

# TOKUYAMA UNIVERSAL BOND



# ***BONDING AGENTS!***

**4<sup>th</sup> Generation** – Early 1990s



**5<sup>th</sup> Generation** – Mid 1990s



**6<sup>th</sup> Generation** – Late 1990s



**7<sup>th</sup> Generation** – Early 2000s



## **8<sup>th</sup> Generation or Universal Bonding Agents**

Time-saving, cost-effective, reduced inventory

**Future trend:** The universal bonding agent category will become more and more relevant, as many dentists make the switch.

# **CHALLENGES!**

## ***Bond strength***

Major issues with bonding agents are due weak adhesion occasioning to a failure restorations

## ***Sensitivity***

Weak bond strength can cause post-op sensitivity

## ***Different protocols***

Each material require different protocols, forcing doctor to buy extra products, resulting in inventory waste

TOKUYAMA **UNIVERSAL BOND**  
**ALL MATERIALS, ONE PROTOCOL**  
BONDING EVERYTHING & THE KITCHEN SINK



**TRUE UNIVERSAL**



**RELIABLE BOND STRENGTH**



**SELF-CURE**



**QUICK & EASY APPLICATION**



# ***TRUE UNIVERSAL***

- *Self-etch, compatible with total-etch, and selective-etch techniques*
- *Compatible with light-cure, dual-cure and self-cure materials without use of additional activators*
- *Can be used as primer for silica-based, zirconia-based and metallic restorations*
- *Applicability to direct and indirect restoration (All primers and activators included)*

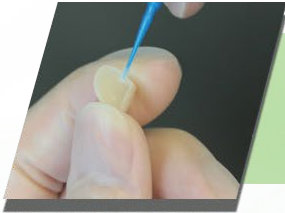




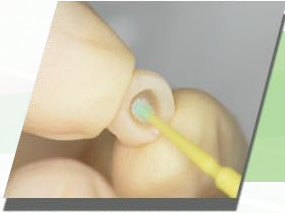
# TRUE UNIVERSAL



- Direct anterior and posterior restorations with light-cure, dual-cure, and self-cure composite materials



- Intraoral repair of composite restorations, metal, porcelain fused to metal, and all ceramic restorations without an additional primer



- Cementation of indirect restorations and veneers when combined with light-cure, dual-cure, and self-cure resin cements



- Bonding and repair of denture resin to metal bases, clasps, or attachments
- Bonding of opaque resin to a metal base in the fabrication of resin-faced stainless steel crowns



- Bonding of core build-ups using core build-up materials



# TRUE UNIVERSAL

Applications	TOKUYAMA UNIVERSAL BOND	Scotchbond Universal Adhesive	G-Premio Bond	Futurabond U	All-Bond Universal	Clearfil Universal Bond	Prime & Bond Elect	Xeno Select	Adhese Universal	iBond Universal
Total-Etch, Self-Etch, Selective Etch	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Compatible w/ all light-curing, dual-curing, or self curing composites	✓	△ *1	✗ *2	✓	✓	△ *6	△ *3	✗	✓	✓
Direct Restorations	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Indirect Restorations	✓	△ *1	△ *3	✓	✓	△ *6	△ *3	✗	✓	✓
Intraoral Repair	✓	✓	△ *4	✓	△ *4	✓ *7	△ *4	✗	△ *8	△ *4
Primer for Prosthesis	✓	△ *1	✗	✗	✓ *5	△ *6	✗	✗	✗	✓ *5

\*1 Requires Dual Cure Activator

\*2 Bonding of dual-cured core build up composites to tooth structure as long as these materials are light-cured

