

SAFETY DATA SHEET

TOKUYAMA UNIVERSAL BOND BOND A

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name TOKUYAMA UNIVERSAL BOND BOND A

1.2. Relevant identified uses of the substance or mixture and uses advised against

Identified uses Dental Adhesive. For dental professionals only.

1.3. Details of the supplier of the safety data sheet

Supplier Tokuyama Dental Italy S.r.l.
Via Chizzalunga, 1,
36066 Sandrigo, Vicenza, Italy
TEL: +39-0444-659650
FAX: +39-0444-750345

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

1.4. Emergency telephone number

Emergency telephone Regional Medicines and Poisons Information Centre NI,
Pharmacy Department
Royal Hospital Suite, Grosvenor Road, Belfast
Emergency telephone: 844 892 0111
Telephone: +44 28 90 63 2032
Fax: +44 28 90 24 8030
E-mail address: nirdic.nirdic@belfasttrust.hscni.net

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification (EC 1272/2008)

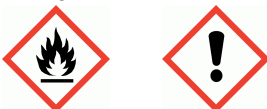
Physical hazards Flam. Liq. 2 - H225

Health hazards Skin Irrit. 2 - H315 : Eye Irrit. 2 - H319 : Skin Sens. 1 - H317 : STOT SE 3 - H336

Environmental hazards Not Classified

2.2. Label elements

Pictogram



Signal word Danger

Hazard statements H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.

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Precautionary statements	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P271 Use only outdoors or in a well-ventilated area. 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. P501 Dispose of contents/ container in accordance with local regulations.
Supplemental label information	EUH066 Repeated exposure may cause skin dryness or cracking.
Contains	ACETONE, (1-METHYLETHYLIDENE)BIS[4,1-PHENYLENEOXY(2-HYDROXY-3,1-PROPANEDIYL)] BISMETHACRYLATE, 2-HYDROXYETHYL METHACRYLATE, 2,2'-ETHYLENEDIOXYDIETHYL DIMETHACRYLATE
Supplementary precautionary statements	P240 Ground and bond container and receiving equipment. P241 Use explosion-proof electrical equipment. P242 Use non-sparking tools. P243 Take action to prevent static discharges. P261 Avoid breathing vapour/ spray. P264 Wash contaminated skin thoroughly after handling. P272 Contaminated work clothing should not be allowed out of the workplace. P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. P304+P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing. P312 Call a POISON CENTRE/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. P370+P378 In case of fire: Use alcohol resistant foam, carbon dioxide or dry powder to extinguish. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P403+P235 Store in a well-ventilated place. Keep cool. P405 Store locked up.

2.3. Other hazards

This product does not contain any substances classified as PBT or vPvB.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

ACETONE	30-60%
CAS number: 67-64-1	EC number: 200-662-2
Classification Flam. Liq. 2 - H225 Eye Irrit. 2 - H319 STOT SE 3 - H336	

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(1-METHYLETHYLIDENE)BIS[4,1-PHENYLENEOXY(2-HYDROXY-3,1-PROPANEDIYL)] BISMETHACRYLATE 10-30%
CAS number: 1565-94-2 EC number: 216-367-7
Classification Skin Sens. 1 - H317 Aquatic Chronic 3 - H412
2-HYDROXYETHYL METHACRYLATE 10-30%
CAS number: 868-77-9 EC number: 212-782-2
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317
2,2'-ETHYLENEDIOXYDIETHYL DIMETHACRYLATE 5-10%
CAS number: 109-16-0 EC number: 203-652-6
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319 Skin Sens. 1 - H317
2-PROPENOIC ACID, 2-METHYL-, 2-HYDROXYETHYL ESTER, PHOSPHATE 1-5%
CAS number: 52628-03-2 EC number: 258-053-2
Classification Skin Irrit. 2 - H315 Eye Irrit. 2 - H319
2,6-DI-tert-BUTYL-p-CRESOL <1%
CAS number: 128-37-0 EC number: 204-881-4 M factor (Chronic) = 1
Classification Aquatic Chronic 1 - H410

The full text for all hazard statements is displayed in Section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information	Get medical attention if any discomfort continues. Show this Safety Data Sheet to the medical personnel.
Inhalation	Move affected person to fresh air and keep warm and at rest in a position comfortable for breathing. When breathing is difficult, properly trained personnel may assist affected person by administering oxygen. Get medical attention.

