

## SAFETY DATA SHEET

### ESTECM II PASTE A / B

#### 1. Identification

##### Product identifier

**Product name** ESTECM II PASTE A / B

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

**Application** Adhesive resin cement. 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  
E-mail address: [coadmin@calpoison.org](mailto:coadmin@calpoison.org)  
<http://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  
E-mail address: [pc@poison.org](mailto:pc@poison.org)  
<http://www.poison.org>

#### 2. Hazard(s) identification

##### Classification of the substance or mixture

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

**Physical hazards** Not Classified

**Health hazards** Skin Irrit . 2 - H 315: Eye Irrit . 2A - H319: Skin Sens. 1 - H317: Carc.2 - H351

**Environmental hazards** Not Classified

##### Label elements

**ESTECM II PASTE A / B****Pictogram****Signal word**

Warning

**Hazard statements**

H315 Causes skin irritation.  
 H317 May cause an allergic skin reaction.  
 H319 Causes serious eye irritation.  
 H351 Suspected of causing cancer.

**Precautionary statements**

P261 Avoid breathing vapors.  
 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.  
 P501 Dispose of contents/ container in accordance with local regulations.

**Contains**

POLY(OXY-1,2-ETHANEDIYL),.alpha.,.alpha.'-[(1-METHYLETHYLIDENE)DI-4,1-PHENYLENE]BIS[.omega.-[(2-METHYL-1-OXO-2-PROPENYL)OXY]-, TRIETHYLENE GLYCOL DIMETHACRYLATE, 2-PROPENOIC ACID, 2-METHYL-, (1-METHYLETHYLIDENE)BIS[4,1-PHENYLENEOXY(2-HYDROXY-3,1-PROPANEDIYL)] ESTER, BENZOYL PEROXIDE, ETHANOL, 2,2'-[(4-METHYLPHENYL)IMINO]BIS-

**Other hazards****Hazards not otherwise classified (HNOC)**

Not applicable.

**3. Composition/information on ingredients****Mixtures****BISPHENOL A POLYETHOXY DIMETHACRYLATE****10-30%**

CAS number: 41637-38-1

**TRIETHYLENE GLYCOL DIMETHACRYLATE****10-30%**

CAS number: 109-16-0

**2-PROPENOIC ACID, 2-METHYL-, (1-METHYLETHYLIDENE)BIS[4,1-PHENYLENEOXY(2-HYDROXY-3,1-PROPANEDIYL)] ESTER****1-5%**

CAS number: 1565-94-2

**TITANIUM DIOXIDE****<1%**

CAS number: 13463-67-7

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<b>BENZOYL PEROXIDE</b>	<b>&lt;1%</b>
CAS number: 94-36-0	
<b>p-TOLYL DIETHANOLAMINE</b>	<b>&lt;1%</b>
CAS number: 3077-12-1	
<b>N,N-DIMETHYL-p-TOLUIDINE</b>	<b>&lt;1%</b>
CAS number: 99-97-8	

### 4. First-aid measures

#### Description of first aid measures

<b>General information</b>	Move affected person to fresh air at once. Get medical attention if any discomfort continues.
<b>Inhalation</b>	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. Get medical attention if any discomfort continues.
<b>Ingestion</b>	Rinse mouth thoroughly with water. Give plenty of water to drink. Get medical attention if any discomfort continues.
<b>Skin Contact</b>	Wash skin thoroughly with soap and water. Take off contaminated clothing and wash it before reuse.
<b>Eye contact</b>	Make sure to remove any contact lenses from the eyes before rinsing. Promptly wash eyes with plenty of water while lifting the eye lids. 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

<b>Skin contact</b>	Skin irritation. Allergic rash.
<b>Eye contact</b>	May cause severe eye irritation.

#### Indication of immediate medical attention and special treatment needed

<b>Notes for the doctor</b>	No specific recommendations.
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### 5. Fire-fighting measures

#### Extinguishing media

<b>Suitable extinguishing media</b>	Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog.
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#### Special hazards arising from the substance or mixture

<b>Specific hazards</b>	In case of fire, toxic gases may be formed.
<b>Hazardous combustion products</b>	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.

