

# THE SCIENCE BEHIND UNIVERSAL

Tokuyama Dental's original technologies provide assured bond strength.

### Adhesive Monomers

**3D-SR Monomer** provides chemical bonding to **tooth, zirconia, alumina and non-precious metal.**

**γ-MPTES** reacts with **glass ceramic surface.**

CC(=O)C=COC(=O)O[Si](CC)(CC)CC
CC(=O)C=COC(=O)O[Si](CC)(CC)CC

### Polymerization Catalyst

**Borate Catalyst**

$$\begin{matrix} R1 \\ | \\ R2-B-R3 \\ | \\ R4 \end{matrix} + \text{Phosphoric Acid Monomer} \rightarrow \begin{matrix} R1 \\ | \\ R2-B-R3 \end{matrix} \xrightarrow{\text{Peroxide Co-Initiator}} R1^{\bullet} \text{ Radical}$$

R1-R4: Aryl group

**BoSE technology** exhibits high catalytic activity under acidic conditions. A thin bonding layer formed after air blow becomes hard because of rapid progression of polymerization and curing on its adhesive interface (Contact Cure), when it comes into contact with resin materials.

**PALFIQUE UNIVERSAL BOND**

**MTU-6** interacts with **precious metal.**

CC(=O)C=COC(=O)O[Si](CC)(CC)CC
CC(=O)C=COC(=O)O[Si](CC)(CC)CC



Simplify your practice with Universal Bond, excellent adhesion for:

- ALL PROCEDURES
- ALL TECHNIQUES
- ALL MATERIALS

# PALFIQUE UNIVERSAL BOND

SELF-CURED UNIVERSAL ADHESIVE



## PACKAGE AVAILABLE

### KIT

- PALFIQUE UNIVERSAL BOND BOND A / 5mL x 1
- PALFIQUE UNIVERSAL BOND BOND B / 5mL x 1
- Disposable Applicator (Fine) x 25
- Mixing Well x 1
- Disposable Mixing Well x 5

### Refill

- PALFIQUE UNIVERSAL BOND BOND A / 5mL
- PALFIQUE UNIVERSAL BOND BOND B / 5mL
- Disposable Mixing Well / 50

## RELATED PRODUCT

### KIT (UNIVERSAL)

- PASTE (A/B) UNIVERSAL / each 2.3mL (each 4.7g) x 1
- PALFIQUE UNIVERSAL BOND BOND A / 5mL x 1
- PALFIQUE UNIVERSAL BOND BOND B / 5mL x 1

- Cement Mixing Tip x 15
- Mini Mixing Tip S x 5
- Nozzle for Mini Mixing Tip x 5
- Disposable Applicator (Fine) x 25
- Mixing Well x 1
- Disposable Mixing Well x 5

### PASTE Refill

PASTE A/B each 2.3mL (each 4.7g) [UNIVERSAL, CLEAR, BROWN, WHITE OPAQUE]

Specifications are subject to change without notice based on Manufacturers discretion.

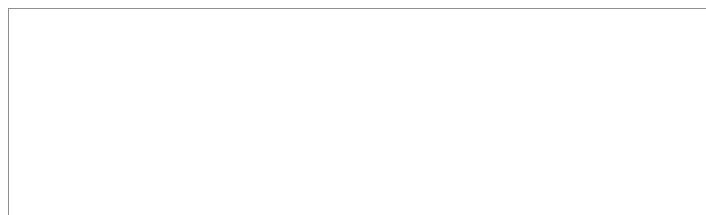
Manufactured by  
**Tokuyama Dental Corporation**

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TEL: +81-3-3835-2261 FAX: +81-3-3835-2265

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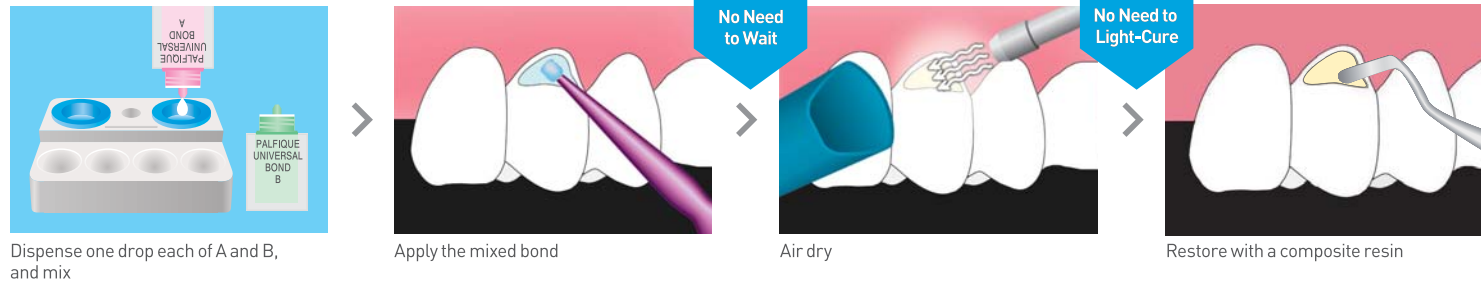
# ALL PROCEDURES

