

# The TMR Series

Direct Composite Resin and Dental Adhesive



## TMR Z Fill 10.

The TMR Z Fill 10's unique filler properties allow for both high strength and sustained fluoride release.

## TMR AQUA BOND 0

AQUA BOND offers Zero second bonding that provides stable adhesive strength in wet conditions.

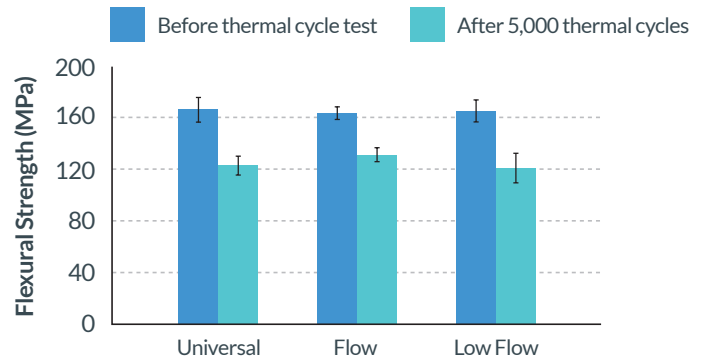
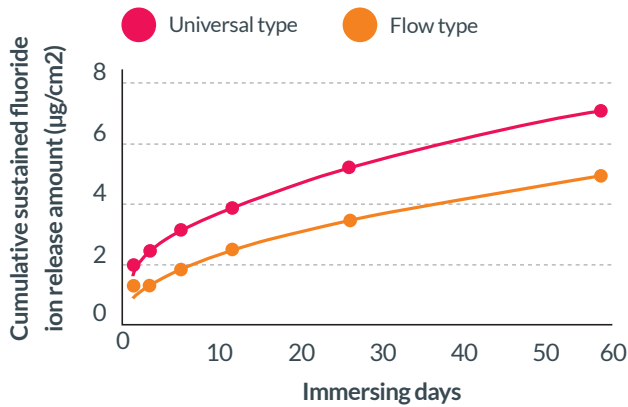


# TMR Z Fill 10.



## Sustained Fluoride Release Properties and Strength

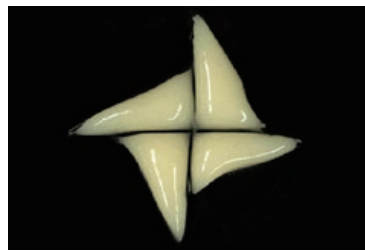
Z Fill 10's filler technology achieves long-term sustained fluoride release with high strength and durability. It has fluorine recharge characteristics, taking in fluorine contained in toothpaste and mouthwash and releasing it.



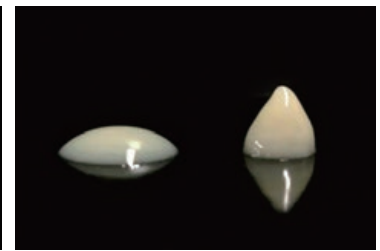
Note: ISO 4049:2009 Dentistry-Polymer-based restorative materials.

## Outstanding Usability

Universal is easily releasable from a spatula and its viscosity allows it to stretch smoothly. In addition, as Flow and Low Flow have appropriate viscosity it is easy to fill or place them as desired.



A-UNO Universal Basic



Flowability of Flow (Left)  
Low Flow (Right)

### YAMAKIN Technology

### Ceramics Cluster Filler

Ceramics cluster filler (C.C.F.) consists of three kinds of filler whose uneven surfaces are intertwined together. By this "anchoring effect", it exhibits high strength. Moreover, the combination of sustained fluoride release properties and high strength, is difficult to achieve in general by adding sustained fluoride release filler.