\*3 Requires DCA

\*4 Requires Primer

\*5 Requires light-curing

\*6 Requires DCA and light-curing

\*7 Primer recommended

\*8 Only composite repair

\*Tokuyama Dental R&D Data



# ***RELIABLE BOND STRENGTH***

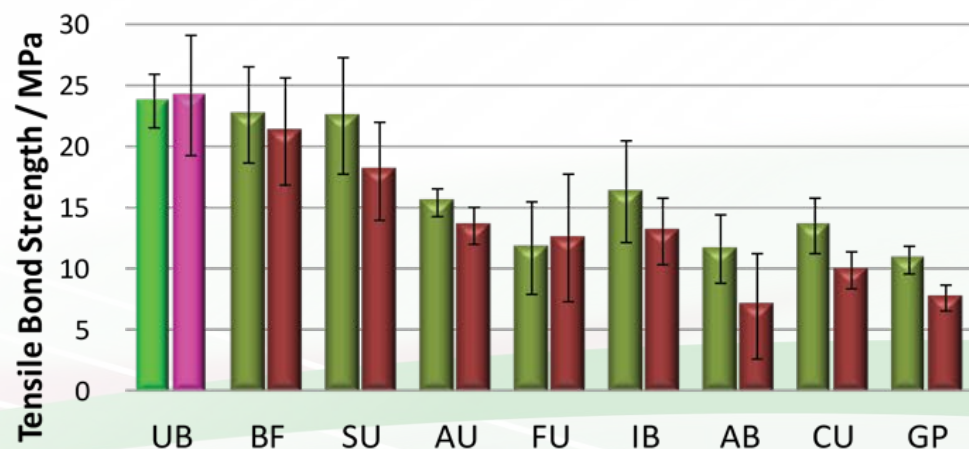
- ***High bond strength to ALL dental materials***
- ***Virtually eliminates post-op sensitivity***
- ***Cavity adaption without voids***
- ***Performs with wide mixing ratios & margin for error***



