

## **SAFETY DATA SHEETS**

**This SDS packet was issued with item:**

075219951

**The safety data sheets (SDS) in this packet apply to one or more components included in the items listed below. Items listed below may require one or more SDS. Please refer to invoice for specific item number(s).**

075219969 075219977

REVISION DATE 15/01/2013

## MATERIAL SAFETY DATA SHEET

### ONE-UP BOND F Plus Bonding Agent A

#### 1 IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING

PRODUCT NAME ONE-UP BOND F Plus Bonding Agent A

PRODUCT USE Dental Adhesive. For dental professionals only.

SUPPLIER Tokuyama Dental America Inc. MANUFACTURER Tokuyama Dental Corporation  
Tel: (877) 378 3548 (Toll-Free) 38-9, Taitou 1-chome, Taitou-ku,  
Tokyo, Japan  
TEL: +81-3-3835-7201

CONTACT PERSON <http://www.tokuyama-dental.com/contact.htm>

EMERGENCY TELEPHONE

Washington  
National Capital Poison Center  
3201 New Mexico Avenue, Suite 310 Washington, DC 20016  
Telephone: +1 202 362 3867  
Emergency telephone: 1 800 222 1222  
Fax: +1 202 362 8377  
E-mail: [pc@poison.org](mailto:pc@poison.org)  
Web site: <http://www.poison.org>

San Francisco  
California Poison Control System  
at San Francisco General Hospital  
University of California San Francisco, Box 1369  
1001 Potrero Avenue, Bldg 5 Rm 2A21  
San Francisco, California 94143-1369  
Telephone: +1 415 643 3200  
Emergency telephone: 1 800 222 1222  
Fax: +1 415 502 6010  
E-mail: [coadmin@calpoison.org](mailto:coadmin@calpoison.org)  
Web site: <http://www.calpoison.org>

<http://www.who.int/ipcs/poisons/centre/en/>

#### 2 HAZARDS IDENTIFICATION

#### POTENTIAL HEALTH EFFECTS

##### INHALATION

Irritating to respiratory system.

##### INGESTION

Slightly irritating. : DIGESTIVE SYSTEM.

##### SKIN CONTACT

Irritating to skin. Product has a defatting effect on skin. May cause sensitization by skin contact.

##### EYE CONTACT

Irritating and may cause redness and pain.

#### 3 COMPOSITION/INFORMATION ON INGREDIENTS

| Name  | EC No.    | CAS-No.     | Content % |
|---|-----------|-------------|-----------|
| 11-methacryloxy-1,1-undecanedicarboxylic acid<br>(MAC-10)     |           | 108362-85-2 | 10-30%    |
| bisphenol A polyethoxy dimethacrylate                         |           | 41637-38-1  | 10-30%    |
| dibutyl hydroxy toluene                                       | 204-881-4 | 128-37-0    | < 1%      |
| methacryloxyalkyl acid phosphate (phosphoric acid<br>monomer) | 258-053-2 | 52628-03-2  | 30-60%    |
| METHYL METHACRYLATE   | 201-297-1 | 80-62-6     | 5-10%     |

#### 4 FIRST-AID MEASURES

REVISION DATE 15/01/2013

**ONE-UP BOND F Plus Bonding Agent A****GENERAL INFORMATION**

Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

**INHALATION**

Move the exposed person to fresh air at once.

**INGESTION**

Immediately rinse mouth and drink plenty of water (200-300 ml). Get medical attention if any discomfort continues.

**SKIN CONTACT**

Wash the skin immediately with soap and water.

**EYE CONTACT**

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. Contact physician if irritation persists.

**5 FIRE-FIGHTING MEASURES****EXTINGUISHING MEDIA**

Fire can be extinguished using: Foam. Carbon dioxide or dry powder.

**SPECIAL FIRE FIGHTING PROCEDURES**

Avoid breathing fire vapors.

**SPECIFIC HAZARDS**

When heated and in case of fire, irritating vapours/gases may be formed.

**PROTECTIVE MEASURES IN FIRE**

Wear full protective clothing.

FLASH POINT (°C) 33.0°C

**6 ACCIDENTAL RELEASE MEASURES****PERSONAL PRECAUTIONS**

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

**ENVIRONMENTAL PRECAUTIONS**

Do not discharge into drains, water courses or onto the ground.

**SPILL CLEAN UP METHODS**

Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Absorb in vermiculite, dry sand or earth and place into containers. Do not contaminate water sources or sewer.

**7 HANDLING AND STORAGE****HANDLING**

All handling to take place in well-ventilated area.

**STORAGE**

Store under refrigerated conditions at temperatures between 0 to 10°C (32 to 50°F). Keep away from heat, direct sunlight, sparks and open flames.

**STORAGE CLASS**

Flammable liquid storage.

**8 EXPOSURE CONTROLS/PERSONAL PROTECTION**

| COMPONENT           | STD   | TWA (8-hrs) |           | STEL (15 min) |  | Notes    |
|---------------------|-------|-------------|-----------|---------------|--|----------|
|                     |       |             |           |               |  |          |
| METHYL METHACRYLATE | PEL   | 100 ppm     | 410 mg/m3 |               |  |          |
| METHYL METHACRYLATE | ACGIH | 50 ppm      |           | 100 ppm       |  | A4, Sen  |
| COMPONENT           |       |             |           |               |  | IDLH     |
| METHYL METHACRYLATE |       |             |           |               |  | 1000 ppm |

ACGIH=American Conference of Governmental Industrial Hygienists.