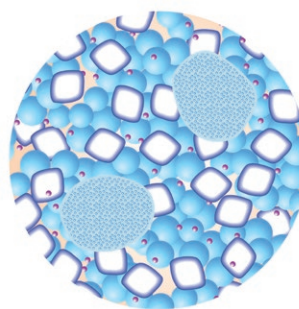


Image of Z Fill 10. (Universal)

-  Ceramics Cluster Filler (1~20µm)
-  Spherical Nano-Filler (SiO<sub>2</sub>: 20nm)
-  Sustained Fluoride Release Filler (Glass: Approx. 700 nm)
-  Organic and inorganic composite filler (3~5µm)

Note: More minute glass fillers than for C.C.F were used in Flow and Low Flow to give excellent flow control.



ものづくり日本大賞  
優秀賞

The concept of having both a sustained fluoride release property and high strength was first commercialized in HR blocks for CAD/CAM crowns: KZR-CAD HR BLOCK 2. Members of the development project were awarded the "Excellence Prize" for the product in the technological development category of the "Seventh Monodzukuri Nippon Grand Awards" by The Ministry of Economy, Trade and Industry (METI).

# TMR Z Fill 10.

## Comprehensive Shade Line-Up

In combination with the filler technology, excellent light scattering property was achieved while maintaining the same transmittance as our conventional products.

A “chameleon effect” can be expected from this characteristic since the light scatters so that the surrounding colors become more natural. Furthermore, A5 and OA5 shades have been added to the line-up for Z Fill 10. and good aesthetics can be obtained even in cervical areas in elderly people or where the milling amount was small.

Product Name	Category	OW	BW	E	A1	A2	A3	A3.5	A4	A5	B1	B2	B3	C2	C3	D2	Size
Z Fill 10. Universal	Dentine				•	•	•	•	•	•	•	•	•	•	•	•	3.8g (2mL)
	Whitening	•	•	•													
	Enamel	•	•	•													
	Opaque					•	•										
Z Fill 10. Flow	Dentine				•	•	•	•	•	•							2.6g (1.5mL)
	Whitening	•	•	•													
	Enamel	•	•	•													
	Opaque					•	•	•	•	•							
Z Fill 10. Low Flow	Dentine				•	•	•	•	•	•							2.6g (1.5mL)
	Whitening	•	•	•													
	Enamel	•	•	•													
	Opaque					•	•	•	•	•							

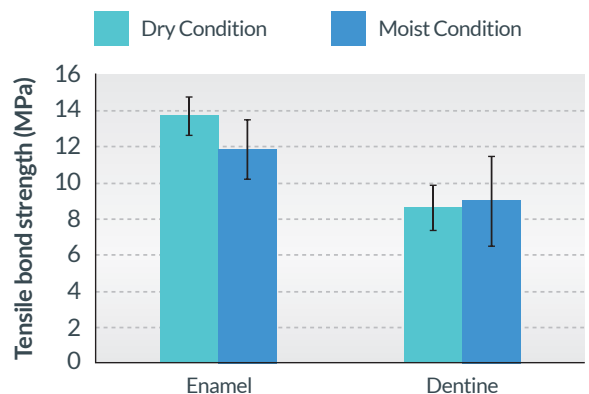
OW: Opaque White BW: Bleaching White E: Enamel

## TMR AQUA BOND 0

### Advanced Adhesion and Speed

Moisture is necessary for demineralization and permeation of tooth substance in adhesion, but excess moisture is known to adversely affect adhesion. AQUA BOND 0 achieves consistent adhesion without sensitivity to moisture conditions, i.e., in both dry and moist conditions, with user-friendly application protocols due to the effects of one of the adhesive components, M-TEG-P.

An adhesive which prevents reduction of bonding strength caused by moisture (which cannot be removed clinically) has been developed.





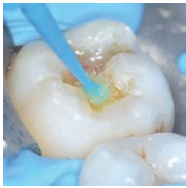
# Clinical case using AQUA BOND 0 and Z Fill 10.



## 1. FORMING A CAVITY

(A crown with ceramic layering on a zirconia frame. Characterized pit and fissure with Nu:le Coat)

**Adhesive procedure:** Apply Multi Primer Liquid and dry. Then, apply TMR-AQUA BOND 0.



## 2. APPLYING AQUA BOND 0

Apply AQUA BOND 0 to the whole surface of the cavity.