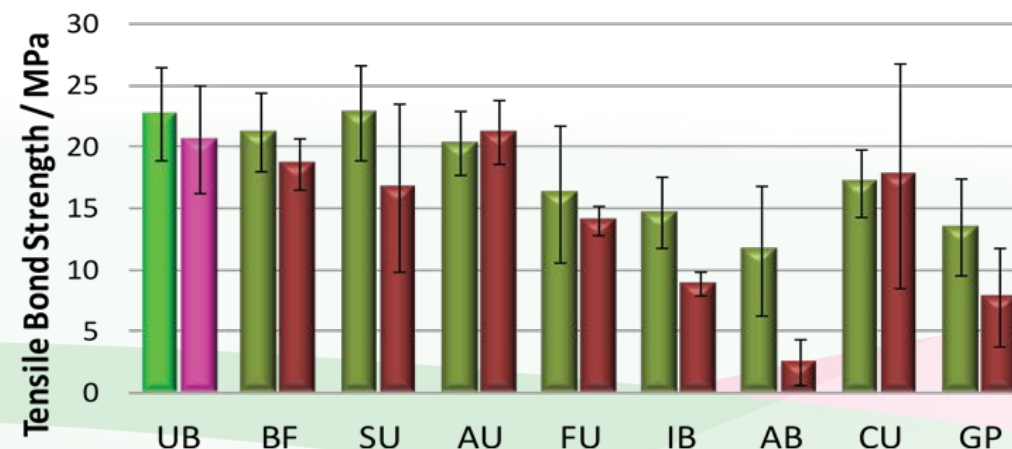


# RELIABLE BOND STRENGTH

Self-etch/Enamel



Self-etch/Dentin



After 24 hrs



After 3,000 thermo-cycles

**UB:** TOKUYAMA UNIVERSAL BOND  
**BF:** TOKUYAMA BOND FORCE  
**SU:** Scotchbond Universal Adhesive

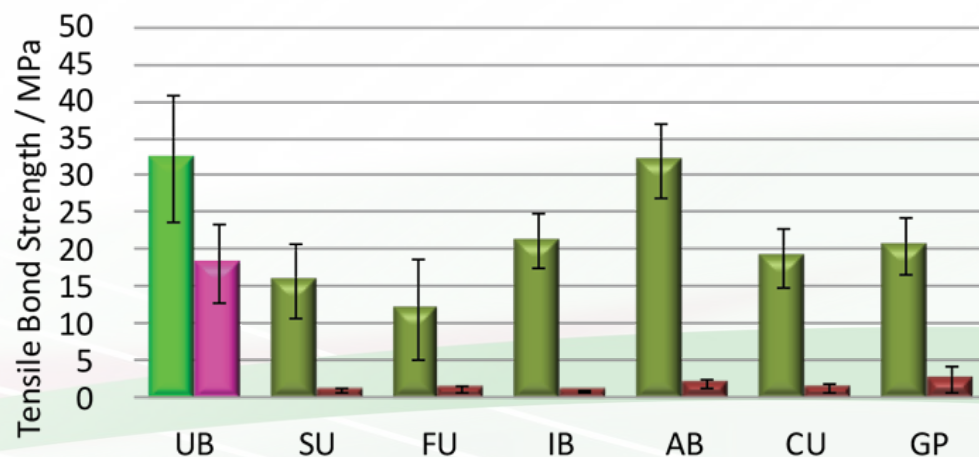
**AU:** Adhese Universal  
**FU:** Futura Bond U  
**IB:** i Bond Universal