A4: Not Classifiable as a Human Carcinogen.

SEN: Sensitizer.

**PROTECTIVE EQUIPMENT**

REVISION DATE 15/01/2013

**ONE-UP BOND F Plus Bonding Agent A****ENGINEERING MEASURES**

Provide adequate general and local exhaust ventilation.

**HAND PROTECTION**

Wear protective gloves.

**EYE PROTECTION**

Wear approved safety goggles.

**OTHER PROTECTION**

Wear appropriate clothing to prevent any possibility of skin contact.

**HYGIENE MEASURES**

**DO NOT SMOKE IN WORK AREA!** Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly with soap & 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.

## 9 PHYSICAL AND CHEMICAL PROPERTIES

|                          |                           |
|--------------------------|---------------------------|
| APPEARANCE               | Liquid                    |
| COLOR                    | Light (or pale) Yellowish |
| ODOR                     | Characteristic            |
| RELATIVE DENSITY         | 1.17                      |
| pH-VALUE, CONC. SOLUTION | < 7                       |
| FLASH POINT (°C)         | 33.0°C                    |

## 10 STABILITY AND REACTIVITY

**STABILITY**

FLAMMABLE.

**CONDITIONS TO AVOID**

Keep away from heat, sparks and open flame. Protect against direct sunlight.

**MATERIALS TO AVOID**

Strong oxidizing agents.

**HAZARDOUS DECOMPOSITION PRODUCTS**

Toxic gases are generated when heated.

## 11 TOXICOLOGICAL INFORMATION

**TOXICOLOGICAL INFORMATION**

No data on possible toxic effects have been found.

## 12 ECOLOGICAL INFORMATION

**ECOTOXICITY**

No data on possible environmental effects have been found.

## 13 DISPOSAL CONSIDERATIONS

**DISPOSAL METHODS**

Dispose of waste and residues in accordance with local authority requirements.

## 14 TRANSPORT INFORMATION

REVISION DATE 15/01/2013

**ONE-UP BOND F Plus Bonding Agent A**

|                          |  |
|--------------------------|--|
| DOT PROPER SHIPPING NAME | ADHESIVES, CONTAINING A FLAMMABLE LIQUID |
| TDG SHIPPING NAME        | ADHESIVES, CONTAINING A FLAMMABLE LIQUID |
| IDENTIFICATION No.       | 1133                                     |
| TUNNEL RESTRICTION CODE  | (D/E)                                    |
| CEFIC TEC(R) NO.         | 30GF1-III, 30GF1-sp                      |
| DOT HAZARD CLASS         | 3  |
| DOT PACKING GROUP        | III                                      |
| U.S DOT HAZARD LABEL     | Flammable Liquid                         |
| UN NO. SEA               | 1133                                     |
| IMDG CLASS               | 3  |
| IMDG PACK GR.            | III                                      |
| EMS                      | F-E, S-D                                 |
| UN NO. AIR               | 1133                                     |
| ICAO CLASS               | 3  |
| AIR PACK GR.             | III                                      |
| TDG CLASS                | 3  |
| TDG LABEL(S)             | 3  |
| TDG PACKING GROUP        | III                                      |

**15 REGULATORY INFORMATION**

## INVENTORIES

| COMPONENT           | CAN | US  | EU     | AUS | JAP | KOR | CHN | PHLP |
|---------------------|-----|-----|--------|-----|-----|-----|-----|------|
| METHYL METHACRYLATE | No. | No. | EINECS | No. | No. | No. | No. | No.  |

| COMPONENT           | TSCA 12(b) Export Notification |
|---------------------|--------------------------------|
| METHYL METHACRYLATE | No.                            |

## US FEDERAL REGULATIONS

| COMPONENT           | SARA 302-TPQ | CERCLA-RQ | SARA 313 |
|---------------------|--------------|-----------|----------|
| METHYL METHACRYLATE | Not Listed   | 1 000 lbs | 1.0 %    |

## CLEAN AIR ACT

| COMPONENT           | CAA Accidental Release Prevention |
|---------------------|-----------------------------------|
| METHYL METHACRYLATE | Not Listed                        |

## US STATE REGULATIONS

| COMPONENT           | CAS     | CA         | FL   | MA   | MN   | NJ   | PA   | RI   |
|---------------------|---------|------------|------|------|------|------|------|------|
| METHYL METHACRYLATE | 80-62-6 | Not Listed | Yes. | Yes. | Yes. | Yes. | Yes. | Yes. |

## REGULATORY REFERENCES

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

**16 OTHER INFORMATION**

REVISION DATE 15/01/2013

REVISION DATE 15/01/2013

## ONE-UP BOND F Plus Bonding Agent A

### DISCLAIMER

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.