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Ingestion	Rinse mouth thoroughly with water. Give a few small glasses of water or milk to drink. Never give anything by mouth to an unconscious person. Keep affected person under observation. Get medical attention.
Skin contact	Wash skin thoroughly with soap and water. In the event of any sensitisation symptoms developing, ensure further exposure is avoided. Get medical attention if symptoms are severe or persist after washing.
Eye contact	Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if any discomfort continues.
Protection of first aiders	First aid personnel should wear appropriate protective equipment during any rescue.

4.2. Most important symptoms and effects, both acute and delayed

General information	The severity of the symptoms described will vary dependent on the concentration and the length of exposure.
Inhalation	May cause drowsiness or dizziness.
Skin contact	Irritating to skin. May cause an allergic skin reaction. Repeated exposure may cause skin dryness or cracking.
Eye contact	Irritating to eyes.

4.3. Indication of any immediate medical attention and special treatment needed

Notes for the doctor	Treat symptomatically.
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SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	Highly flammable liquid and vapours. Extinguish with alcohol-resistant foam, carbon dioxide, dry powder or water fog. Use fire-extinguishing media suitable for the surrounding fire.
Unsuitable extinguishing media	Do not use water jet as an extinguisher, as this will spread the fire.

5.2. Special hazards arising from the substance or mixture

Specific hazards	Highly flammable liquid and vapour. Containers can burst violently or explode when heated, due to excessive pressure build-up. Vapours may be ignited by a spark, a hot surface or an ember. Vapours may form explosive mixtures with air. Fire-water run-off in sewers may create fire or explosion hazard.
Hazardous combustion products	Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours. Irritating gases or vapours. Carbon monoxide (CO). Carbon dioxide (CO ₂).

5.3. Advice for firefighters

Protective actions during firefighting	Avoid breathing fire gases or vapours. Evacuate area. Keep upwind to avoid inhalation of gases, vapours, fumes and smoke. Ventilate closed spaces before entering them. Cool containers exposed to heat with water spray and remove them from the fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. If a leak or spill has not ignited, use water spray to disperse vapours and protect men stopping the leak. Control run-off water by containing and keeping it out of sewers and watercourses.
Special protective equipment for firefighters	Wear positive-pressure self-contained breathing apparatus (SCBA) and appropriate protective clothing. Firefighter's clothing conforming to European standard EN469 (including helmets, protective boots and gloves) will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

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6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions Wear protective clothing as described in Section 8 of this safety data sheet. No action shall be taken without appropriate training or involving any personal risk. Evacuate area. Provide adequate ventilation. No smoking, sparks, flames or other sources of ignition near spillage. Promptly remove any clothing that becomes contaminated. Avoid inhalation of dust and vapours. Use suitable respiratory protection if ventilation is inadequate. Avoid contact with skin and eyes.

6.2. Environmental precautions

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

6.3. Methods and material for containment and cleaning up

Methods for cleaning up Wear protective clothing as described in Section 8 of this safety data sheet. No smoking, sparks, flames or other sources of ignition near spillage. Eliminate all ignition sources if safe to do so. Use non-sparking tools. Contain and absorb spillage with sand, earth or other non-combustible material. Collect and place in suitable waste disposal containers and seal securely. Do not allow material to enter confined spaces, due to the risk of explosion. Wash thoroughly after dealing with a spillage. For waste disposal, see Section 13.

6.4. Reference to other sections

Reference to other sections For personal protection, see Section 8. See Section 11 for additional information on health hazards. See Section 12 for additional information on ecological hazards. For waste disposal, see Section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Usage precautions Wear protective clothing as described in Section 8 of this safety data sheet. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use explosion-proof electrical, ventilating and lighting equipment. Use only non-sparking tools. Ground/bond container and receiving equipment. Take precautionary measures against static discharges. Avoid breathing gas, fume, vapours or spray. Handle all packages and containers carefully to minimise spills. Avoid the formation of mists. Keep container tightly sealed when not in use. Do not handle broken packages without protective equipment. Keep away from food, drink and animal feeding stuffs.

