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Reviewed on July 01, 2004

# TOKUYAMA DENTAL CORPORATION

## MATERIAL SAFETY DATA SHEET

(According to 91/155/EEC and OSHA regulation 29 CFR 1910. 1200(g))

### 1. Identification of substance

Product name	<b>ONE-UP BOND F Plus BONDING AGENT A</b>
Description of Product	Dental Adhesive, For dental professionals only
Manufacturer	<b>Tokuyama Dental Corporation</b> 38-9 Taitou 1-chome, Taitou-ku, Tokyo, Japan
EC Representative (Emergency Contact in EU)	<b>Tokuyama Europe GmbH</b> Oststrasse 10, 40211 Düsseldorf, Germany Tel: +49 211 1754480, Fax: +49 211 357379
North/South America Middle East	<b>J. MORITA USA, Inc.</b> 9 Mason, Irvine, CA 92618, U.S.A. Tel: (949) 581 9600 Fax: (949) 465 1095 Tel: (800) 831 3222 Email: info@jmoritausa.com

### 2. Composition / Data on components

Ingredients	%	Cas.No.	Symbols	R-phrases	OSHA PEL
Methacryloyloxyalkyl acid phosphate (phosphoric acid monomer)	30-60	N/E	Xi	36/37/38	N/E
11-Methacryloxy-1,1-undecanedicarboxylic acid (MAC-10)	10-30	108362-85-2	Xi	36/37/38	N/E
Methyl methacrylate	5-20	80-62-6	Xi, F	11-37/38-43	100ppm
Bisphenol A polyethoxy methacrylate	20-40	41637-38-1	N/E	N/E	N/E

### 3. Hazard identification

Hazard description	Irritant Flammable (see section 9 and 14)
R-phrases	R10: Flammable R36/38: Irritating to eyes and skin. R43: May cause sensitization by skin contact.

### 4. First aid measures

After skin contact	Wash immediately with soap and plenty of water.
After eye contact	Wash immediately with plenty of water. Get medical attention.
After swallowing	Induce drinking plenty of water and get medical attention.

### 5. Fire fighting measures

Suitable extinguishing media	Chemical foam, carbon dioxide or dry chemical.
Media not to be used	None.
Combustion products and resulting gases	Irritant gas may be released during heating or in case of fire.
Special precaution for fire-fighters	Use protective clothing and a self-contained breathing apparatus.

### 6. Accidental release measures

Personal protection	Wear suitable protective groves.
Environmental protection	Do not empty into drains.
Methods for cleaning up	Clean up with an inert absorbent and dispose of it at special waste collection point.

### 7. Handling and storage

Handling	Use in a well ventilated areas.
Storage	Store in a cool, dark place (0-10°C). Keep away from heat, direct sunlight, sparks and open flames.

### 8. Exposure controls / personal protection

In general	Not required.
Respiration protection	Not required.
Hand protection	Wear suitable protective gloves.
Eye protection	Wear suitable protective glasses.
Skin protection	Wear suitable protective clothing.

### 9. Physical and chemical properties

Appearance	Slight yellowish liquid	Explosive properties	N/A
Odour	Characteristic Odour	Oxidizing properties	None
pH	Acidic	Vapor pressure	N/A
Boiling point	N/A	Relative density	1.17g/cm <sup>3</sup>
Melting point	N/A	Solubility (water)	N/A
Flash point	33.0°C	Solubility (Solvent)	N/A
Flammability	Flammable	Partition coefficient	N/A
Autoflammability	N/A	Others	—

### 10. Stability and reactivity

Conditions to avoid	Light, heat, sparks and open flames.
Materials to avoid	Strong oxidizing agents.
Hazardous reactions	No hazardous reactions known.