## SAFETY DATA SHEET

### ONE-UP BOND F Plus Bonding Agent A

#### 1. IDENTIFICATION

|                            |  |
|----------------------------|--|
| <b>Product Name</b>        | ONE-UP BOND F Plus Bonding Agent A   |
| <b>Identified uses</b>     | Dental Adhesive. For dental professionals only.  |
| <b>Supplier</b>            | Tokuyama Dental America Inc.<br>Tel: (877) 378 3548 (Toll-Free)  |
| <b>Contact Person</b>      | <a href="http://www.tokuyama-dental.com/contact.htm">http://www.tokuyama-dental.com/contact.htm</a>  |
| <b>Manufacturer</b>        | Tokuyama Dental Corporation<br>38-9, Taitou 1-chome, Taitou-ku, Tokyo<br>110-0016, Japan<br>TEL: +81-3-3835-2261   |
| <b>Emergency Telephone</b> | Washington<br>National Capital Poison Center<br>3201 New Mexico Avenue, Suite 310<br>Washington,<br>DC 20016<br>Telephone: +1 202 362 3867<br>Emergency telephone: +1 800 222 1222<br>Fax: +1 202 362 8377<br>E-mail: <a href="mailto:pc@poison.org">pc@poison.org</a><br>Web site: <a href="http://www.poison.org">http://www.poison.org</a>  |
|                            | San Francisco<br>California Poison Control System<br>at San Francisco General Hospital<br>University of California San Francisco, Box 1369<br>1001 Potrero Avenue, Bldg 5 Rm 2A21<br>San Francisco, California 94143-1369<br>Telephone: +1 415 643 3200<br>Emergency telephone: +1 800 222 1222<br>Fax: +1 415 502 6010<br>E-mail: <a href="mailto:coadmin@calpoison.org">coadmin@calpoison.org</a><br>Web site: <a href="http://www.calpoison.org">http://www.calpoison.org</a> |
|                            | <a href="http://www.who.int/ipcs/poisons/centre/en/">http://www.who.int/ipcs/poisons/centre/en/</a>  |

#### 2. HAZARD(S) IDENTIFICATION

|                      |                            |
|----------------------|----------------------------|
| <b>Appearance</b>    | Liquid                     |
| <b>Color</b>         | Light (or pale). Yellowish |
| <b>Odor</b>          | Characteristic.            |
| <b>GHS Pictogram</b> |                            |



**Signal Word** Warning

**Hazard Statements**

|      |                                      |
|------|--------------------------------------|
| H226 | Flammable liquid and vapour.         |
| H315 | Causes skin irritation.              |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation.       |
| H335 | May cause respiratory irritation.    |

**Precautionary Statements**

|      |  |
|------|--|
| P210 | Keep away from heat/sparks/open flames/hot surfaces. – No smoking.         |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |
| P271 | Use only outdoors or in a well-ventilated area.                            |

**ONE-UP BOND F Plus Bonding Agent A**

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P403+233 Store in a well-ventilated place. Keep container tightly closed.  
 P501 Dispose of contents/container in accordance with local regulations.

**Contains**

11-methacryloxy-1,1-undecanedicarboxylic acid (MAC-10)  
 bisphenol A polyethoxy dimethacrylate  
 METHYL METHACRYLATE

**GHS Classification**

Physical and Chemical Hazards Flam. Liq. 3 - H226  
 Human health Skin Irrit. 2 - H315; Eye Irrit. 2 - H319; Skin Sens. 1 - H317; STOT SE 3 - H335  
 Environment Not classified.

**Hazard Not Otherwise Classified (HNOC)**

Not applicable.

**OSHA Regulatory Status**

This Product is Hazardous under the OSHA Hazard Communication Standard.

**General Information**

May cause irritation to the respiratory system. IF SWALLOWED: Slightly irritating. ( DIGESTIVE SYSTEM. ) This chemical may cause skin/eye irritation. Product has a defatting effect on skin. May cause sensitization by skin contact.

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

|  |                          |
|--|--------------------------|
| <b>11-methacryloxy-1,1-undecanedicarboxylic acid (MAC-10)</b>  | <b>10-30%</b>            |
| <b>CAS No.: 108362-85-2</b>  | <b>EC No.:</b>           |
| GHS Classification<br>Skin Irrit. 2 - H315; Eye Irrit. 2 - H319; STOT SE 3 - H335                      |                          |
| <b>bisphenol A polyethoxy dimethacrylate</b>   | <b>10-30%</b>            |
| <b>CAS No.: 41637-38-1</b>   | <b>EC No.: 609-946-4</b> |
| GHS Classification<br>Skin Irrit. 2 - H315; Eye Irrit. 2 - H319; Skin Sens. 1 - H317; STOT SE 3 - H335 |                          |
| <b>dibutyl hydroxy toluene</b>   | <b>&lt; 1%</b>           |
| <b>CAS No.: 128-37-0</b>   | <b>EC No.: 204-881-4</b> |
| GHS Classification<br>Aquatic Chronic 1 - H410   |                          |
| <b>methacryloxyalkyl acid phosphate (phosphoric acid monomer)</b>                                      | <b>30-60%</b>            |
| <b>CAS No.: 52628-03-2</b>   | <b>EC No.: 258-053-2</b> |
| GHS Classification<br>Skin Irrit. 2 - H315; Eye Irrit. 2 - H319  |                          |



## ONE-UP BOND F Plus Bonding Agent A

|  |                          |
|--|--------------------------|
| <b>METHYL METHACRYLATE</b>   | <b>5-10%</b>             |
| <b>CAS No.: 80-62-6</b>  | <b>EC No.: 201-297-1</b> |
| GHS Classification<br>Flam. Liq. 2 - H225; Skin Irrit. 2 - H315; Skin Sens. 1 - H317; STOT SE 3 - H335 |                          |

### 4. FIRST-AID MEASURES

#### Description of first aid measures

##### **General Information**

Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

##### **Inhalation**

Move the exposed person to fresh air at once.