Air drying can be performed immediately after applying.

Light cure for 3 sec. with a LED light whose light intensity is 2,400 mw/cm<sup>2</sup>.



## 3. FILLING WITH Z FILL 10. FLOW

Fill the cavity with the Flow type which has appropriate viscosity. Many shades in the line-up enables the dental technician's image to be reproduced aesthetically.

Light cure for 4 sec. with a LED light whose light intensity is 2,400 mw/cm<sup>2</sup>.

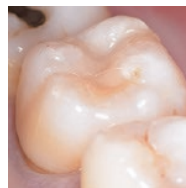


## 4. FILLING WITH Z FILL 10. UNIVERSAL

As the Universal type has good formability, delicate repair work is possible.

The A5 shade will be useful when there is less grinding.


Light cure for 4 sec. with a LED light whose light intensity is 2,400 mw/cm<sup>2</sup>.



## 5. AFTER THE TREATMENT

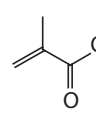
Z Fill 10. has both sustained fluoride release and strength, along with the aesthetic advantage of being like a natural tooth. This will improve the patient's QOL.

Restoration of Cavity  
(Photos provided by: YAMAKITA DENTAL OFFICE (Kochi, Japan))

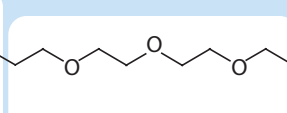
YAMAKIN Technology 

**M-TEG-P TECHNOLOGY**

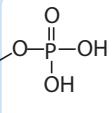
The adhesive component M-TEG-P has an amphiphilic spacer base. Therefore, consistent adhesion and uniformity are achieved, even under moist conditions.



Polymerizing Group



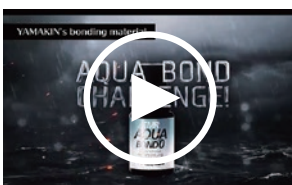
Amphiphilic Part



Phosphate Group

M-TEG-P is a registered trademark of YAMAKIN CO. LTD.

## More Details



### VIDEO AQUA BOND CHALLENGE

Check out the video clip showing the high adhesive strength of AQUA BOND 0.



### REPORT TMR-AQUA BOND 0 PRODUCT REPORT



### VIDEO TMR-ZFILL 10. CHAMELEON EFFECT



### REPORT TMR-Z FILL 10. PRODUCT REPORT



# TMR Z Fill 10.

**Controlled medical device:** Resin-based Dental Restorative Material



Description	Size	Qty
TMR-Z Fill 10. Universal (Available in 18 shades)	3.8g (2mL)	1
TMR-Z Fill 10. Flow (Available in 15 shades)	2.6g (1.5mL)	1
TMR-Z Fill 10. Low Flow (Available in 15 shades)	2.6g (1.5mL)	1
TMR-Z Fill 10. Accessories - Needle tips, TMR Aqua Bond, Applicator brush, disposable plates, Multi primer liquid		1

Please visit our website or phone our sales team to order from the full Z Fill 10 range.

# TMR AQUA BOND 0

**Controlled medical device:** Dental Adhesive for Enamel and Dentine  
(Dental adhesive for ceramics) (Dental adhesive for metal)

Code	Description	Size	Qty
40700001	TMR AQUA BOND	5ml	1



# Multi Primer LIQUID

**Controlled medical device:** Bonding material for dental metal, dental ceramics, dental resin

**For intraoral repair of restorations** (metal, ceramics and resin). For Repairing hybrid resin or porcelain prosthesis apply Multi Primer first, then use TMR-AQUA BOND 0 and TMR-Z Fill 10.

Code	Description	Size	Qty
90701	Multi Primer Paste (2ml syringe)	2ml	1
90711	Multi Primer Liquid	7ml	1
90721	Multi Primer Repair Liquid One	6ml	1



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