## **kuraray**



# THE FUTURE IS HERE ... CREATE HYDROXYAPATITE

YOUR REAL SOLUTION FOR SENSITIVE TEETH ONLY WITH TEETHMATE™ DESENSITIZER

**TEETHMATE™ DESENSITIZER** 

#### CREATING HYDROXYAPATITE

That's how you treat sensitivity.

Imagine treating sensitive teeth effectively. And for the first time naturally. With TEETHMATE™ DESENSITIZER a revolutionary new natural material class has been born, which does just that. We designed TEETHMATE™ DESENSITIZER to create the human body's hardest mineral, hydroxyapatite (HAp)\*. It is created exactly where you need it, closing dentinal tubules and enamel cracks. And because it is natural, it is also tissue-friendly. So from now on, you can treat sensitivity with confidence.



#### TREATING DENTIN, ENAMEL AND EVEN PREPARED TEETH

Smart, Invisible, Durable,

Are you looking for a real solution for sensitivity? TEETHMATE™ DESENSITIZER provides just that. Use it to close exposed or prepared dentin. Directly treat your patients' teeth before and after bleaching. Or use TEETHMATE™ DESENSITIZER in combination with your favorite adhesive or cement. Thanks to the creation of HAp, your sensitivity treatment is now smart, invisible and durable.

#### THE HUMAN BODY'S STRONGEST MINERAL

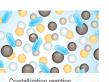
The power of natural elements.

TEETHMATE™ DESENSITIZER actually crystallizes HAp from the ground up, nicely sealing dentinal tubules and enamel cracks. The newly created HAp acts as if it were the patient's own. But how is it possible to build HAp? It's all about the right calcium and phosphate ion ratio and the right pH combined with Kuraray Noritake Dental's special technology.

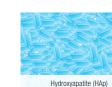
#### CRYSTALLIZATION







 $\bullet \bullet \to \mathsf{TTCP}^* \quad \to \mathsf{DCPA}^* \quad \longrightarrow \mathsf{water} \quad \bullet \bullet \to \mathsf{others} \quad \searrow \to \mathsf{HAp}$ 



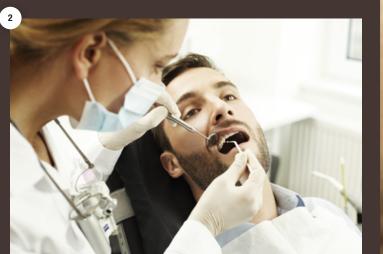
<sup>\*</sup> The fundamental HAp technology was developed by the ADAF (American Dental Association Foundation) -Paffenbarger Research Center. The basic manufacturing method was developed by Dr. Laurence C. Chow and Dr. Shozo Takagi in the research center and Dr. Akiyoshi Sugawara who practices as a 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.

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

<sup>2.</sup> 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.

<sup>\*</sup> TTCP: tetracalcium phosphate, DCPA: dicalcium phosphate anhydrous







#### YOUR PATIENTS WILL LOVE IT

Simply apply with ease.

The only thing you need to do is to apply it to one or more teeth. And what about protecting the gingiva? Our HAp is tissue friendly, so you don't have to worry about that. All you have to do is mix the powder and liquid, rub it onto the tooth and rinse it with water. Your patients will love the neutral taste and the invisible result. And most of all - your patients will enjoy their teeth again.

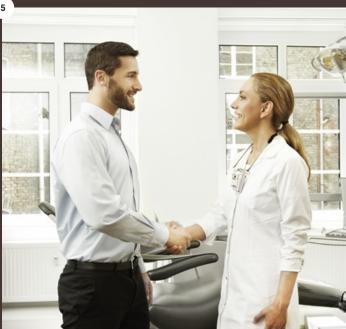
#### CLINICAL SPARKS - DR. TIM KOWALKE'S CASE\*

For Peter Williams\*\* wine tasting is not only about discovering new wines but also a good opportunity to regularly meet up with his wine friends. But for a year now, he has been a little reluctant to go to the wine tasting sessions. He really enjoys the wine tasting itself but suffers from intense tooth pain afterwards. After a thorough diagnosis, his dentist Dr. Tim Kowalke decides to treat Peter with TEETHMATE™ DESENSITIZER.

