mark]

**Signal word** Warning
ESTELITE BULK FILL Flow

Hazard statements
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.

Precautionary statements
P264 Wash contaminated skin thoroughly after handling.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P302+P352 If on skin: Wash with plenty of water.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321 Specific treatment (see medical advice on this label).
P332+P313 If skin irritation occurs: Get medical advice/ attention.
P333+P313 If skin irritation or rash occurs: Get medical advice/ attention.
P337+P313 If eye irritation persists: Get medical advice/ attention.
P362+P364 Take off contaminated clothing and wash it before reuse.
P261 Avoid breathing vapor/ spray.
P501 Dispose of contents/ container in accordance with local regulations.

Contains
BISPHENOL A DI(2-HYDROXY PROPOXY) DIMETHACRYLATE, TRIETYLENE GLYCOL DIMETHACRYLATE, (1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXY-2,1-ETHANEDIYLOXY-2,1-ETHANEDIYL) BISMETHACRYLATE, 2-(2H-BENZOTRIAZOL-2-YL)-p-CRESOL

Other hazards
Hazards not otherwise classified (HNOC)
Not applicable.

3. Composition/information on ingredients

Mixtures

<table>
<thead>
<tr>
<th>Ingredient</th>
<th>Percentage</th>
<th>CAS number</th>
</tr>
</thead>
<tbody>
<tr>
<td>BISPHENOL A DI(2-HYDROXY PROPOXY) DIMETHACRYLATE</td>
<td>10-30%</td>
<td>1565-94-2</td>
</tr>
<tr>
<td>TRIETYLENE GLYCOL DIMETHACRYLATE</td>
<td>10-30%</td>
<td>109-16-0</td>
</tr>
<tr>
<td>(1-METHYLETHYLIDENE)BIS(4,1-PHENYLENEOXY-2,1-ETHANEDIYLOXY-2,1-ETHANEDIYL) BISMETHACRYLATE</td>
<td>5-10%</td>
<td>41637-38-1</td>
</tr>
<tr>
<td>2-(2H-BENZOTRIAZOL-2-YL)-p-CRESOL</td>
<td>&lt;1%</td>
<td>2440-22-4</td>
</tr>
<tr>
<td>MEQUINOL</td>
<td>&lt;1%</td>
<td>150-76-5</td>
</tr>
</tbody>
</table>

4. First-aid measures

Description of first aid measures
General information
Move affected person to fresh air at once. Get medical attention if any discomfort continues.
ESTELITE BULK FILL Flow

Inhalation
Move affected person to fresh air at once.

Ingestion
Try to induce vomiting. Get medical attention if any discomfort continues.

Skin Contact
Wash skin thoroughly with soap and water.

Eye contact
Remove any contact lenses and open eyelids wide apart. Continue to rinse for at least 15 minutes. Continue to rinse for at least 15 minutes. Get medical attention if irritation persists after washing.

Most important symptoms and effects, both acute and delayed

General information
No information available.

Skin contact
Skin irritation. Allergic rash.

Eye contact
May cause severe eye irritation.

Indication of immediate medical attention and special treatment needed

Notes for the doctor
No specific recommendations.

5. Fire-fighting measures

Extinguishing media
Suitable extinguishing media
Extinguish with the following media: Foam. Carbon dioxide or dry powder.

Special hazards arising from the substance or mixture
Specific hazards
Irritating gases or vapors.

Hazardous combustion products
No known hazardous decomposition products.

Advice for firefighters
Protective actions during firefighting
Avoid breathing fire gases or vapors.

Special protective equipment for firefighters
Wear chemical protective suit.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions
Wear protective clothing as described in Section 8 of this safety data sheet.

Environmental precautions
Environmental precautions
No specific recommendations.

Methods and material for containment and cleaning up

Methods for cleaning up
Absorb in vermiculite, dry sand or earth and place into containers. Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation.

Reference to other sections
For waste disposal, see section 13.

7. Handling and storage

Precautions for safe handling
Usage precautions
All handling should only take place in well-ventilated areas.

Conditions for safe storage, including any incompatibilities
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Storage precautions
Store in a cool, dark place (0-25°C, 32-77°F). Keep away from heat, direct sunlight, sparks and open flames.

Storage class
Chemical storage.

Specific end uses(s)
The identified uses for this product are detailed in Section 1.2.

8. Exposure Controls/personal protection

Control parameters

Occupational exposure limits

MEQUINOL
Long-term exposure limit (8-hour TWA): ACGIH 5 mg/m³

2,6-DI-tert-BUTYL-p-CRESOL
Long-term exposure limit (8-hour TWA): ACGIH 2 mg/m³ inhalable fraction and vapor A4

TITANIUM DIOXIDE
Long-term exposure limit (8-hour TWA): ACGIH 10 mg/m³
A4
Long-term exposure limit (8-hour TWA): OSHA 15 mg/m³ total dust

ACGIH = American Conference of Governmental Industrial Hygienists.
A4 = Not Classifiable as a Human Carcinogen.
OSHA = Occupational Safety and Health Administration.