##### **Ingestion**

Immediately rinse mouth and drink plenty of water (200-300 ml). Get medical attention if any discomfort continues.

##### **Skin Contact**

Wash the skin immediately with soap and water.

##### **Eye Contact**

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. Contact physician if irritation persists.

#### Most important symptoms and effects, both acute and delayed

##### **Inhalation**

Irritating to respiratory system.

##### **Ingestion**

Slightly irritating. ( DIGESTIVE SYSTEM. )

##### **Skin Contact**

Irritating to skin. Product has a defatting effect on skin. May cause sensitization by skin contact.

##### **Eye Contact**

Irritating and may cause redness and pain.

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

##### **Notes To The Physician**

CAUTION! First aid personnel must be aware of own risk during rescue! Wear suitable protective clothing.

### 5. FIRE-FIGHTING MEASURES

##### **Auto Ignition Temperature (°C)**

Not available.

##### **Flammability Limit - Lower(%)**

Not available.

##### **Flammability Limit - Upper(%)**

Not available.

##### **Flash point (°C)**

33.0°C

##### **Extinguishing Media**

Fire can be extinguished using: Foam. Carbon dioxide or dry powder.

##### **Specific Hazards**

When heated and in case of fire, irritating vapors/gases may be formed.

##### **Special Fire Fighting Procedures**

Avoid breathing fire vapors.

##### **Protective Equipment For Fire-Fighters**

Wear full protective clothing.

### 6. ACCIDENTAL RELEASE MEASURES

## ONE-UP BOND F Plus Bonding Agent A

### Personal Precautions

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

### Environmental Precautions

Do not discharge into drains, water courses or onto the ground.

### Spill Clean Up Methods

Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Absorb in vermiculite, dry sand or earth and place into containers. Do not contaminate water sources or sewer.

### Reference to other sections

For personal protection, see section 8.

## 7. HANDLING AND STORAGE

### Handling

All handling to take place in well-ventilated area.

### Storage

Store under refrigerated conditions at temperatures between 0 to 10°C (32 to 50°F). Keep away from heat, direct sunlight, sparks and open flames.

### Storage Class

Flammable liquid storage.

### Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| COMPONENT               | STD      | TWA (8-hrs) |                       | STEL (15 min) |  | Notes   |
|-------------------------|----------|-------------|-----------------------|---------------|--|---------|
| dibutyl hydroxy toluene | ACGIH    |             | 2 mg/m <sup>3</sup>   |               |  | A4      |
| METHYL METHACRYLATE     | PEL      | 100 ppm     | 410 mg/m <sup>3</sup> |               |  |         |
| METHYL METHACRYLATE     | ACGIH    | 50 ppm      |                       | 100 ppm       |  | A4, Sen |
| COMPONENT               | IDLH     |             |                       |               |  |         |
| METHYL METHACRYLATE     | 1000 ppm |             |                       |               |  |         |

ACGIH=American Conference of Governmental Industrial Hygienists.

A4: Not Classifiable as a Human Carcinogen.

SEN: Sensitizer.

### Protective Equipment



### Engineering Measures

Provide adequate general and local exhaust ventilation.

### Respiratory Equipment

In case of inadequate ventilation use suitable respirator.

### Hand Protection

Wear protective gloves.

### Eye Protection

Wear approved safety goggles.

### Other 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 & 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.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

## ONE-UP BOND F Plus Bonding Agent A

|                   |                            |
|-------------------|----------------------------|
| <b>Appearance</b> | Liquid                     |
| <b>Color</b>      | Light (or pale). Yellowish |
| <b>Odor</b>       | Characteristic.            |
| <b>Solubility</b> | No information available.  |

**Initial boiling point and boiling range**

Not available.

**Melting point (°C)**

Not available.

**Relative density** 1.17

**Vapor density (air=1)**

Not available.

**Vapor pressure**

Not available.

**Evaporation rate**

Not available.

**pH-Value, Conc. Solution** < 7

**pH-Value, Diluted Solution**

Not available.

**Viscosity**

Not available.

**Decomposition temperature (°C)**

Not available.

**Odour Threshold, Lower**

Not available.

**Odour Threshold, Upper**

Not available.

**Flash point** 33.0°C

**Auto Ignition Temperature (°C)**

Not available.

**Flammability Limit - Lower(%)**

Not available.

**Flammability Limit - Upper(%)**

Not available.

**Partition Coefficient  
(N-Octanol/Water)**

Not available.

**Explosive properties**

Not available.

**Other Flammability**

Not available.

**Oxidising properties**

Not available.

### 10. STABILITY AND REACTIVITY

**Reactivity**

May polymerise.

**Stability**

FLAMMABLE.

Hazardous reactions:

Not available.

**Conditions To Avoid**

Keep away from heat, sparks and open flame. Protect against direct sunlight.

**Materials To Avoid**

Strong oxidizing agents.

**Hazardous Decomposition Products**

Toxic gases are generated when heated.