#### Advice for firefighters

<b>Protective actions during firefighting</b>	Avoid breathing fire gases or vapors. Keep up-wind to avoid fumes. Move containers from fire area if it can be done without risk. Containers close to fire should be removed or cooled with water. No smoking, sparks, flames or other sources of ignition near spillage.
<b>Special protective equipment for firefighters</b>	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing.

### 6. Accidental release measures

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### Personal precautions, protective equipment and emergency procedures

**Personal precautions** Wear protective clothing as described in Section 8 of this safety data sheet. No smoking, sparks, flames or other sources of ignition near spillage.

### Environmental precautions

**Environmental precautions** Avoid discharge into drains or watercourses or onto the ground.

### Methods and material for containment and cleaning up

**Methods for cleaning up** Eliminate all sources of ignition. No smoking, sparks, flames or other sources of ignition near spillage. Provide adequate ventilation. Keep combustible materials away from spillage. Absorb in vermiculite, dry sand or earth and place into containers. Avoid the spillage or runoff entering drains, sewers or watercourses. Use only non-sparking tools.

**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. Keep away from heat, sparks and open flame. Good personal hygiene procedures should be implemented. Wash hands and any other contaminated areas of the body with soap and water before leaving the work site. Take any precaution to avoid mixing with combustibles and reducing agents.

### Conditions for safe storage, including any incompatibilities

**Storage precautions** Keep away from heat, direct sunlight, sparks and open flames. Store in a cool, dark place ( 0 - 10 °C, 32 - 50 ° F ).

### Specific end uses(s)

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

## 8. Exposure Controls/personal protection

### Control parameters

### Occupational exposure limits

#### **TITANIUM DIOXIDE**

Long-term exposure limit (8-hour TWA): ACGIH 10 mg/m  
A4

Long-term exposure limit (8-hour TWA): OSHA 15 mg/m total dust

#### **BENZOYL PEROXIDE**

Long-term exposure limit (8-hour TWA): OSHA 5 mg/m

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

A4

ACGIH = American Conference of Governmental Industrial Hygienists.

OSHA = Occupational Safety and Health Administration.

A4 = Not Classifiable as a Human Carcinogen.

### Exposure controls

**Appropriate engineering controls** Provide adequate general and local exhaust ventilation. Observe any occupational exposure limits for the product or ingredients.

**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.

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**Hygiene measures** Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station and safety shower. Do not smoke in work area. Promptly remove any clothing that becomes contaminated. Wash promptly with soap and water if skin becomes contaminated. Wash hands at the end of each work shift and before eating, smoking and using the toilet. When using do not eat, drink or smoke.

**Respiratory protection** If ventilation is inadequate, suitable respiratory protection must be worn.

### 9. Physical and Chemical Properties

#### Information on basic physical and chemical properties

<b>Appearance</b>	Paste
<b>Color</b>	Clear, white to brown
<b>Odor</b>	Characteristic
<b>Odor threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point</b>	Not available.
<b>Initial boiling point and range</b>	Not available.
<b>Flash point</b>	Not applicable.
<b>Evaporation rate</b>	Not available.
<b>Evaporation factor</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	Not available.
<b>Vapor pressure</b>	Not available.
<b>Vapor density</b>	Not available.
<b>Relative density</b>	Not determined.
<b>Solubility(ies)</b>	Not available.
<b>Partition coefficient</b>	Not available.
<b>Auto-ignition temperature</b>	Not available.
<b>Decomposition Temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Explosive properties</b>	Not available.
<b>Oxidizing properties</b>	Not available.
<b>Other information</b>	Not available.

### 10. Stability and reactivity

**Reactivity** There are no known reactivity hazards associated with this product.

**Stability** Stable under the prescribed storage conditions.

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<b>Possibility of hazardous reactions</b>	Not known.
<b>Conditions to avoid</b>	Keep away from heat, sparks and open flame. Protect against direct sunlight.
<b>Materials to avoid</b>	Flammable/combustible materials. Strong reducing agents.
<b>Hazardous decomposition products</b>	Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors. Carbon monoxide (CO). Carbon dioxide (CO <sub>2</sub> ).

