

# Ketac™ Nano

Light-Curing Glass Ionomer Restorative



An esthetic glass ionomer.  
Fewer steps. Faster treatment.

**3M** ESPE

# The innovative Quick Mix Capsule saves time, steps, and improves overall mixing results.

The revolutionary Quick Mix Capsule mixes the two pastes inside the tip.

- No hand mixing needed—which means less mess, less cleanup.
- Fewer voids.



**No measuring needed.**

Each unit-dose capsule contains the accurate amounts of the two pastes. It delivers the same amount of material as competitive unit-dose capsules.

**No trituration needed.**

**Dispensed directly into the preparation.**

The correct position of the tip for mixing and dispensing is extended straight out—not bent at an angle.

## Quick Mix Capsule: 3 Steps

**1** Lift nozzle on capsule



**2** Insert into applicator



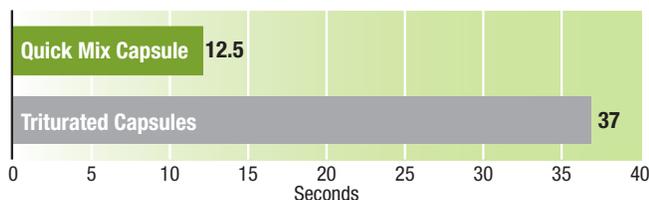
**3** Syringe slowly



## Triturated Capsule: 11 Steps

- 1 Shake capsule to loosen powder
- 2 Depress plunger on capsule
- 3 Insert into activator/applier
- 4 Click once to activate
- 5 Remove from applicator/activator
- 6 Insert into mixer
- 7 Mix for 10 seconds
- 8 Remove from mixer
- 9 Insert into applicator
- 10 Two clicks to prime
- 11 Syringe slowly

## Capsule Preparation Time



With significantly fewer steps, dental assistants find they can prepare the Quick Mix Capsule 3 times faster than a triturated capsule.

Source: 3M ESPE internal data

# Our nanotechnology makes a **better, more esthetic** glass ionomer.

## The first nano-ionomer.

Ketac™ Nano Light-Curing Glass Ionomer Restorative is the first paste/paste, resin-modified glass ionomer developed with nanotechnology. It blends nanotechnology originally developed for Filtek™ Supreme Universal Restorative WITH fluoraluminosilicate (FAS) technology.

Because nanofillers and nanoclusters add benefits not usually associated with glass ionomers—such as esthetics—it has resulted in a new category of glass ionomer restorative: the nano-ionomer.

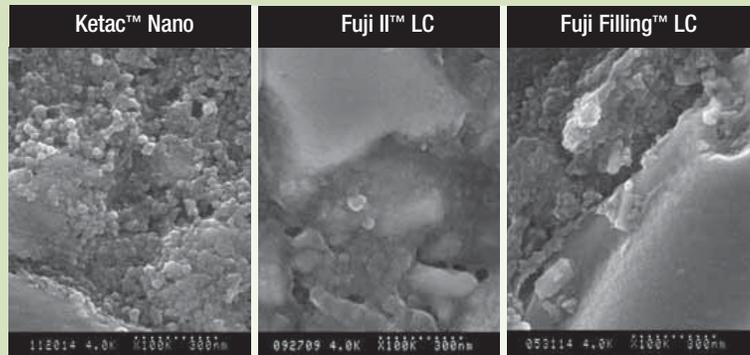
## The GI with a superb, natural-looking polish.

Glass ionomer restoratives can contain a broad range of particle sizes which influence:

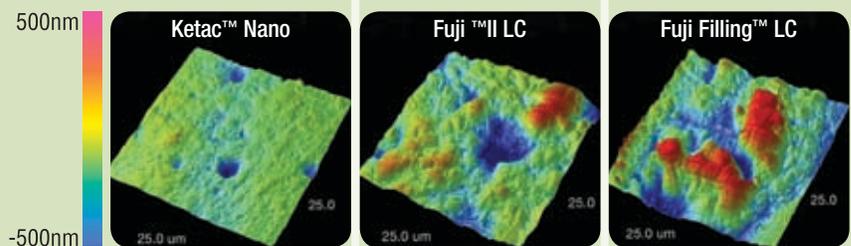
- Optical properties
- Strength and wear