Dr. Tim Kowalke first cleans Peter's teeth. Before mixing, his assistant briefly shakes the powder loosely to get the right quantity, and holds the bottle vertically to get the ideal drop. Then his assistant mixes the powder and liquid for 15 seconds. Dr. Tim Kowalke rubs the mixture on the sensitive areas for 30 seconds followed by rinsing with a mild water flow.

And Peter can now really enjoy the wine tasting again.





<sup>\*</sup> The image pictures shown on page 4 and 5 are not related to "clinical sparks" story. Dr. Tim Kowalke is a German dentist in Frankfurt.

<sup>\*\*</sup> Peter Williams is not the real name of the patient.

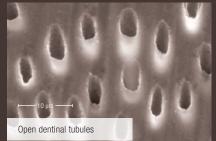
#### SCIENCE

Dr. Thanatvarakorn\* et al. showed the potential of TEETHMATE™ DESENSITIZER in a study. They concluded: "... Therefore, the calcium-phosphate-containing material is expected to be a new generation desensitizer promoting growth of the crystals, leading to long term stability in the oral environment."

Dr. Endo\*\* et al. concluded the following about TEETHMATE<sup>TM</sup> DESENSITIZER in their study: "... The results suggested that the application of TEETHMATE<sup>TM</sup> DESENSITIZER within the tubules was effective on inhibition of dentin demineralization. The obliteration of dentinal tubules by repeated application of TEETHMATE<sup>TM</sup> DESENSITIZER prevents demineralization and the occluded dentinal tubules reduce dentinal fluid movement with consequent clinical improvement of dentin hypersensitivity."

- \* Thanatvarakom, 0., et al. In vitro evaluation of dentinal hydraulic conductance and tubule sealing by a novel calcium—phosphate desensitizer.

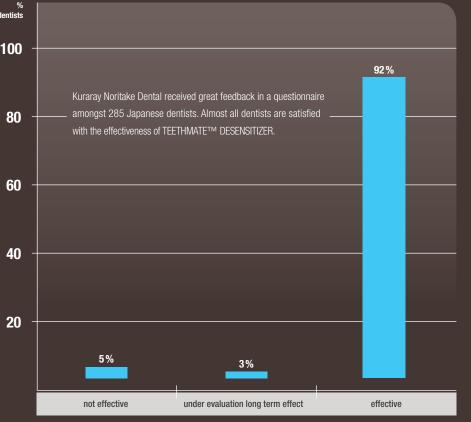
  J Biomed Mater Res, 101(2), 303-309, 2012.
- \*\* Endo, E., et al.: Evaluation of a calcium phosphate desensitizer using an ultrasonic device. Dent Mater J, 32(3), 456-461, 2013.





SEM pictures source: Kuraray Noritake Dental Inc.

#### **EFFECTIVENESS EVALUATION**



#### Questionnaire by Kuraray Noritake Dental Inc.

#### TECH SPECS

Wide indication range

- Treatment of dentin exposed by toothbrush abrasion, gingival recession, periodontal disease and/or acid erosion
- Treatment of dentin after mechanical tooth cleaning, scaling and/or root planing
- Treatment of the tooth surface before and after bleaching
- Treatment of prepared dentin for fillings and/or prosthetic restorations

Components Tetracalcium phosphate (TTCP), dicalcium

phosphate anhydrous (DCPA), water, others

Reaction pH Around 10

Amount of treatments per package 130 treatments

Max leaving time after mixing 10 minutes

Patients should avoid drinking and eating For 45 minutes after treatment

Bond strength with adhesives

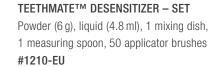
Bond strength with cements

Non-significant decrease or increase

Non-significant decrease or increase

#### ORDER INFO







Powder (1.2 g), liquid (1.0 ml), 1 mixing dish, 1 measuring spoon, 50 applicator brushes

TEETHMATE™ DESENSITIZER - INTRODUCTORY SET

#1215-EU



TEETHMATE™ DESENSITIZER – POWDER

Powder (6 g)

#1216-EU



TEETHMATE™ DESENSITIZER – LIQUID

Liquid (4.8 ml)

#1217-EU



1220 FII

#1220-EU

TEETHMATE™ DESENSITIZER – APPLICATOR BRUSH

50 applicator brushes

#1221-EU

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#### YOUR CONTACT

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