

# **kuraray**

## TEETHMATE™ DESENSITIZER

Creating  
Hydroxyapatite

That's How You Treat Sensitivity



**KURARAY AMERICA, INC.**  
33 Maiden Ln, Suite 600D, New York, NY 10038  
800 879-1676 | kuraraydental.com  
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# THE HUMAN BODY THE POWER OF

## BIOCOMPATIBILITY

**TEETHMATE DESENSITIZER (TMD)** is composed of two different types of calcium phosphates which react under water to form Hydroxyapatite (HAp).

This product is free from glutaraldehyde, gluten, methacrylates and colophony resins; therefore, making it highly biocompatible with no gingival irritation.

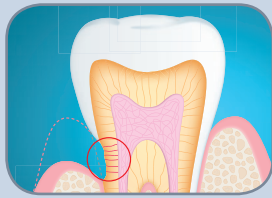
This mildly alkaline product is easy to apply (*Figure 1*) without any extra measures needed for isolation. TMD can be used safely in both children and adults.



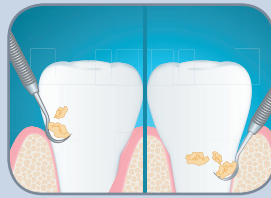
Figure 1: Application of **TEETHMATE DESENSITIZER** to treat cervical hypersensitivity.

## CAN BE USED FOR MOST SENSITIVITY CHALLENGES

This can be used in a wide variety of treatment approaches for treating sensitivity:



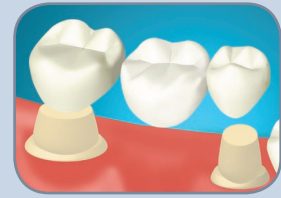
Exposed Dentin  
(Ex: Cervical Hypersensitivity)



Scaling/Root Planing



Before/After Bleaching



Dentin Prepared for Prosthesis

## SMART TECHNOLOGY\*

TMD actually crystallizes to form HAp, nicely sealing dentinal tubules and enamel cracks. The newly created HAp acts as if it were the patient's own. How is it possible to build HAp?

It's about the right calcium and phosphate ion ratio and the right pH combined with Kuraray Noritake Dental's special technology.



- Tetra calcium phosphate(TTCP)
- Dicalcium phosphate anhydrate(DCPA)
- H<sub>2</sub>O
- Others
- HAp

Figure 2: Schematic diagram showing reaction phases.

\* The fundamental HAp technology was developed by the ADAF (American Dental Association Foundation) - Paffenbarger Research Center. The basic manufacturing method was developed by Dr. Laurence C. Chow and Dr. Shozo Takagi in the research center and Dr. Akiyoshi Sugawara who practices as a dentist in Tokyo. Kuraray Noritake Dental modified the powder, manufacturing method, additives etc. to optimize the technology for desensitizer usage. Please refer to the literature below when you wish to find out more about this fundamental technology.

1. Brown, WE.; Chow, LC.: A new calcium phosphate setting cement. J Dent Res, 62, 672, 1983.

2. Sugawara, A.; Chow, LC.; Takagi, S.: An in vitro study of dentin hypersensitivity using calcium phosphate cement. J J Dent Mater, 8(2), 282-292, 1989.

# Y'S STRONGEST MINERAL NATURAL ELEMENTS

## EASY TO USE, IMMEDIATE RELIEF FROM SENSITIVITY

### No Air Blow



TMD is tolerant of the moisture in the oral cavity due to its unique hardening mechanism; no air blow required.

### No Light-Cure



Self-hardening of the calcium phosphates creates HAp without the use of a curing light.

### No Film Thickness



No side effects with the use of adhesives. TMD covers only the dentinal tubules or enamel cracks; there is no film thickness.

**TEETHMATE DESENSITIZER (TMD)** is easy to apply due to its high biocompatibility and does not require air-blow, or light-cure.

It has no film thickness and can be used easily under restorations.

As the calcium phosphate components harden quickly to form hydroxyapatite, relief from sensitivity is immediate.

## LONG TERM DURABILITY

HAp formation can be experimentally proven through XRD analysis (Figure 3). This formation contributes to long term durability.

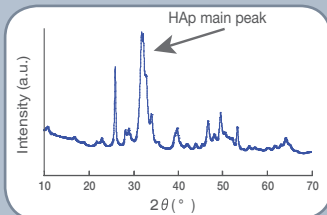


Figure 3: XRD Analysis confirms HAp formation.

Open dentinal tubules that were treated with TMD showed evidence of sealed tubules after 5 months storage in artificial saliva (Figure 4) in vitro.

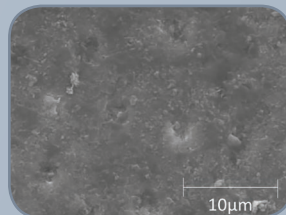


Figure 4: SEM Photo of Dentin Surface after 5 months storage in artificial saliva (37°C).

Data Source: Kuraray Noritake Dental Inc.

## NO INTERFERENCE WITH ADHESIVES

Application of TMD prior to application of adhesives does not reduce bond strength (Figure 5).

This is especially helpful for clinicians who are using etch and rinse adhesives.