## SIMPLE HANDLING

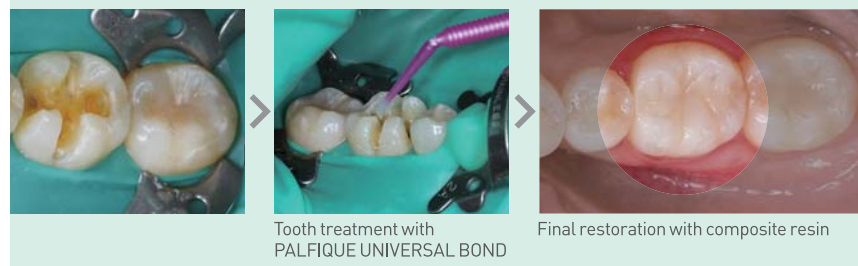
No need to

wait after bond application  
light-cure  
apply separately for tooth and restorations

### DIRECT RESTORATIONS AND INTRAORAL REPAIR OF RESTORATIONS WITH COMPOSITE RESIN



#### Composite Restoration



#### Intraoral Repair



PALFIQUE UNIVERSAL BOND is a adhesive system for both direct and indirect restorations that can be used with Self-etch, Selective-etch and Total-etch techniques. As a universal adhesive, PALFIQUE UNIVERSAL BOND has been designed to be fully compatible with light-cured, self-cured and dual-cured composite materials. PALFIQUE UNIVERSAL BOND also improves the bond strength of polymerizable resin material to all indirect restorative materials.

	PALFIQUE UNIVERSAL BOND	Scotchbond Universal Adhesive*	Adhese Universal*
Compatibility with all etching techniques	✓	✓	✓
Compatibility with dual- and self-cure composite	✓	▲*	✓
Can be used as a primer for prosthesis	✓	▲*	—

\* Requires Dual Cure Activator unless it is used with Rely X Ultimate\*

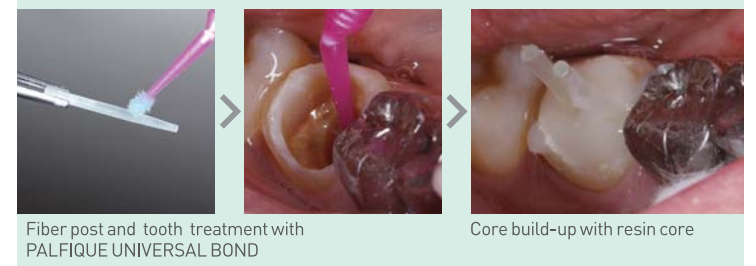
### CEMENTATION OF INDIRECT RESTORATIONS



#### Cementation



#### Core Build-up

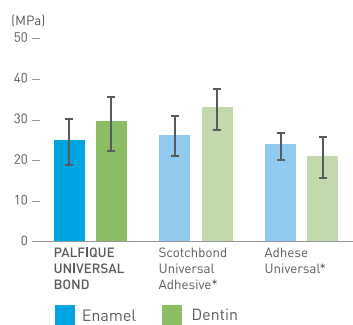


# ALL TECHNIQUES

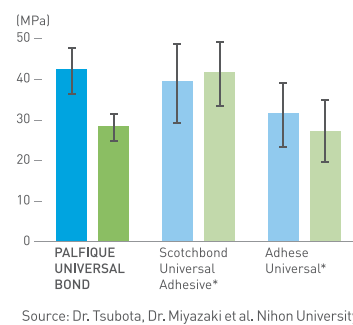
## COMPATIBILITY with ALL ETCHING TECHNIQUES

PALFIQUE UNIVERSAL BOND can be used with Self-etch, Selective-etch and Total-etch techniques.