### 11. Toxicological information

#### Information on toxicological effects

**Routes of exposure** Skin , Eyes , Ingestion , Inhalation , Health effects: See section 4.

**Notes (oral LD<sub>50</sub>)** Not available.

**Notes (dermal LD<sub>50</sub>)** Not available.

**Notes (inhalation LC<sub>50</sub>)** 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.

**IARC carcinogenicity** Some of the ingredients are listed or exempt.

**NTP carcinogenicity** Some of the ingredients are listed or exempt.

**OSHA Carcinogenicity** None of the ingredients are listed.

#### 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.

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### Aspiration hazard

**Aspiration hazard** Not available.

### Toxicological information on ingredients.

#### 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.

#### BENZOYL PEROXIDE

##### 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.

#### N,N-DIMETHYL-p-TOLUIDINE

##### Acute toxicity - oral

**ATE oral (mg/kg)** 100.0

##### Acute toxicity - dermal

**ATE dermal (mg/kg)** 300.0

### **12. Ecological Information**

#### Toxicity

**Acute toxicity - fish** Not available.

**Acute toxicity - aquatic invertebrates** Not available.

**Acute toxicity - aquatic plants** 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

**Mobility** 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.

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### 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.

#### 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

Avoid exposure to high temperatures or direct sunlight. Keep away from heat, sparks and open flame. Protect against physical damage and/or friction. Take appropriate measures to prevent load shifting. Keep away from food, drink and animal feeding stuffs.

**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** 29 CFR 1910. 1200(g) Federal Regulations (OSHA Standard).

#### International Regulations

#### US Federal Regulations

##### **SARA Section 302 Extremely Hazardous Substances Tier II Threshold Planning Quantities**

*TITANIUM DIOXIDE*

Not listed.

*BENZOYL PEROXIDE*

Not listed.

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

*TITANIUM DIOXIDE*

Not listed.

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### *BENZOYL PEROXIDE*

Not listed.

### **SARA Extremely Hazardous Substances EPCRA Reportable Quantities**

#### *TITANIUM DIOXIDE*

Not listed.

#### *BENZOYL PEROXIDE*

Not listed.

### **SARA 313 Emission Reporting**

#### *TITANIUM DIOXIDE*

Not listed.

#### *BENZOYL PEROXIDE*

1.0 %

### **CAA Accidental Release Prevention**

#### *TITANIUM DIOXIDE*

Not listed.

#### *BENZOYL PEROXIDE*

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**

#### *TITANIUM DIOXIDE*

Not listed.

#### *BENZOYL PEROXIDE*

Threshold Quantity: 7500 lbs

### **US State Regulations**

#### **California Proposition 65 Carcinogens and Reproductive Toxins**

##### *TITANIUM DIOXIDE (air borne, unbound particles of respirable size)*

Known to the State of California to cause cancer.

##### *BENZOYL PEROXIDE*

Not listed.

##### *N,N-DIMETHYL-p-TOLUIDINE*

Known to the State of California to cause cancer.

### **California Air Toxics "Hot Spots" (A-I)**

#### *TITANIUM DIOXIDE*

Not listed.

**ESTEC EM II PASTE A / B***BENZOYL PEROXIDE*

Present.

**California Directors List of Hazardous Substances***TITANIUM DIOXIDE*

Not listed.

*BENZOYL PEROXIDE*

Present.

**Massachusetts "Right To Know" List***TITANIUM DIOXIDE*

Present.

*BENZOYL PEROXIDE*

Present.

**Rhode Island "Right To Know" List***TITANIUM DIOXIDE*

Present.

*BENZOYL PEROXIDE*

Present.

**Minnesota "Right To Know" List***TITANIUM DIOXIDE*

Present.

*BENZOYL PEROXIDE*

Present.

**New Jersey "Right To Know" List***TITANIUM DIOXIDE*

Present.

*BENZOYL PEROXIDE*

Present.

**Pennsylvania "Right To Know" List***TITANIUM DIOXIDE*

Present.

*BENZOYL PEROXIDE*

Present.

**16. Other information****Revision comments****Revision date** 3/7/2018**Revision** 2

**Hazard statements in full** H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.  
H319 Causes serious eye irritation.  
H351 Suspected of causing cancer.

## ESTEC EM II PASTE A / B

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 information.