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 if skin becomes contaminated. Take off contaminated clothing. Wash contaminated clothing before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Storage precautions Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Keep container tightly closed, in a cool, well ventilated place. Store locked up. Keep only in the original container. Protect containers from damage. Store away from the following materials: Oxidising materials. Organic peroxides/hydroperoxides.

7.3. Specific end use(s)

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

SECTION 8: Exposure Controls/personal protection

8.1. Control parameters

Occupational exposure limits

ACETONE

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Long-term exposure limit (8-hour TWA): WEL 500 ppm 1210 mg/m³

Short-term exposure limit (15-minute): WEL 1500 ppm 3620 mg/m³

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

Long-term exposure limit (8-hour TWA): WEL 10 mg/m³

WEL = Workplace Exposure Limit

8.2. Exposure controls

Appropriate engineering controls	Provide adequate ventilation. Use explosion-proof electrical, ventilating and lighting equipment. Observe any occupational exposure limits for the product or ingredients.
Eye/face protection	Wear tight-fitting, chemical splash goggles or face shield.
Hand protection	Wear protective gloves. The most suitable glove should be chosen in consultation with the glove supplier/manufacturer, who can provide information about the breakthrough time of the glove material. To protect hands from chemicals, gloves should comply with European Standard EN374. Considering the data specified by the glove manufacturer, check during use that the gloves are retaining their protective properties and change them as soon as any deterioration is detected. Frequent changes are recommended.
Other skin and body protection	Wear appropriate clothing to prevent repeated or prolonged skin contact.
Hygiene measures	Wash hands thoroughly after handling. Wash at the end of each work shift and before eating, smoking and using the toilet. Do not eat, drink or smoke when using this product. Take off immediately all contaminated clothing and wash it before reuse.
Respiratory protection	Ensure all respiratory protective equipment is suitable for its intended use and is 'CE'-marked. Check that the respirator fits tightly and the filter is changed regularly. Gas and combination filter cartridges should comply with European Standard EN14387. Full face mask respirators with replaceable filter cartridges should comply with European Standard EN136. Half mask and quarter mask respirators with replaceable filter cartridges should comply with European Standard EN140.

SECTION 9: Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance	Liquid
Colour	Colourless ~ Yellow
Odour	Characteristic
Odour threshold	Not available.
pH	Not available.
Melting point	Not available.
Initial boiling point and range	>35°C
Flash point	-17.6°C
Evaporation rate	Not available.
Flammability (solid, gas)	Not available.
Upper/lower flammability or explosive limits	Not available.
Vapour pressure	Not available.
Vapour density	Not available.

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Relative density	0.968
Solubility(ies)	No information available.
Partition coefficient	Not available.
Auto-ignition temperature	Not available.
Decomposition Temperature	Not available.
Viscosity	Not available.
Explosive properties	Not available.
Oxidising properties	Not available.

9.2. Other information

Other information	Not available.
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SECTION 10: Stability and reactivity

10.1. Reactivity

Reactivity	The following materials may react violently with the product: Oxidising materials. Organic peroxides/hydroperoxides. See the other subsections of this section for further details.
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10.2. Chemical stability

Stability	Stable at normal ambient temperatures and when used as recommended. Stable under the prescribed storage conditions.
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10.3. Possibility of hazardous reactions

Possibility of hazardous reactions	The following materials may react strongly with the product: Oxidising materials. Organic peroxides/hydroperoxides.
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10.4. Conditions to avoid

Conditions to avoid	Vapours may form explosive mixtures with air. Containers can burst violently or explode when heated, due to excessive pressure build-up. Static electricity and formation of sparks must be prevented.
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10.5. Incompatible materials

Materials to avoid	Oxidising materials. Organic peroxides/hydroperoxides.
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10.6. Hazardous decomposition products

Hazardous decomposition products	Thermal decomposition or combustion products may include the following substances: Harmful gases or vapours. Irritating gases or vapours. Carbon monoxide (CO). Carbon dioxide (CO ₂).
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SECTION 11: Toxicological information

11.1. Information on toxicological effects

Routes of exposure	Skin , Eyes , Ingestion , Inhalation , Health effects: See section 4.2.
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Acute toxicity - oral

Notes (oral LD ₅₀)	Not available.
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Acute toxicity - dermal

Notes (dermal LD ₅₀)	Not available.
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Acute toxicity - inhalation

Notes (inhalation LC ₅₀)	Not available.
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Skin corrosion/irritation

Skin corrosion/irritation Skin Irrit. 2 - H315 Irritating to skin.