Ingredient comments
TITANIUM DIOXIDE: Due to the physical nature of this product, it is unlikely that inhalation of powder/dust will occur.

Exposure controls

Appropriate engineering controls
Provide adequate general and local exhaust ventilation.

Eye/face protection
The following protection should be worn: Chemical splash goggles.

Hand protection
Wear protective gloves.

Other skin and body protection
Wear appropriate clothing to prevent any possibility of skin contact.

Hygiene measures
Do not smoke in work area. Wash hands at the end of each work shift and before eating, smoking and using the toilet. Wash promptly with soap and water if skin becomes contaminated. Promptly remove any clothing that becomes contaminated. Use appropriate skin cream to prevent drying of skin. When using do not eat, drink or smoke.

Respiratory protection
No specific recommendations. Respiratory protection must be used if the airborne contamination exceeds the recommended occupational exposure limit.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance
Paste

Color
Yellow-white, translucent yellow

Odor
Not available.

Odor threshold
Not available.

pH
Not applicable.
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<table>
<thead>
<tr>
<th>Property</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Melting point</td>
<td>Not available.</td>
</tr>
<tr>
<td>Initial boiling point and range</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flash point</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Evaporation rate</td>
<td>Not available.</td>
</tr>
<tr>
<td>Evaporation factor</td>
<td>Not available.</td>
</tr>
<tr>
<td>Flammability (solid, gas)</td>
<td>Not available.</td>
</tr>
<tr>
<td>Upper/lower flammability or explosive limits</td>
<td>Not applicable.</td>
</tr>
<tr>
<td>Other flammability</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor pressure</td>
<td>Not available.</td>
</tr>
<tr>
<td>Vapor density</td>
<td>Not available.</td>
</tr>
<tr>
<td>Relative density</td>
<td>1.65</td>
</tr>
<tr>
<td>Solubility(ies)</td>
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</tr>
<tr>
<td>Partition coefficient</td>
<td>Not available.</td>
</tr>
<tr>
<td>Auto-ignition temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Decomposition Temperature</td>
<td>Not available.</td>
</tr>
<tr>
<td>Viscosity</td>
<td>Not available.</td>
</tr>
<tr>
<td>Explosive properties</td>
<td>Not available.</td>
</tr>
<tr>
<td>Oxidizing properties</td>
<td>Not available.</td>
</tr>
<tr>
<td>Other information</td>
<td>Not available.</td>
</tr>
</tbody>
</table>

10. Stability and reactivity

Reactivity  There are no known reactivity hazards associated with this product.
Stability   Stable at normal ambient temperatures and when used as recommended.
Possibility of hazardous reactions                 Not known.
Conditions to avoid                                 Keep away from heat, sparks and open flame. Protect against direct sunlight.
Materials to avoid                                  Strong oxidizing agents.
Hazardous decomposition products                    Heating may generate the following products: Toxic gases or vapors.

11. Toxicological information

Information on toxicological effects

Toxicological effects                                No data on possible toxic effects have been found.
Route of entry                                      See section 4. Titanium dioxide (TiO2) is kneaded in the product, it does not exist as respirable particles. Due to the physical nature of this product, it is unlikely that inhalation of powder/dust will occur.
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Acute toxicity - oral
Notes (oral LD₅₀) Not available.

Acute toxicity - dermal
Notes (dermal LD₅₀) Not available.

Acute toxicity - inhalation
Notes (inhalation LC₅₀) Not available.

Skin corrosion/irritation
Skin corrosion/irritation Causes skin irritation.

Animal data
Not available.

Serious eye damage/irritation
Serious eye damage/irritation Causes serious eye irritation.

Respiratory sensitization
Respiratory sensitization Not available.

Skin sensitization
Skin sensitization May cause an allergic skin reaction.

Germ cell mutagenicity
Genotoxicity - in vitro Not available.

Genotoxicity - in vivo Not available.

Carcinogenicity
Carcinogenicity Not available. Some ingredients are listed in the National Toxicology Program (NTP) Report on Carcinogens, or has been found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs, or by OSHA. See "Toxicological information on ingredients" shown below.

Reproductive toxicity
Reproductive toxicity - fertility Not available.

Reproductive toxicity - development Not available.

Specific target organ toxicity - single exposure
STOT - single exposure Not available.

Specific target organ toxicity - repeated exposure
STOT - repeated exposure Not available.

Aspiration hazard
Aspiration hazard Not available.

Toxicological information on ingredients.

2,6-DI-tert-BUTYL-p-CRESOL

Carcinogenicity
IARC carcinogenicity IARC Group 3 Not classifiable as to its carcinogenicity to humans.
NTP carcinogenicity Reasonably anticipated to be a human carcinogen.
OSHA Carcinogenicity Not listed.

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## TITANIUM DIOXIDE

### Carcinogenicity
- **IARC carcinogenicity**
  - IARC Group 2B  Possibly carcinogenic to humans.
- **NTP carcinogenicity**
  - Reasonably anticipated to be a human carcinogen.
- **OSHA Carcinogenicity**
  - Not listed.