### 11. TOXICOLOGICAL INFORMATION

## ONE-UP BOND F Plus Bonding Agent A

### Acute toxicity:

Not available.

### Skin Corrosion/Irritation:

Irritating to skin. Product has a defatting effect on skin.

### Serious eye damage/irritation:

Irritating and may cause redness and pain.

### Respiratory or skin sensitisation:

#### **Respiratory sensitisation**

Not available.

#### **Skin sensitisation**

:

May cause sensitization by skin contact.

### Germ cell mutagenicity:

Not available.

### Carcinogenicity:

METHYL METHACRYLATE

EPA: Not likely to be carcinogenic to humans

#### **IARC Carcinogenicity**

Butylated hydroxytoluene (BHT) , METHYL METHACRYLATE : IARC Group 3 Not classifiable as to its carcinogenicity to humans.

#### **NTP - Carcinogenicity**

Not listed.

#### **OSHA - Carcinogenicity**

Not listed.

### Reproductive Toxicity:

Not available.

### Specific target organ toxicity - single exposure:

Irritating to respiratory system.

### Specific target organ toxicity - repeated exposure:

#### **STOT - Repeated exposure**

Not available.

### Aspiration hazard:

#### **Viscosity**

Not available.

## 12. ECOLOGICAL INFORMATION

### **Toxicity**

No data available.

### **Degradability**

No data available.

### **Bioaccumulative potential**

No data available on bioaccumulation.

### **Partition coefficient**

Not available.

### **Mobility:**

No information available.

### **Results of PBT and vPvB assessment**

This product does not contain any PBT or vPvB Substances.

### **Other adverse effects**

Not known.

## ONE-UP BOND F Plus Bonding Agent A

### 13. DISPOSAL CONSIDERATIONS

#### Disposal Methods

Dispose of waste and residues in accordance with local authority requirements.

### 14. TRANSPORT INFORMATION

|                          |  |
|--------------------------|--|
| UN No. (DOT/TDG)         | 1133                                     |
| UN No. (IMDG)            | 1133                                     |
| UN No. (ICAO)            | 1133                                     |
| DOT Proper Shipping Name | ADHESIVES, CONTAINING A FLAMMABLE LIQUID |
| TDG Proper Shipping Name | ADHESIVES, CONTAINING A FLAMMABLE LIQUID |
| DOT Hazard Class         | 3  |
| DOT Hazard Label         | Flammable Liquid                         |
| TDG Class                | 3  |
| TDG Label(s)             | 3  |
| IMDG Class               | 3  |
| ICAO Class               | 3  |
| Transport Labels         |  |



|  |     |
|--|-----|
| DOT Pack Group                                       | III |
| IMDG Pack Group                                      | III |
| Air Pack Group                                       | III |
| Environmentally Hazardous Substance/Marine Pollutant | No. |

|                              |                |
|------------------------------|----------------|
| EMS                          | F-E, S-D       |
| Special precautions for user | Not available. |

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

### 15. REGULATORY INFORMATION

#### Regulatory Status (US)

This Product is Hazardous under the OSHA Hazard Communication Standard.

#### Regulatory References

29 CFR 1910.1200(g) Federal Regulations (OSHA Standard).

#### US Federal Regulations

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

None of the ingredients are listed.

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

The following ingredients are listed.

METHYL METHACRYLATE; 1,000 lbs (454 Kg)

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

None of the ingredients are listed.

## ONE-UP BOND F Plus Bonding Agent A

### **SARA 313 Emission Reporting**

The following ingredients are listed.

METHYL METHACRYLATE

### **CAA Accidental Release Prevention**

None of the ingredients are listed.

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

Fire Acute

### **OSHA Highly Hazardous Chemicals**

None of the ingredients are listed.

### **US State Regulations**

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

None of the ingredients are listed.

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

The following ingredients are listed.

METHYL METHACRYLATE

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

None of the ingredients are listed.

#### **Massachusetts "Right To Know" List**

The following ingredients are listed.

dibutyl hydroxy toluene

METHYL METHACRYLATE

#### **Rhode Island "Right To Know" List**

The following ingredients are listed.

dibutyl hydroxy toluene

METHYL METHACRYLATE

#### **Minnesota "Right To Know" List**

The following ingredients are listed.

dibutyl hydroxy toluene

METHYL METHACRYLATE

#### **New Jersey "Right To Know" List**

The following ingredients are listed.

dibutyl hydroxy toluene

METHYL METHACRYLATE

#### **Pennsylvania "Right To Know" List**

The following ingredients are listed.

dibutyl hydroxy toluene

METHYL METHACRYLATE

### **International Inventories**

#### **EU - EINECS/ELINCS**

The following ingredients are listed.

dibutyl hydroxy toluene

methacryloxyalkyl acid phosphate (phosphoric acid monomer)

METHYL METHACRYLATE

#### **Canada – DSL/NDSL**

The following ingredients are listed.

bisphenol A polyethoxy dimethacrylate

dibutyl hydroxy toluene

methacryloxyalkyl acid phosphate (phosphoric acid monomer)

METHYL METHACRYLATE

#### **US - TSCA**

The following ingredients are listed.

bisphenol A polyethoxy dimethacrylate

dibutyl hydroxy toluene

methacryloxyalkyl acid phosphate (phosphoric acid monomer)

METHYL METHACRYLATE

#### **US – TSCA 12(b) Export Notification**

None of the ingredients are listed.