### 11. Toxicological information

Inhalation	Irritation of respiratory organs.
Ingestion	Slight irritation of digestive organs.
Skin contact	Slight irritation, defatting action, repeated prolonged contact may cause inflammation.
Eye contact	Irritation, redness, pain.
Carcinogenicity	N/R
Others	—

### 12. Ecological information

Biodegradability	N/A
Bioaccumulative	N/A
Aquatic toxicity	N/A
Others	—

### 13. Disposal consideration

Disposal must be made according to federal, state and local regulations.
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### 14. Transport information

Proper shipping name	Adhesives, containing a flammable liquid.
UN number	UN1133
Classification	3(IATA, CFR49)
Packing group	III(IATA, CFR49)
Air transport	Flammable. See section 2 and 9.
Sea transport	
Inland transport	

### 15. Regulatory information

Marking according to EU regulations	67/548/EEC, 92/32/EEC
Contains	Methacryloyloxyalkyl acid phosphate (phosphoric acid monomer), 11-Methacryloxy-1,1-undecanedicarboxylic acid (MAC-10) and Methyl methacrylate.
Symbols	Xi: Irritant
R-phrases	R10: Flammable R36/38: Irritating to eyes and skin. R43: May cause sensitization by skin contact.
S-phrases	S2: Keep out of the reach of children. S24: Avoid contact with skin. S37: Wear suitable gloves. S26: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S28: After contact with skin, wash immediately with soap and plenty of water. S46: If swallowed, seek medical advice immediately and show this container and label.
Others	R and S-phrases are not marked according to contents not more than 125ml and the case not related to the general public (Article 23 "Labeling" -3).

### 16. Other information

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.

\* N/E: Not Established, N/A: Not Available, N/R: Not Regulated by IARC

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2. Composition / Data on components

Ingredients	%	Cas.No.	Symbols	R-phrases	OSHA PEL
2-Hydroxyethyl methacrylate	30-60	868-77-9	Xi	36/38-43	N/E
Methyl methacrylate	10-30	80-62-6	Xi, F	11-37/38-43	100ppm
Fluoroaluminosilicate glass filler	15-30	N/E	N/E	N/E	N/E
Borate catalyst	<5	N/E	N/E	N/E	N/E
Purified Water	5-20	7732-18-5	N/E	N/E	N/E

3. Hazard identification

Hazard description	Irritant Flammable (see section 9 and 14)
R-phrases	R10: Flammable R36/38: Irritating to eyes and skin. R43: May cause sensitization by skin contact.

4. First aid measures

After skin contact	Wash immediately with soap and plenty of water.
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After swallowing	Induce drinking plenty of water and get medical attention.

5. Fire fighting measures

Suitable extinguishing media	Chemical foam, carbon dioxide or dry chemical.
Media not to be used	None.
Combustion products and resulting gases	Irritant gas may be released during heating or in case of fire.
Special precaution for fire-fighters	Use protective clothing and a self-contained breathing apparatus.

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Personal protection	Wear suitable protective groves.
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Methods for cleaning up	Clean up with an inert absorbent and dispose of it at special waste collection point.

7. Handling and storage

Handling	Use in a well ventilated areas.
Storage	Store in a cool, dark place (0-10 °C). Keep away from heat, direct sunlight, sparks and open flames.

8. Exposure controls / personal protection

In general	Not required.
Respiration protection	Not required.
Hand protection	Wear suitable protective gloves.
Eye protection	Wear suitable protective glasses.
Skin protection	Wear suitable protective clothing.

9. Physical and chemical properties

Appearance	Luminous yellow liquid	Explosive properties	N/A
Odour	Characteristic Odour	Oxidizing properties	None
pH	Neutral	Vapor pressure	N/A
Boiling point	N/A	Relative density	1.23g/cm <sup>3</sup>
Melting point	N/A	Solubility (water)	N/A
Flash point	29.5 °C	Solubility (Solvent)	N/A
Flammability	Flammable	Partition coefficient	N/A
Autoflammability	N/A	Others	—

10. Stability and reactivity

Conditions to avoid	Light, heat, sparks and open flames.
Materials to avoid	Strong oxidizing agents.
Hazardous reactions	No hazardous reactions known.

11. Toxicological information

Inhalation	Irritation of respiratory organs.
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