**AB:** All-Bond Universal  
**CU:** Clearfil Universal Bond  
**GP:** G-Premio Bond

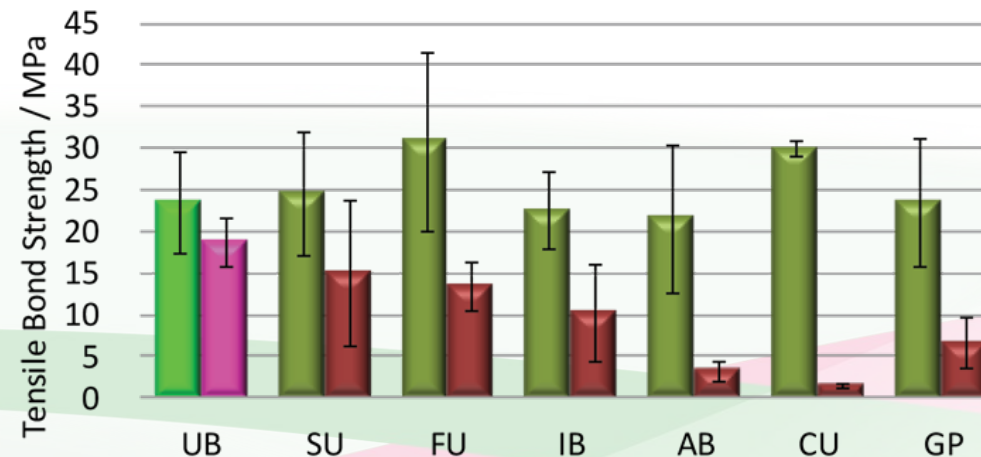


# RELIABLE BOND STRENGTH

Ceramic



Zirconia



After 24 hrs



After 3,000 thermo-cycles

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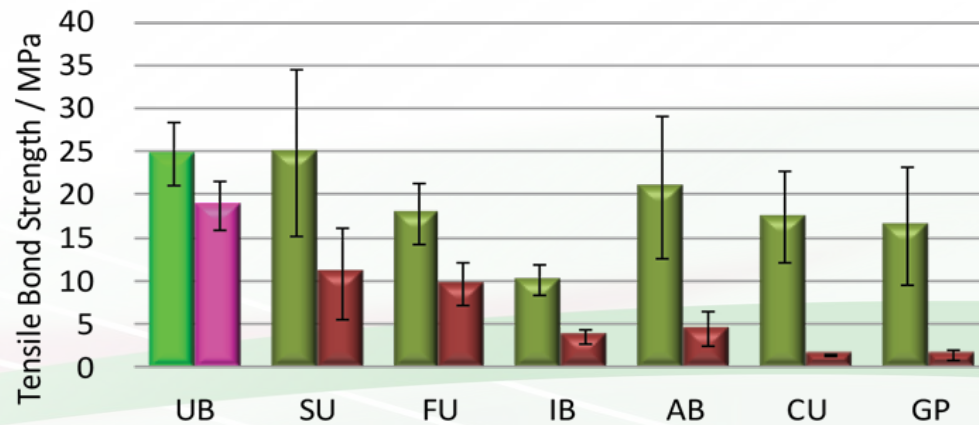
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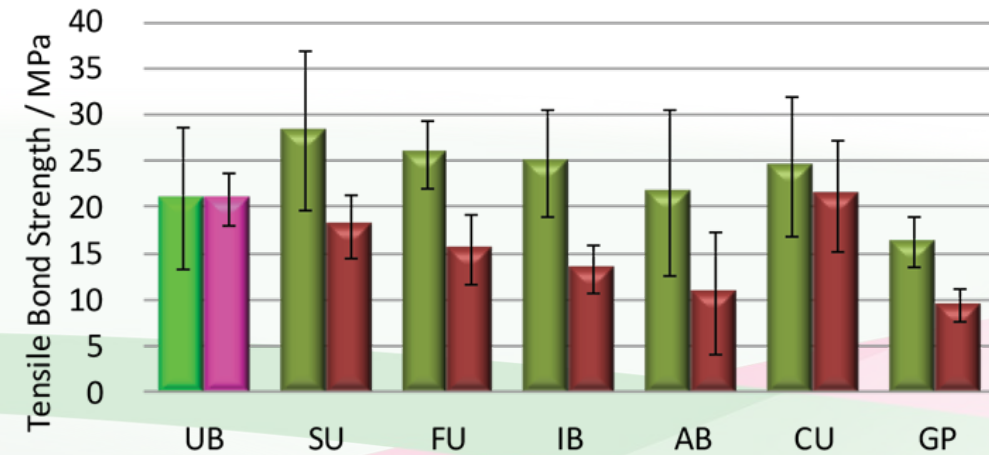


# RELIABLE BOND STRENGTH

Indirect Composite



Precious metal



● After 24 hrs

● After 3,000 thermo-cycles

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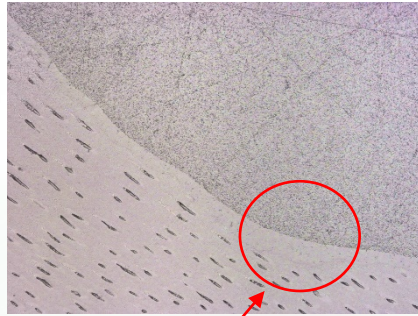