## ONE-UP BOND F Plus Bonding Agent A

### 16. OTHER INFORMATION

**Revision Comments**

This is first issue.

**Revision Date**

08/05/2014

**Disclaimer**

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.

Revision Date 08/05/2014

## SAFETY DATA SHEET

### ONE-UP BOND F Plus Bonding Agent B

#### 1. IDENTIFICATION

|                            |  |
|----------------------------|--|
| <b>Product Name</b>        | ONE-UP BOND F Plus Bonding Agent B   |
| <b>Identified uses</b>     | Dental Adhesive. For dental professionals only.  |
| <b>Supplier</b>            | Tokuyama Dental America Inc.<br>Tel: (877) 378 3548 (Toll-Free)  |
| <b>Contact Person</b>      | <a href="http://www.tokuyama-dental.com/contact.htm">http://www.tokuyama-dental.com/contact.htm</a>  |
| <b>Manufacturer</b>        | Tokuyama Dental Corporation<br>38-9, Taitou 1-chome, Taitou-ku, Tokyo<br>110-0016, Japan<br>TEL: +81-3-3835-2261   |
| <b>Emergency Telephone</b> | Washington<br>National Capital Poison Center<br>3201 New Mexico Avenue, Suite 310<br>Washington,<br>DC 20016<br>Telephone: +1 202 362 3867<br>Emergency telephone: +1 800 222 1222<br>Fax: +1 202 362 8377<br>E-mail: <a href="mailto:pc@poison.org">pc@poison.org</a><br>Web site: <a href="http://www.poison.org">http://www.poison.org</a><br><br>San Francisco<br>California Poison Control System<br>at San Francisco General Hospital<br>University of California San Francisco, Box 1369<br>1001 Potrero Avenue, Bldg 5 Rm 2A21<br>San Francisco, California 94143-1369<br>Telephone: +1 415 643 3200<br>Emergency telephone: +1 800 222 1222<br>Fax: +1 415 502 6010<br>E-mail: <a href="mailto:coadmin@calpoison.org">coadmin@calpoison.org</a><br>Web site: <a href="http://www.calpoison.org">http://www.calpoison.org</a><br><br><a href="http://www.who.int/ipcs/poisons/centre/en/">http://www.who.int/ipcs/poisons/centre/en/</a> |

#### 2. HAZARD(S) IDENTIFICATION

|                      |                 |
|----------------------|-----------------|
| <b>Appearance</b>    | Liquid          |
| <b>Color</b>         | Yellow.         |
| <b>Odor</b>          | Characteristic. |
| <b>GHS Pictogram</b> |                 |



**Signal Word** Warning

**Hazard Statements**

|      |                                      |
|------|--------------------------------------|
| H226 | Flammable liquid and vapour.         |
| H315 | Causes skin irritation.              |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation.       |

**Precautionary Statements**

|              |  |
|--------------|--|
| P210         | Keep away from heat/sparks/open flames/hot surfaces. – No smoking.   |
| P280         | Wear protective gloves/protective clothing/eye protection/face protection.   |
| P305+351+338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P403+235     | Store in a well-ventilated place. Keep cool.   |



## ONE-UP BOND F Plus Bonding Agent B

P501 Dispose of contents/container in accordance with local regulations.

### Contains

2-DIMETHYLAMINOETHYL METHACRYLATE  
2-HYDROXYETHYL METHACRYLATE  
METHYL METHACRYLATE

### GHS Classification

|                               |  |
|-------------------------------|--|
| Physical and Chemical Hazards | Flam. Liq. 3 - H226  |
| Human health                  | Skin Irrit. 2 - H315; Eye Irrit. 2 - H319; Skin Sens. 1 - H317 |
| Environment                   | Not classified.  |

### Hazard Not Otherwise Classified (HNOC)

Not applicable.

### OSHA Regulatory Status

This Product is Hazardous under the OSHA Hazard Communication Standard.

### General Information

May cause irritation to the respiratory system. IF SWALLOWED: Slightly irritating. ( DIGESTIVE SYSTEM. ) This chemical may cause skin/eye irritation. Product has a defatting effect on skin. May cause sensitization by skin contact.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 2-DIMETHYLAMINOETHYL METHACRYLATE

1-5%

CAS No.: 2867-47-2

EC No.: 220-688-8

#### GHS Classification

Acute Tox. 4 - H302; Acute Tox. 4 - H312; Skin Irrit. 2 - H315; Eye Irrit. 2 - H319; Skin Sens. 1 - H317

#### 2-HYDROXYETHYL METHACRYLATE

30-60%

CAS No.: 868-77-9

EC No.: 212-782-2

#### GHS Classification

Skin Irrit. 2 - H315; Eye Irrit. 2 - H319; Skin Sens. 1 - H317

#### dibutyl hydroxy toluene

< 1%

CAS No.: 128-37-0

EC No.: 204-881-4

#### GHS Classification

Aquatic Chronic 1 - H410

#### METHYL METHACRYLATE

5-10%

CAS No.: 80-62-6

EC No.: 201-297-1

#### GHS Classification

Flam. Liq. 2 - H225; Skin Irrit. 2 - H315; Skin Sens. 1 - H317; STOT SE 3 - H335

### 4. FIRST-AID MEASURES

#### Description of first aid measures

#### General Information

Move the exposed person to fresh air at once. Get medical attention if any discomfort continues.