#### Shear Bond Strength to Tooth Self-Etch



#### Shear Bond Strength to Tooth Total-Etch

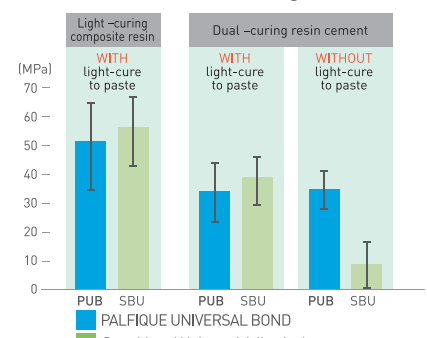


Source: Dr. Tsubota, Dr. Miyazaki et al. Nihon University The 145th Meeting of the Japanese Society of Conservative Dentistry, 2016

## COMPATIBILITY with ALL COMPOSITE MATERIALS

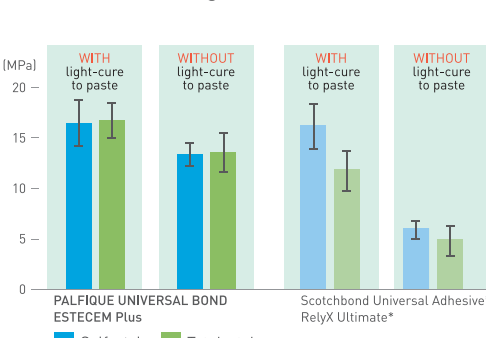
PALFIQUE UNIVERSAL BOND is compatible with light-curing, dual-curing and self-curing composite materials for all direct and indirect restorations without the use of a separate activator.

#### Micro-tensile Bond Strength to Dentin



Source: Dr. Katsumata, Dr. Sano et al. Kagoshima University, Hokkaido University The 35th Annual Meeting of Japan Society for Adhesive Dentistry, 2016

#### Shear Bond Strength to Dentin

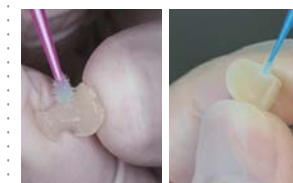


Source: Dr. Kurokawa, Dr. Miyazaki et al. Nihon University The 145th Meeting of the Japanese Society of Conservative Dentistry, 2016

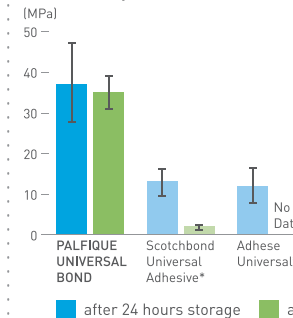
# ALL MATERIALS

PALFIQUE UNIVERSAL BOND can adhere to any material as well as tooth without additional primers.

#### Ceramics



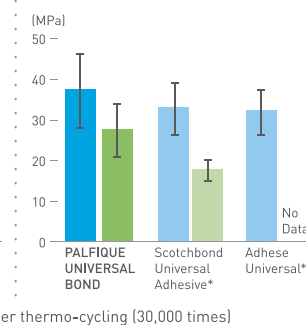
#### Shear Bond Strength to Lithium Disilicate (IPS e-max press\*)



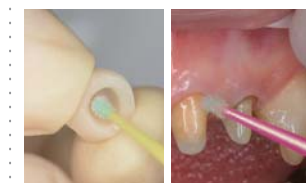
#### Zirconia / Alumina



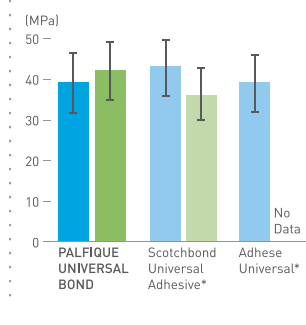
#### Shear Bond Strength to Zirconia



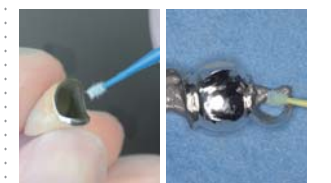
#### Indirect Resin



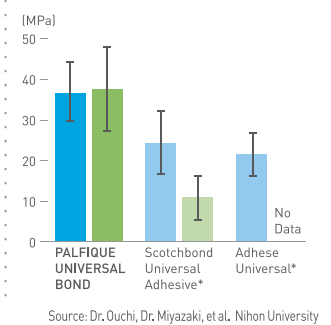
#### Shear Bond Strength to Indirect Resin



#### Metal



#### Shear Bond Strength to Precious Metal



Source: Dr. Ouchi, Dr. Miyazaki, et al. Nihon University The 35th Annual Meeting of Japan Society for Adhesive Dentistry, 2016

\* Not a registered trademark of Tokuyama Dental Corporation