# ***RELIABLE BOND STRENGTH***

**Tokuyama  
Universal Bond**

CORNER

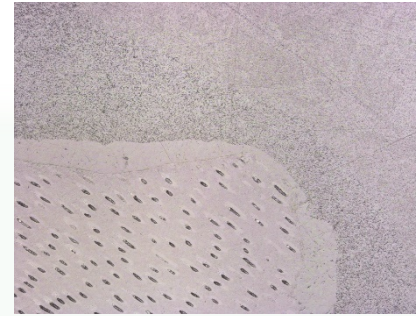


NO GAP

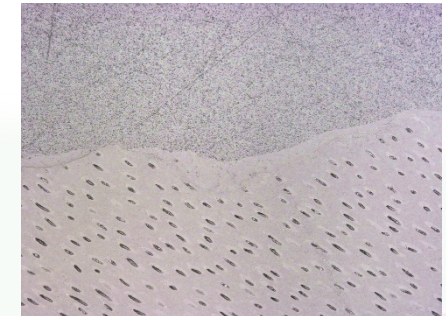
SIDE



EDGE



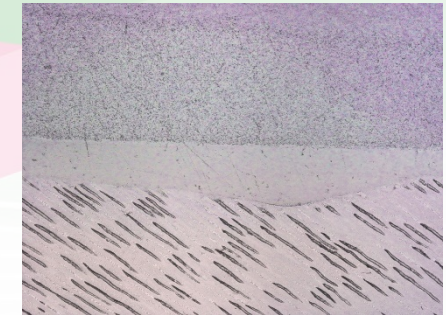
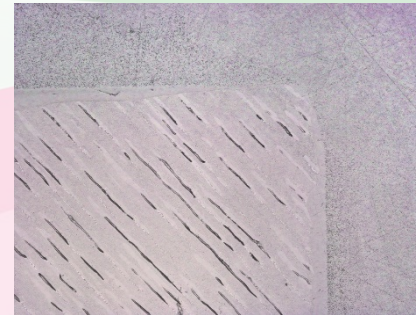
FLOOR