## ONE-UP BOND F Plus Bonding Agent B

### Inhalation

Move the exposed person to fresh air at once.

### Ingestion

Immediately rinse mouth and drink plenty of water (200-300 ml). Get medical attention if any discomfort continues.

### Skin Contact

Wash the skin immediately with soap and water.

### Eye Contact

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. Contact physician if irritation persists.

### Most important symptoms and effects, both acute and delayed

#### Inhalation

Irritating to respiratory system.

#### Ingestion

Slightly irritating. ( DIGESTIVE SYSTEM. )

#### Skin Contact

Irritating to skin. Product has a defatting effect on skin. May cause sensitization by skin contact.

#### Eye Contact

Irritating and may cause redness and pain.

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

#### Notes To The Physician

CAUTION! First aid personnel must be aware of own risk during rescue! Wear suitable protective clothing.

## 5. FIRE-FIGHTING MEASURES

#### Auto Ignition Temperature (°C)

Not available.

#### Flammability Limit - Lower(%)

Not available.

#### Flammability Limit - Upper(%)

Not available.

**Flash point (°C)** 29.5°C

#### Extinguishing Media

Fire can be extinguished using: Foam. Carbon dioxide or dry powder.

#### Specific Hazards

When heated and in case of fire, irritating vapors/gases may be formed.

#### Special Fire Fighting Procedures

Avoid breathing fire vapors.

#### Protective Equipment For Fire-Fighters

Wear full protective clothing.

## 6. ACCIDENTAL RELEASE MEASURES

#### Personal Precautions

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

#### Environmental Precautions

Do not discharge into drains, water courses or onto the ground.

#### Spill Clean Up Methods

Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Absorb in vermiculite, dry sand or earth and place into containers. Do not contaminate water sources or sewer.

#### Reference to other sections

For personal protection, see section 8.

## 7. HANDLING AND STORAGE

#### Handling

All handling to take place in well-ventilated area.

#### Storage

Store under refrigerated conditions at temperatures between 0 to 10°C (32 to 50°F). Keep away from heat, direct sunlight, sparks and open flames.

## ONE-UP BOND F Plus Bonding Agent B

### Storage Class

Flammable liquid storage.

### Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

| COMPONENT               | STD   | TWA (8-hrs) |                       | STEL (15 min) |  | Notes    |
|-------------------------|-------|-------------|-----------------------|---------------|--|----------|
|                         |       |             |                       |               |  |          |
| dibutyl hydroxy toluene | ACGIH |             | 2 mg/m <sup>3</sup>   |               |  | A4       |
| METHYL METHACRYLATE     | PEL   | 100 ppm     | 410 mg/m <sup>3</sup> |               |  |          |
| METHYL METHACRYLATE     | ACGIH | 50 ppm      |                       | 100 ppm       |  | A4, Sen  |
| COMPONENT               |       |             |                       |               |  | IDLH     |
| METHYL METHACRYLATE     |       |             |                       |               |  | 1000 ppm |

ACGIH=American Conference of Governmental Industrial Hygienists.

A4: Not Classifiable as a Human Carcinogen.

SEN: Sensitizer.

### Protective Equipment



### Engineering Measures

Provide adequate general and local exhaust ventilation.

### Respiratory Equipment

In case of inadequate ventilation use suitable respirator.

### Hand Protection

Wear protective gloves.

### Eye Protection

Wear approved safety goggles.

### Other 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 & 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.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

|  |                           |
|--|---------------------------|
| <b>Appearance</b>                              | Liquid                    |
| <b>Color</b>                                   | Yellow.                   |
| <b>Odor</b>                                    | Characteristic.           |
| <b>Solubility</b>                              | No information available. |
| <b>Initial boiling point and boiling range</b> |                           |
|  | Not available.            |
| <b>Melting point (°C)</b>                      |                           |
|  | Not available.            |
| <b>Relative density</b>                        | 1.23                      |
| <b>Vapor density (air=1)</b>                   |                           |
|  | Not available.            |
| <b>Vapor pressure</b>                          |                           |
|  | Not available.            |
| <b>Evaporation rate</b>                        |                           |
|  | Not available.            |
| <b>pH-Value, Conc. Solution</b>                | 7                         |

## ONE-UP BOND F Plus Bonding Agent B

### pH-Value, Diluted Solution

Not available.

### Viscosity

Not available.

### Decomposition temperature (°C)

Not available.

### Odour Threshold, Lower

Not available.

### Odour Threshold, Upper

Not available.

**Flash point** 29.5°C

### Auto Ignition Temperature (°C)

Not available.

### Flammability Limit - Lower(%)

Not available.

### Flammability Limit - Upper(%)

Not available.

### Partition Coefficient

(N-Octanol/Water)

Not available.

### Explosive properties

Not available.

### Other Flammability

Not available.

### Oxidising properties

Not available.

## 10. STABILITY AND REACTIVITY

### Reactivity

May polymerise.

### Stability

FLAMMABLE.

Hazardous reactions:

Not available.

### Conditions To Avoid

Keep away from heat, sparks and open flame. Protect against direct sunlight.

### Materials To Avoid

Strong oxidizing agents.

### Hazardous Decomposition Products

Toxic gases are generated when heated.