### 12. Ecological Information

#### Toxicity
- **Acute toxicity - fish**
  - Not available.
- **Acute toxicity - aquatic invertebrates**
  - Not available.
- **Acute toxicity - aquatic plants**
  - Not available.
- **Chronic toxicity - fish early life stage**
  - Not available.
- **Short term toxicity - embryo and sac fry stages**
  - Not available.
- **Chronic toxicity - aquatic invertebrates**
  - Not available.

#### Persistence and degradability
- **Persistence and degradability**
  - No data available.

#### Bioaccumulative potential
- **Bio-Accumulative Potential**
  - No data available on bioaccumulation.
- **Partition coefficient**
  - Not available.
- **Mobility in soil**
  - No information available.

#### Results of PBT and vPvB assessment
- **Results of PBT and vPvB assessment**
  - This product does not contain any substances classified as PBT or vPvB.

#### Other adverse effects
- **Other adverse effects**
  - Not known.

### 13. Disposal considerations

#### Waste treatment methods
- **Disposal methods**
  - Dispose of waste to licensed waste disposal site in accordance with the requirements of the local Waste Disposal Authority.

### 14. Transport information

#### General
- The product is not covered by international regulations on the transport of dangerous goods (IMDG, IATA, DoT).

#### UN Number
- Not applicable.
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UN proper shipping name
Not applicable.

Transport hazard class(es)
Not applicable.

Packing group
Not applicable.

Environmental hazards
Environmentally Hazardous Substance
No.

Special precautions for user
Not applicable.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
Not applicable.

15. Regulatory information

Regulatory Status
This Product is Hazardous under the OSHA Hazard Communication Standard.

Regulatory References

International Regulations

US Federal Regulations
SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities

MEQUINOL
Not listed.

2,6-DI-tert-BUTYL-p-CRESOL
Not listed.

TITANIUM DIOXIDE
Not listed.

CERCLA/Superfund, Hazardous Substances/Reportable Quantities (EPA)

MEQUINOL
Not listed.

2,6-DI-tert-BUTYL-p-CRESOL
Not listed.

SARA Extremely Hazardous Substances EPCRA Reportable Quantities

MEQUINOL
Not listed.

2,6-DI-tert-BUTYL-p-CRESOL
Not listed.

SARA 313 Emission Reporting
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**MEQUINOL**
No.

**2,6-DI-tert-BUTYL-p-CRESOL**
No.

**CAA Accidental Release Prevention**
None of the ingredients are listed or exempt.

**MEQUINOL**
Not listed.

**2,6-DI-tert-BUTYL-p-CRESOL**
Not listed.

**FDA - Essential Chemical**
None of the ingredients are listed or exempt.

**FDA - Precursor Chemical**
None of the ingredients are listed or exempt.

**SARA (311/312) Hazard Categories**

**Acute**

**OSHA Highly Hazardous Chemicals**

**MEQUINOL**
Not listed.

**TITANIUM DIOXIDE**
Not listed.

**US State Regulations**

**California Proposition 65 Carcinogens and Reproductive Toxins**
None of the ingredients are listed or exempt.

**California Air Toxics "Hot Spots" (A-I)**
None of the ingredients are listed or exempt.

**California Air Toxics "Hot Spots" (A-II)**
None of the ingredients are listed or exempt.

**California Directors List of Hazardous Substances**

**MEQUINOL**
Present.

**2,6-DI-tert-BUTYL-p-CRESOL**
Present.

**Massachusetts "Right To Know" List**

**MEQUINOL**
Present.

**2,6-DI-tert-BUTYL-p-CRESOL**
Present.

**TITANIUM DIOXIDE**
Not listed.
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Rhode Island "Right To Know" List

MEQUINOL
Present.

2,6-DI-tert-BUTYL-p-CRESOL
Present.

TITANIUM DIOXIDE
Not listed.

Minnesota "Right To Know" List

MEQUINOL
Present.

2,6-DI-tert-BUTYL-p-CRESOL
Present.

TITANIUM DIOXIDE
Not listed.

New Jersey "Right To Know" List

MEQUINOL
Present.

2,6-DI-tert-BUTYL-p-CRESOL
Present.

TITANIUM DIOXIDE
Not listed.

Pennsylvania "Right To Know" List

MEQUINOL
Present.

2,6-DI-tert-BUTYL-p-CRESOL
Present.

TITANIUM DIOXIDE
Not listed.

16. Other information

<table>
<thead>
<tr>
<th>Training advice</th>
<th>There is a specific duty on the importer/user/distributor of the substances and mixtures to ensure that the workers have received appropriate training and refresher training.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revision date</td>
<td>5/30/2016</td>
</tr>
<tr>
<td>Revision</td>
<td>1</td>
</tr>
</tbody>
</table>
| Hazard statements in full | H315 Causes skin irritation.  
                          | H317 May cause an allergic skin reaction.                                                      
                          | H319 Causes serious eye irritation.                                                            |

The information which is contained in this document is based on available data. However, as such has been obtained from various sources, including independent laboratories, it is given without warranty or representation that is complete, accurate and can be relied upon. Tokuyama Dental Corp. has not attempted to conceal in any way the deleterious aspects of the product listed herein, but makes no warranty as to such.