**Scotchbond  
Universal Adhesive**



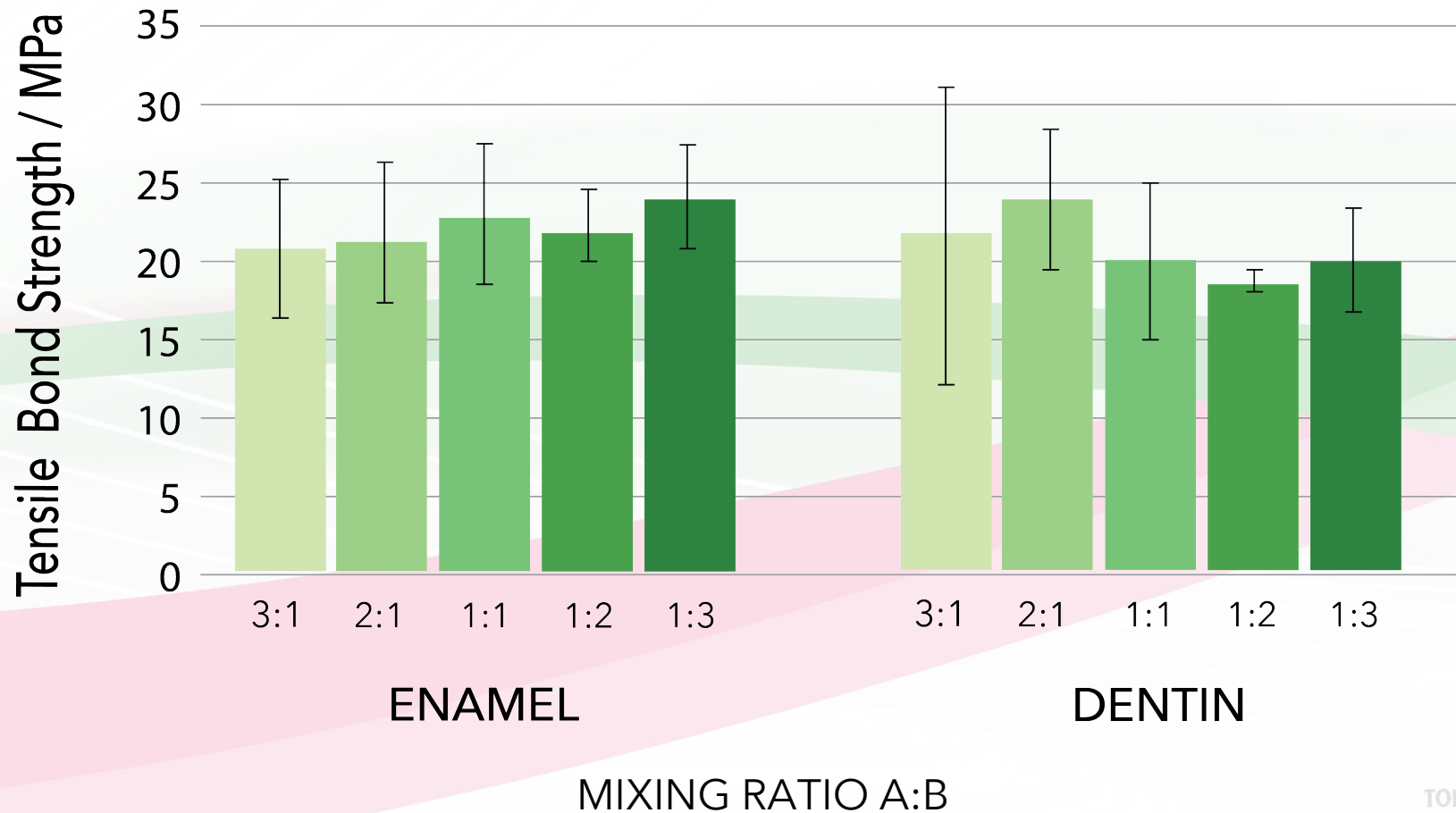
GAP





# RELIABLE BOND STRENGTH

*Maintains performance under a wide range of mixing ratios, offering a wide margin for error.*







# SELF-CURE

*Self-cure chemistry provides reliable bond in deep preparations, post and core-build ups that are difficult to reach with a curing light*



Bond A Components	Function
Phosphoric acid monomer (New 3D-SR Monomer)	Formation of bonding layer. Adhesion for tooth, zirconia, alumina, and non-precious metal
MTU-6 (Metal Primer)	Adhesion to precious metals
HEMA	Penetration into tooth substance. Formation of bonding layer
Bis-GMA	Formation of bonding layer
TEGDMA	Formation of bonding layer
Acetone	Solvent

Bond B Components	Function
$\gamma$ -MPTES (Ceramic Primer)	Silane Coupling Agent. Adhesion for glass ceramics and resin composite
Borate	Polymerization catalyst
Peroxide	Polymerization catalyst
Acetone	Solvent
Isopropyl alcohol	Solvent
Water	Solvent





# QUICK & EASY APPLICATION

- *25 seconds application*
- *Same protocol for every case and material*
- *No agitation*



Dispense 1 drop from each bottle into the same dimple of a mixing well.



Apply mixed bond.  
\*For indirect restorations, apply on both surfaces.



Apply weak air (5 sec.), then medium air (5 sec.) until solvent evaporates.  
\*Air-dry both surfaces for indirect restorations.



# Product Line



Product #	Product Name	Product Information	
15203	Universal Bond Kit	1x Bond A (5mL), 1x Bond B (5mL), 25 disposable applicator brushes, 15 disposable mixing wells, procedure guide, IFU	<b>MSRP: \$142.00</b>
15213	Bond A Refill	1x Bond A (5mL), IFU	<b>MSRP: \$67.50</b>
15218	Bond B Refill	1x Bond B (5mL), IFU	<b>MSRP: \$67.50</b>
34650	Disposable Mixing Well	50 disposable mixing wells	<b>MSRP: \$29.00</b>



# Frequently Asked Questions

*What is the film thickness of Tokuyama Universal Bond?*

***The film thickness is 5 microns***

*Does the product requires refrigeration?*

***Yes, Tokuyama Universal Bond requires storage under refrigeration (0-10°C/32-50°F). Tokuyama Dental recommends removing Tokuyama Universal Bond from the refrigerator 20 minutes before the first application. It may remain in room temperature throughout the day, but needs to be returned to refrigeration at the end of the day***

*What is the shelf life?*

***The shelf life is two years after the date of production under refrigeration***

*What is working time after mixing?*

***3 minutes of working time when using Tokuyama Universal Bond mixing wells. When using a standard, more shallow mixing well, complete the application within one minute.***



# THANK YOU

Tokuyama-us.com  
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