Animal data Not available.

Serious eye damage/irritation

Serious eye damage/irritation Eye Irrit. 2 - H319 Causes serious eye irritation.

Respiratory sensitisation

Respiratory sensitisation Not available.

Skin sensitisation

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

Germ cell mutagenicity

Genotoxicity - in vitro Not available.

Carcinogenicity

Carcinogenicity Not available.

IARC carcinogenicity

Contains a substance which may be potentially carcinogenic. IARC Group 3 Not classifiable as to its carcinogenicity to humans.

Reproductive toxicity

Reproductive toxicity - fertility Not available.

Reproductive toxicity - development Not available.

Specific target organ toxicity - single exposure

STOT - single exposure STOT SE 3 - H336 May cause drowsiness or dizziness.

Target organs Central nervous system

Specific target organ toxicity - repeated exposure

STOT - repeated exposure Not classified as a specific target organ toxicant after repeated exposure.

Aspiration hazard

Aspiration hazard Not available.

Toxicological information on ingredients.

SILICON DIOXIDE

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.

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.

SECTION 12: Ecological Information

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12.1. Toxicity

Toxicity No information available.

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

12.2. Persistence and degradability

Persistence and degradability The degradability of the product is not known.

12.3. Bioaccumulative potential

Bioaccumulative potential No data available on bioaccumulation.

Partition coefficient Not available.

12.4. Mobility in soil

Mobility Volatile liquid. The product contains organic solvents which will evaporate easily from all surfaces.

12.5. Results of PBT and vPvB assessment

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

12.6. Other adverse effects

Other adverse effects None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

General information The generation of waste should be minimised or avoided wherever possible. Reuse or recycle products wherever possible. This material and its container must be disposed of in a safe way. When handling waste, the safety precautions applying to handling of the product should be considered. Care should be taken when handling emptied containers that have not been thoroughly cleaned or rinsed out. Empty containers or liners may retain some product residues and hence be potentially hazardous.

Disposal methods Dispose of surplus products and those that cannot be recycled via a licensed waste disposal contractor. Waste, residues, empty containers, discarded work clothes and contaminated cleaning materials should be collected in designated containers, labelled with their contents. Incineration or landfill should only be considered when recycling is not feasible.

SECTION 14: Transport information

General For limited quantity packaging/limited load information, consult the relevant modal documentation using the data shown in this section.

14.1. UN number

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UN No. (ADR/RID)	1133
UN No. (IMDG)	1133
UN No. (ICAO)	1133
UN No. (ADN)	1133

14.2. UN proper shipping name

Proper shipping name (ADR/RID)	ADHESIVES
Proper shipping name (IMDG)	ADHESIVES
Proper shipping name (ICAO)	ADHESIVES
Proper shipping name (ADN)	ADHESIVES

14.3. Transport hazard class(es)

ADR/RID class	3
ADR/RID classification code	F1
ADR/RID label	3
IMDG class	3
ICAO class/division	3
ADN class	3

Transport labels



14.4. Packing group

ADR/RID packing group	II
IMDG packing group	II
ADN packing group	II
ICAO packing group	II

14.5. Environmental hazards

Environmentally hazardous substance/marine pollutant
No.

14.6. Special precautions for user

Always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

EmS	F-E, S-D
ADR transport category	2
Emergency Action Code	•3YE
Hazard Identification Number (ADR/RID)	33
Tunnel restriction code	(D/E)

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14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

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

SECTION 15: Regulatory information

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

EU legislation (EC) No 1907/2006 (REACH).
(EC) No 1272/2008 (CLP).
(EU) No 2015/830.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out.

SECTION 16: Other information

Classification procedures according to Regulation (EC) 1272/2008 STOT SE 3 - H336: Skin Irrit. 2 - H315: Eye Irrit. 2 - H319: Skin Sens. 1 - H317: : Calculation method. Flam. Liq. 2 - H225: : On basis of test data.

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

Revision comments

Revision date 15/09/2018

Revision 3

Supersedes date 20/11/2016

Hazard statements in full H225 Highly flammable liquid and vapour.
H315 Causes skin irritation.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H336 May cause drowsiness or dizziness.
H410 Very toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.

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.