## 11. TOXICOLOGICAL INFORMATION

### Acute toxicity:

Not available.

### Skin Corrosion/Irritation:

Irritating to skin. Product has a defatting effect on skin.

### Serious eye damage/irritation:

Irritating and may cause redness and pain.

### Respiratory or skin sensitisation:

#### Respiratory sensitisation

Not available.

#### Skin sensitisation

:

May cause sensitization by skin contact.

## ONE-UP BOND F Plus Bonding Agent B

### Germ cell mutagenicity:

Not available.

### Carcinogenicity:

METHYL METHACRYLATE

EPA: Not likely to be carcinogenic to humans

### **IARC Carcinogenicity**

METHYL METHACRYLATE , Butylated hydroxytoluene (BHT) : IARC Group 3 Not classifiable as to its carcinogenicity to humans.

### **NTP - Carcinogenicity**

Not listed.

### **OSHA - Carcinogenicity**

Not listed.

### Reproductive Toxicity:

Not available.

### Specific target organ toxicity - single exposure:

Irritating to respiratory system.

### Specific target organ toxicity - repeated exposure:

#### **STOT - Repeated exposure**

Not available.

### Aspiration hazard:

#### **Viscosity**

Not available.

## 12. ECOLOGICAL INFORMATION

### **Toxicity**

No data available.

### **Degradability**

No data available.

### **Bioaccumulative potential**

No data available on bioaccumulation.

### **Partition coefficient**

Not available.

### **Mobility:**

No information available.

### **Results of PBT and vPvB assessment**

This product does not contain any PBT or vPvB Substances.

### **Other adverse effects**

Not known.

## 13. DISPOSAL CONSIDERATIONS

### **Disposal Methods**

Dispose of waste and residues in accordance with local authority requirements.

## 14. TRANSPORT INFORMATION

|                                 |  |
|---------------------------------|--|
| <b>UN No. (DOT/TDG)</b>         | 1133                                     |
| <b>UN No. (IMDG)</b>            | 1133                                     |
| <b>UN No. (ICAO)</b>            | 1133                                     |
| <b>DOT Proper Shipping Name</b> | ADHESIVES, CONTAINING A FLAMMABLE LIQUID |
| <b>TDG Proper Shipping Name</b> | ADHESIVES, CONTAINING A FLAMMABLE LIQUID |
| <b>DOT Hazard Class</b>         |  |

3

## ONE-UP BOND F Plus Bonding Agent B

**DOT Hazard Label**

Flammable Liquid

**TDG Class** 3

**TDG Label(s)** 3

**IMDG Class** 3

**ICAO Class** 3

**Transport Labels**

**DOT Pack Group** III

**IMDG Pack Group** III

**Air Pack Group** III

**Environmentally Hazardous Substance/Marine Pollutant**

No.

**EMS** F-E, S-D

**Special precautions for user** Not available.

**Transport in Bulk according to Annex II of MARPOL 73/78 and the IBC Code Notes**

Not applicable.

### 15. REGULATORY INFORMATION

**Regulatory Status (US)**

This Product is Hazardous under the OSHA Hazard Communication Standard.

**Regulatory References**

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

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

None of the ingredients are listed.

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

The following ingredients are listed.

METHYL METHACRYLATE; 1, 000 lbs (454 Kg)

**SARA Extremely Hazardous Substances EPCRA Reportable Quantities**

None of the ingredients are listed.

**SARA 313 Emission Reporting**

The following ingredients are listed.

METHYL METHACRYLATE

**CAA Accidental Release Prevention**

None of the ingredients are listed.

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

Fire Acute

**OSHA Highly Hazardous Chemicals**

None of the ingredients are listed.

**US State Regulations**
**California Proposition 65 Carcinogens and Reproductive Toxins**

None of the ingredients are listed.

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

The following ingredients are listed.

## ONE-UP BOND F Plus Bonding Agent B

METHYL METHACRYLATE

### California Air Toxics "Hot Spots" (A-II)

None of the ingredients are listed.

### Massachusetts "Right To Know" List

The following ingredients are listed.

2-DIMETHYLAMINOETHYL METHACRYLATE

dibutyl hydroxy toluene

METHYL METHACRYLATE

### Rhode Island "Right To Know" List

The following ingredients are listed.

dibutyl hydroxy toluene

METHYL METHACRYLATE

### Minnesota "Right To Know" List

The following ingredients are listed.

dibutyl hydroxy toluene

METHYL METHACRYLATE

### New Jersey "Right To Know" List

The following ingredients are listed.

2-DIMETHYLAMINOETHYL METHACRYLATE

dibutyl hydroxy toluene

METHYL METHACRYLATE

### Pennsylvania "Right To Know" List

The following ingredients are listed.

2-DIMETHYLAMINOETHYL METHACRYLATE

dibutyl hydroxy toluene

METHYL METHACRYLATE

### International Inventories

#### EU - EINECS/ELINCS

All ingredients are listed or exempt.

#### Canada – DSL/NDL

All ingredients are listed or exempt.

#### US - TSCA

All ingredients are listed or exempt.

#### US – TSCA 12(b) Export Notification

None of the ingredients are listed.

## 16. OTHER INFORMATION

### Revision Comments

This is first issue.

### Revision Date

08/05/2014

### Disclaimer

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.