**3M ESPE's nano-sized particles are more uniform in size, providing excellent polish.**

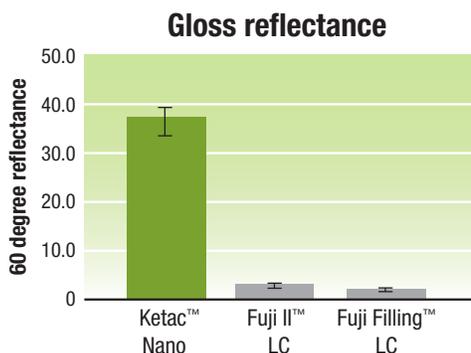
Tests show Ketac Nano restorative has higher initial polish than other RMGI filling materials.



In vitro studies demonstrate how the more uniform size of bonded nanofillers and nanoclusters found in Ketac Nano restorative results in enhanced polish and esthetics. SEM's of polished surfaces x100k.\*



Images taken under the Atomic Force Microscope compare surface roughness after polishing. Ketac™ Nano Light-Curing Glass Ionomer Restorative surfaces remain smooth. The color bar topographically distinguishes between the high peaks and lower valleys.\*



Rhpoint Novo-Curve Gloss Meter reflectance readings showed Ketac™ Nano Light-Curing Glass Ionomer Restorative having superb polish compared to Fuji II LC and Fuji Filling LC. Results illustrate improved esthetics and reduced surface roughness.\*



Photographic images of "reflectance after polishing" show Ketac™ Nano Light-Curing Glass Ionomer Restorative has an initial gloss that is superior to other resin-modified glass ionomers.\* All glass ionomers shown are Shade A2.

\*Source: 3M ESPE internal data

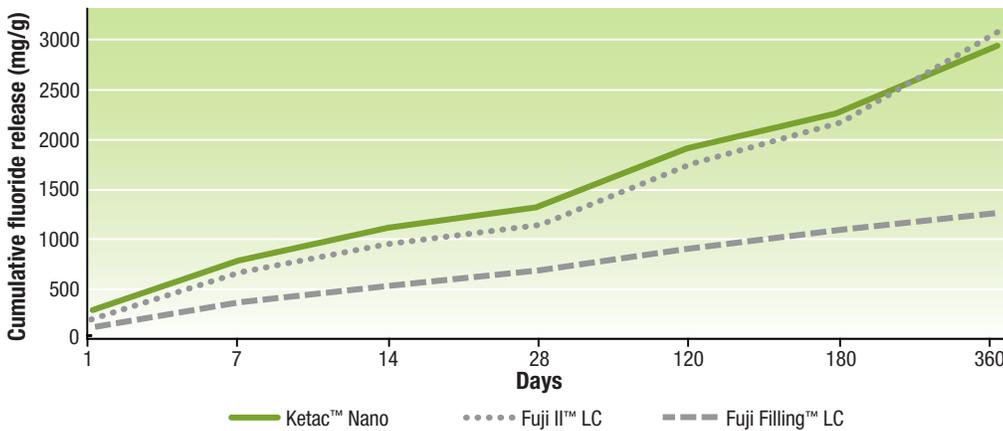
# Our nano-ionomer offers improved esthetics, yet still provides fluoride release.

Fast, easy-to-use, fluoride-releasing glass ionomers are an important part of everyday dentistry. When tested against other leading resin-modified glass ionomers, Ketac Nano restorative proves to be an excellent choice for fluoride release. In vitro tests show it also **has the ability to recharge the fluoride release** after application of a topical fluoride source.



An esthetically-pleasing Class V restoration using Ketac™ Nano Light-Curing Glass Ionomer Restorative. Photo courtesy of Dr. Gunnar Reich.

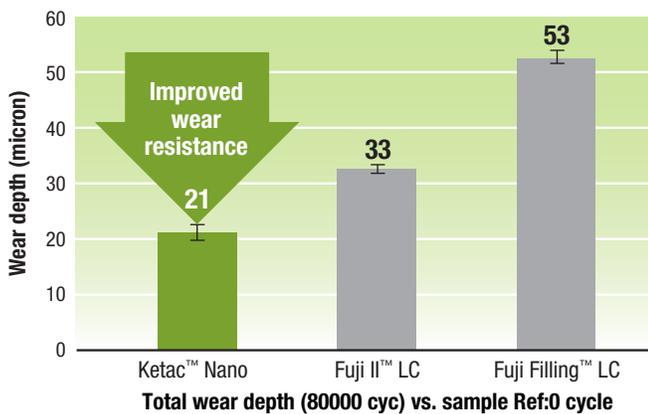
Fluoride Release (ppm F/g)



