SAFETY DATA SHEET
ESTELITE UNIVERSAL FLOW (Medium, Super Low, High)

1. Identification

Product identifier
Product name ESTELITE UNIVERSAL FLOW (Medium, Super Low, High)

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
E-mail address: 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
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 - H315 : Eye Irrit. 2A - H319 : Skin Sens. 1 - H317 : STOT SE 3 - H335
Environmental hazards Not Classified

Label elements
ESTELITE UNIVERSAL FLOW (Medium, Super Low, High)

Pictogram

Signal word

Warning

Hazard statements
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory irritation.

Precautionary statements
P264 Wash contaminated skin thoroughly after handling.
P271 Use only outdoors or in a well-ventilated area.
P272 Contaminated work clothing must not be allowed out of the workplace.
P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.
P261 Avoid breathing vapor/ spray.
P302+P352 If on skin: Wash with plenty of water.
P304+P340 If inhaled: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P312 Call a poison center/ doctor if you feel unwell.
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.
P403+P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.
P501 Dispose of contents/ container in accordance with local regulations.

Supplemental label information

AT(o) 0.05% of the mixture consists of ingredient(s) of unknown acute oral toxicity.

Contains
BISPHENOL A POLYETHOXY DIMETHACRYLATE, TRIETHYLENE GLYCOL DIMETHACRYLATE, 2-PROPENOIC ACID, 2-METHYL-, (1-METHYLETHYLIDENE)BIS[4,1-PHENYLENEOXY(2-HYDROXY-3,1-PROPANEDIYL)] ESTER, 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>BISPHENOL A POLYETHOXY DIMETHACRYLATE</th>
<th>0 - 30%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 41637-38-1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>TRIETHYLENE GLYCOL DIMETHACRYLATE</th>
<th>5 - 20%</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAS number: 109-16-0</td>
<td></td>
</tr>
</tbody>
</table>
ESTELITE UNIVERSAL FLOW (Medium, Super Low, High)

<table>
<thead>
<tr>
<th>Substance</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-PROPENOIC ACID, 2-METHYL-, (1-METHYLETHYLIDENE)BIS[4,1-PHENYLENEOXY(2-HYDROXY-3,1-PROPANEDIYL)] ESTER</td>
<td>0 - 30%</td>
</tr>
<tr>
<td>CAS number: 1565-94-2</td>
<td></td>
</tr>
<tr>
<td>2-(2H-BENZOTRIAZOL-2-YL)-p-CRESOL</td>
<td>&lt; 1%</td>
</tr>
<tr>
<td>CAS number: 2440-22-4</td>
<td></td>
</tr>
<tr>
<td>p-METHOXYPHENOL</td>
<td>&lt; 0.1%</td>
</tr>
<tr>
<td>CAS number: 150-76-5</td>
<td></td>
</tr>
<tr>
<td>2,6-DI-tert-BUTYL-p-CRESOL</td>
<td>&lt; 0.1%</td>
</tr>
<tr>
<td>CAS number: 128-37-0</td>
<td></td>
</tr>
<tr>
<td>M factor (Chronic) = 1</td>
<td></td>
</tr>
<tr>
<td>TITANIUM DIOXIDE</td>
<td>&lt; 0.1%</td>
</tr>
<tr>
<td>CAS number: 13463-67-7</td>
<td></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.

Inhalation
Move affected person to fresh air at once. Get medical attention if any discomfort continues.

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

Skin Contact
Wash with plenty of soap and water. Take off contaminated clothing and wash it before reuse.

Eye contact
Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. 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

Inhalation
May cause respiratory irritation.

Skin contact
Causes skin irritation. May cause an allergic skin reaction.

Eye contact
Causes serious 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 foam, carbon dioxide, dry powder or water fog.

Special hazards arising from the substance or mixture

Specific hazards
In case of fire, toxic gases may be formed.

Hazardous combustion products
Thermal decomposition or combustion may liberate carbon oxides and other toxic gases or vapors.
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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
Avoid the spillage or runoff entering drains, sewers or watercourses.

Methods and material for containment and cleaning up

Methods for cleaning up
Provide adequate ventilation. Collect and place in suitable waste disposal containers and seal securely.

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

7. Handling and storage

Precautions for safe handling

Usage precautions
Wear protective clothing as described in Section 8 of this safety data sheet. All handling should only take place in well-ventilated areas. Avoid contact with skin, eyes and clothing. Avoid breathing vapour/spray.

Advice on general occupational hygiene
Do not eat, drink or smoke when using this product. Wash 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. Take off contaminated clothing and wash it before reuse.