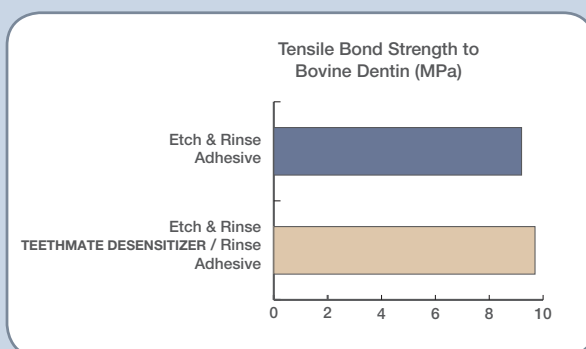


Figure 5. Influence on adhesive strength using Etch & Rinse Adhesives.

Data Source: Kuraray Noritake Dental Inc.

## DOES IT REALLY WORK?

# 92%\*

of dentists agree that **TEETHMATE DESENSITIZER** is very effective.

\*285 Japanese dentists already answered this question. 92% of the dentists said that **TEETHMATE DESENSITIZER** is very effective.



### Tips for the maximum performance;

Apply the paste more than 30 sec. with rubbing motion.

Repeat the application 2-3 times if the sensitivity is remaining.

This products does not damage tooth structure or gum, and has no film thickness.



## OPTIMUM TREATMENT OPTION

TEETHMATE™ DESENSITIZER (TMD) consists of a powder and liquid. We optimized delivery by using powder and liquid which are hydrophilic components. The product readily penetrates into the moist tooth structure

to occlude opened dentinal tubules or enamel cracks by forming hydroxyapatite (HAp) and usually does not require multiple treatments to achieve a therapeutic effect.

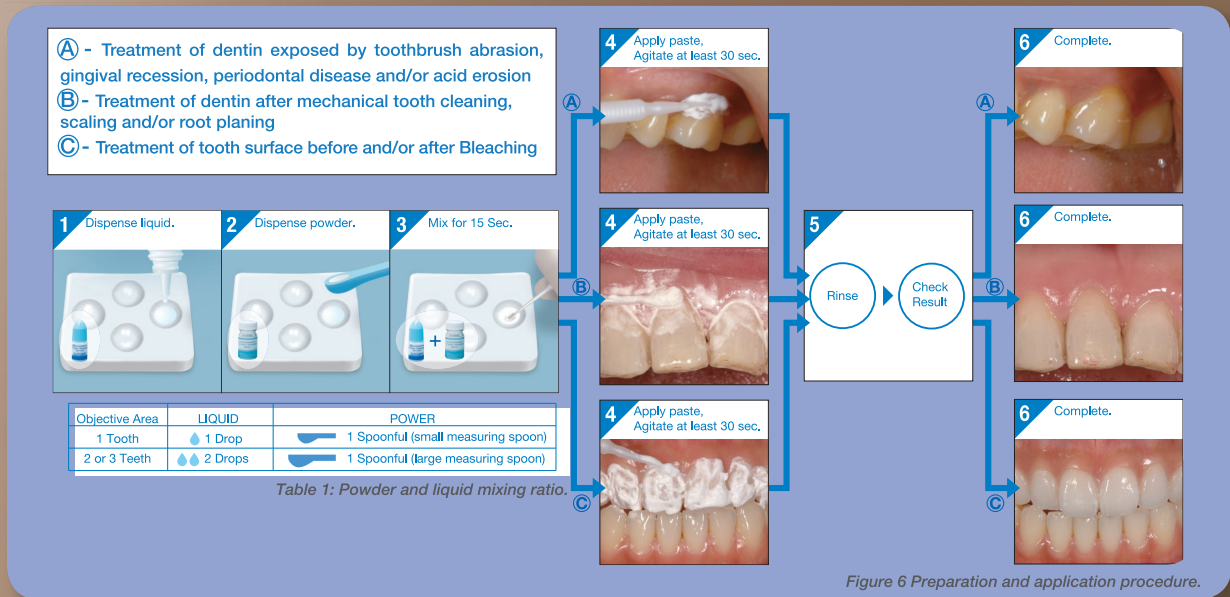


## EASY TO MIX AND APPLY TO ANY SURFACE

Application is easy. Clean the surface, saliva or plaque; hold the liquid container vertically and dispense the liquid (Figure 6);

add the powder in the correct ratio (Table 1) and mix with a micro-applicator. Rub the slurry into the treatment area for at

least 30s. Rinse and check for desensitizing effect.



## PRODUCT INFORMATION



### #1210KA

**TEETHMATE  
DESENSITIZER Set**  
1 x Powder (6g)  
1 x Liquid (4.8mL)

**Accessories :**  
1 x Mixing Dish  
1 x Measuring Spoon  
50 x Applicator Brush  
(superfine <white>)



**#1216KA  
TEETHMATE  
DESENSITIZER  
POWDER**

(6g)



**#1217KA  
TEETHMATE  
DESENSITIZER  
LIQUID**

(4.8mL)

Warranty: Kuraray Noritake Dental Inc. will replace any product that is proved to be defective. Neither Kuraray Noritake Dental Inc. nor the distributor accepts liability for any loss or damage, direct, consequential or special, arising out of the application or use of or the inability to use these products. Before using, the user should determine the suitability of the products for the intended use and the user assumes all risk and liability whatsoever in connection therein. TEETHMATE DESENSITIZER and Kuraray Noritake Dental Inc. products are available only through Kuraray Authorized dealers.

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Manufactured by Kuraray Noritake Dental Inc.  
1621 Sakazu, Kurashiki, Okayama 710-0801, Japan