Fluoride uptake in enamel has been known to have a caries preventive effect. Ketac™ Nano Light-Curing Glass Ionomer Restorative shows high fluoride release.\*

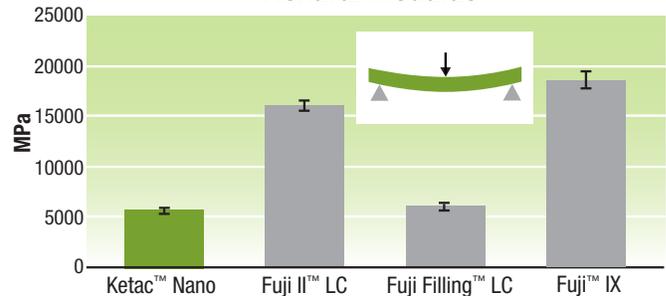
## Ketac Nano restorations not only look great, but perform well, too.

Low Wear



When tested against competitive resin-modified glass ionomers, Ketac™ Nano Light-Curing Glass Ionomer Restorative showed lower wear, making it an ideal glass ionomer solution in posterior applications.

Flexural Modulus



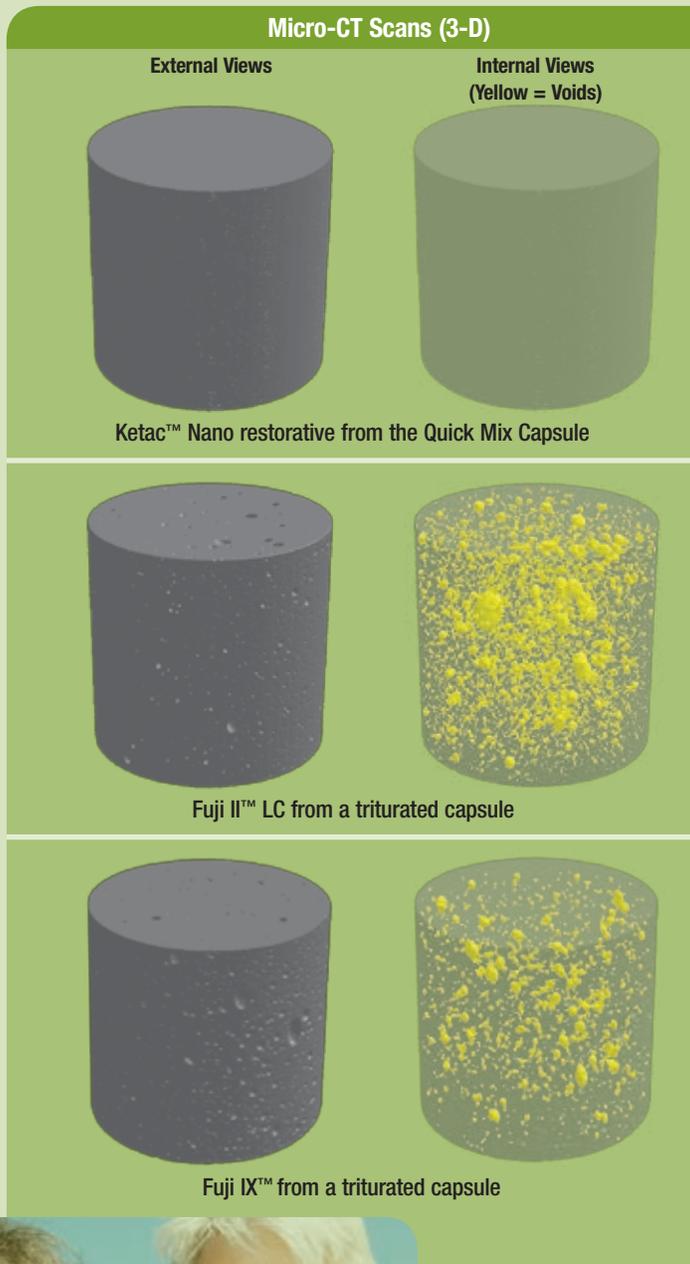
Historically, glass ionomers have the reputation of being a brittle material. Ketac™ Nano Light-Curing Glass Ionomer Restorative exhibits a low flexural modulus—so is less brittle—than the leading resin-modified and conventional glass ionomers.\*