Conditions for safe storage, including any incompatibilities

Storage precautions
Store in tightly-closed, original container in a well-ventilated place. Keep away from heat, sparks and open flame. Avoid exposure to high temperatures or direct sunlight.

Specific end uses(s)
Specific end use(s)
The identified uses for this product are detailed in Section 1.

8. Exposure Controls/personal protection

Control parameters
Occupational exposure limits

p-METHOXYPHENOL
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.
ESTELITE UNIVERSAL FLOW (Medium, Super Low, High)

Exposure controls

Appropriate engineering controls
Provide adequate general and local exhaust ventilation.

Eye/face protection
Wear tight-fitting, chemical splash goggles or face shield.

Hand protection
Wear protective gloves.

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

Hygiene measures
Do not eat, drink or smoke when using this product. Wash 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. Take off contaminated clothing and wash it before reuse.

Respiratory protection
No specific recommendations. Respiratory protection may be required if excessive airborne contamination occurs.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Appearance
Paste

Color
Yellow-white

Odor
Odorless

Odor threshold
Not available.

pH
Not applicable.

Melting point
Not available.

Initial boiling point and range
Not available.

Flash point
Not applicable.

Evaporation rate
Not available.

Evaporation factor
Not available.

Flammability (solid, gas)
Not available.

Upper/lower flammability or explosive limits
Not applicable.

Other flammability
Not available.

Vapor pressure
Not available.

Vapor density
Not available.

Relative density
1.7

Solubility(ies)
Not available.

Partition coefficient
Not available.

Auto-ignition temperature
Not available.

Decomposition Temperature
Not available.

Viscosity
Not available.

Explosive properties
Not available.
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Oxidizing properties Not available.

Other information Not available.

**10. Stability and reactivity**

Reactivity There are no known reactivity hazards associated with this product. See the other subsections of this section for further details.

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

**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 Irrit. 2 - H315 Causes skin irritation.

Animal data Not available.

**Serious eye damage/irritation**

Eye Irrit. 2 - H319 Causes serious eye irritation.

Respiratory sensitization Not available.

Skin sensitization Skin Sens. 1 - H317 May cause an allergic skin reaction.

Germ cell mutagenicity Not available.

Genotoxicity - in vitro Not available.

Genotoxicity - in vivo Not available.

**Carcinogenicity**

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.

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

Reproductive toxicity
Reproductive toxicity - fertility Not available.
Reproductive toxicity - development Not available.

Specific target organ toxicity - single exposure
STOT - single exposure STOT SE 3 - H335 May cause respiratory irritation.

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

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.

TITANIUM DIOXIDE

Acute toxicity - inhalation
ATE inhalation (dusts/mists mg/l) 1.5

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

Acute aquatic toxicity
Acute toxicity - fish Not available.
Acute toxicity - aquatic invertebrates Not available.
Acute toxicity - aquatic plants Not available.

Ecological information on ingredients.

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

Chronic aquatic toxicity
M factor (Chronic) 1

Persistence and degradability
Persistence and degradability No data available.
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Bioaccumulative potential
Bio-Acculative Potential  No data available on bioaccumulation.
Partition coefficient  Not available.
Mobility in soil
Mobility  No information available.
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  Not regulated.
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  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.
US Federal Regulations
SARA (311/312) Hazard Categories
Acute
US State Regulations
California Proposition 65 Carcinogens and Reproductive Toxins
None of the ingredients are listed
ESTELITE UNIVERSAL FLOW (Medium, Super Low, High)

California Directors List of Hazardous Substances
2,6-DI-tert-BUTYL-p-CRESOL
p-METHOXYPHENOL

Massachusetts "Right To Know" List
2,6-DI-tert-BUTYL-p-CRESOL
p-METHOXYPHENOL
TITANIUM DIOXIDE

Rhode Island "Right To Know" List
2,6-DI-tert-BUTYL-p-CRESOL
p-METHOXYPHENOL
TITANIUM DIOXIDE

Minnesota "Right To Know" List
2,6-DI-tert-BUTYL-p-CRESOL
p-METHOXYPHENOL
TITANIUM DIOXIDE

New Jersey "Right To Know" List
2,6-DI-tert-BUTYL-p-CRESOL
p-METHOXYPHENOL
TITANIUM DIOXIDE

Pennsylvania "Right To Know" List
2,6-DI-tert-BUTYL-p-CRESOL
p-METHOXYPHENOL
TITANIUM DIOXIDE

16. Other information

Training advice
Ensure operatives are trained to minimize exposure. Only trained personnel should use this material.

Revision comments
§15. Regulatory information

Revision date
amended 4/10/2020

Revision
2

Hazard statements in full
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H335 May cause respiratory 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 replied 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.