\*Source: 3M ESPE internal data

# Fewer voids from a Quick Mix Capsule than a triturated capsule.

Porosity may lead to reduced physical properties.\*\* Optical images from a micro-CT scan evaluation demonstrates **Ketac Nano restorative—dispensed from the Quick Mix Capsule—contained significantly fewer voids** than both Fuji II LC and Fuji IX material dispensed from a triturated capsule. External views on the LEFT show surface roughness as it correlates to material voids. Yellow areas in the internal views on the RIGHT indicate actual voids in the material.\*

**60%** of dentists (n = 120) who used the Quick Mix Capsule in their practice noted fewer voids in their restorations.\*



## Summary of advantages

### Innovative nano-ionomer

- The first paste/paste RMGI restorative based on bonded nanofiller technology
- Esthetic glass ionomer restorative
- High fluoride release
- Improved wear resistance
- Light cure on demand
- Radiopaque
- Available in 5 shades: A1, A2, A3, A3.5, B2

### Innovative dispensers

- Automatic mixing for fast dispensing from the unit-dose Quick Mix Capsule
- Also available in our 40-dose Clicker™ Dispenser



For situations where **esthetics** and **fluoride release** are important, you can feel confident using Ketac Nano Light-Curing Glass Ionomer Restorative.

\*Source: 3M ESPE internal data

\*\*Source: John F. McCabe, et al, *Dental Materials* (2004) 20, 972-978.

# Ketac™ Nano Light-Curing Glass Ionomer Restorative is an esthetic alternative to glass ionomers—an important part of everyday dentistry.

“In my practice, Ketac Nano is the glass ionomer of choice for patients ranging from pediatric to geriatric.”

—Dr. Joe Blaes, *Pearls for Your Practice*, September 2007, *Dental Economics*

“... replicates tooth texture and color at a much higher level than other glass ionomer cements ...”

—Dr. Theodore P. Croll, *The Nano Advantage*, Renee Knight *Dental Products Report* Online Edition, 2008



Ketac™ Nano Light-Curing Glass Ionomer Restorative Trial Kit (3305TK)

## Ordering Information

Item #	Product Information
3305TK	<b>Ketac™ Nano Light-Curing Glass Ionomer Restorative Trial Kit—Quick Mix Capsule</b> Kit includes: 10 – A2 Quick Mix Capsules; 10 – A3 Quick Mix Capsules; Primer (6.5ml); Instructions; Technique Guide

### Ketac™ Nano Light-Curing Glass Ionomer Restorative Refills

1 Quick Mix Capsule refill = 20 capsules

Shade	Quick Mix Capsule Item #
A1	3305A1
A2	3305A2
A3	3305A3
A3.5	3305A3.5
B2	3305B2

### 3304P Ketac™ Nano Light-Curing Glass Ionomer Restorative Primer

1 – 6.5ml Vial Primer

Item #	Product Information
3304TK	<b>Ketac™ Nano Light-Curing Glass Ionomer Restorative Trial Kit—Clicker Dispenser</b> Kit includes: 1 – 12g Clicker Dispenser A2; Primer (6.5ml); 10 Delivery Tips with pistons; Instructions; Technique Guide

### 3304I Ketac™ Nano Light-Curing Glass Ionomer Restorative Introductory Kit—Clicker Dispenser

Kit includes: 1 – 12g Clicker™ Dispenser A1; 1 – 12g Clicker Dispenser A3; Primer (6.5ml); 50 Delivery Tips with pistons; Mixing Pad; 50 Fiber Tips; 1 Applicator Handle; 48 Disposable Mixing Wells; Shade Guide; Instructions; Technique Guide

### Ketac™ Nano Light-Curing Glass Ionomer Restorative Refills

1 – 12g Clicker Dispenser refill = 40 applications

Shade	Clicker Dispenser Item #
A1	3304A1
A2	3304A2
A3	3304A3
A3.5	3304A3.5
B2	3304B2

Customer Care Center: 1-800-634-2249 [www.3MESPE.com/KetacNano](http://www.3MESPE.com/KetacNano)

**3M ESPE**

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