

# Ketac<sup>®</sup> Molar Easymix

## Glass Ionomer Restorative Material – Radiopaque

## Glasionomer Füllungsmaterial – Röntgenzichtig

## Matériau de obturation vitro-ionomère – radiopaque

## Materiale per obturazione in ionomero vetro – radiopaque

## Material de obturación de ionomero de vidrio – radiopaque

## Material para obturação de ionomero vitro – radiopaque

## Glasionomer vulmateriaal – röntgenzichtbaar

## γαιόκονομέρες εμφρακτικό υλικό – ρöntgenozichtbaar

## Glasionomer-füllingsmaterial – röntgenopak

## Las-ionomeroipinneten täytämateriaali – röntgenopaakki

## Glasionomer fyllingsmaterial – radiopaque

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At higher temperatures, the time available for processing is shortened while it is prolonged at lower temperatures than indicated (e.g., mixing on a chilled glass slab). The processing time is also shortened if the amount of powder exceeds the recommendation. Exceeding the indicated processing time leads to reduced bond to enamel and dentin.

**Dosing**  
The mixing ratio by weight is 4.5 parts powder (1 level spoonful) to 1 part liquid (1 drop).

**Conventional filling therapy and A.R.T. technique:**  
▶ Wipe the cavity by shaking the bottle.  
▶ Dip the enclosed spoon into the powder and use the plastic scraper at the bottle opening to level it off. Avoid compressing the powder.  
▶ Dose a sufficient amount of powder into a well.  
▶ Hold the bottle of liquid in a vertical position and dose the appropriate number of drops for the amount of powder used to the powder.  
▶ There must not be any dried residue of the liquid on the nozzle, and the drops must not contain any bubbles.  
▶ Carefully re-close both bottles after use and ensure that no powder residue remains on the plastic scraper of the powder bottle.

**Mixing**  
Conventional filling therapy and A.R.T. technique:  
▶ Process Ketac Molar Easymix at room temperature (20-25°C/68-77°F).  
▶ Use a metal or plastic spatula and a mixing pad or glass slab for mixing.  
▶ The powder should be transferred into the liquid in not more than two portions.  
▶ Spread the paste repeatedly until the consistency is homogeneous.  
▶ **Mixture can have a negative effect on the properties of the glass ionomer cement. If a homogeneous paste is not obtained with the given mixing ratios, discard the material.**

**Application**  
Apply any and all contamination from water, saliva, etc. and keep the working area dry during the entire time of application and shaping.

**Conventional filling therapy:**  
▶ Apply Ketac Molar Easymix in several portions using a suitable instrument. Undercuts may need to be treated first.  
▶ Remove excess Ketac Molar Easymix with enamel undercuts.  
A.R.T. technique:  
▶ Apply Ketac Molar Easymix in several portions using a suitable instrument. Undercuts may need to be treated first.  
▶ Carefully avoid trapping air bubbles under enamel undercuts.  
▶ Slightly overfill cavities; apply the material to adjacent grooves and fissures.  
▶ Apply a small amount of Vaseline to your fingertip and use this finger to firmly press the glass ionomer cement into the cavity. Ketac Molar Easymix is available in A3 shade based on the VITA Classical color system.

**Finishing**  
Conventional filling therapy:  
▶ Beginning no earlier than 5 minutes after the start of mixing, use Arkansas stone, fine-grain diamonds, polishing discs of decreasing grain size, or silicone polishes for finishing.  
▶ If desired, apply Vaseline again for surface sealing.  
▶ The patient must not trap air bubbles under enamel undercuts.  
A.R.T. technique:  
▶ Remove any excess material with a carver or large excavator as soon as possible without pulling the material from the cavity.  
▶ Before the filling material is completely cured, test the occlusion with your articulation paper.  
▶ Apply more Vaseline to the working areas to protect the restoration. The patient must not expose the filling to any pressure for 1 hour!

**Notes**  
The material bonds to metal instruments. Residual quantities of the cement should be removed with water before they set on the instrument.  
**Storage and Shelflife**  
Store the product at 15-25°C/59-77°F.  
**To protect the powder from moisture, do not open the powder bag until immediately prior to the first application.**  
Replace the cap securely after use.

**Precautions**  
3M MSDS can be obtained from www.mm.com, or contact your local subsidiary.

**Precautions During Processing**  
Only Ketac Molar Easymix Liquid should be used to process Ketac Molar Easymix. Do not use water or other liquids to dilute Ketac Molar Easymix. Use only the liquid that will alter the concentration of acid in the filling material. This may result in post-operative sensitivity. In addition, the mechanical properties of the material will be impaired and strength will be altered.

**Steps Prior to Preparation**  
Conventional filling therapy and A.R.T. technique:  
▶ Keep hands dry and required instruments and materials.  
▶ In the case of multi-surface fillings, place a matrix band to protect neighboring teeth and simply contour shaping.  
Especially in the A.R.T. technique:  
▶ A minimal set of instruments should include: dental mirror, probe, tweezers, excavators (large, medium, small, modeling instrument, fine-grain shaped cutting instrument), mixing spatula, mixing pad, a matrix band (if required), cotton rolls, cotton pellets, water cup (sterilizable or disposable). This basic set can be supplemented with additional instruments depending on the available financial resources and/or operator's ability.  
▶ Prior to commencing preparation, the working area should be thoroughly cleaned and dried. This renders discolored, demineralized enamel easy to recognize and treat.  
▶ If a matrix is available during treatment, the working area must be kept dry with repeated changes of cotton rolls.

**Cavity Preparation**  
Conventional filling therapy:  
▶ Remove only the carious substance; no undercuts required.  
▶ Do not prepare thin edges since the material requires a minimal wall thickness of 0.5 mm!  
▶ Clean the cavity with water and dry with air.  
A.R.T. technique:  
▶ Extend the cavity with small cavities with a dental hatchet or carver to gain better access. As a consequence, an enamel jetting until wall break off and sufficient space for access of the smallest manual excavator is created.  
▶ Commencing at the enamel-dentin junction, Ketac Molar Easymix Liquid to the prepared surfaces and allowing the substance(s) to react for 10 sec.  
▶ Then rinse with copious amounts of water and blow dry in only 2-3 short bursts.  
▶ The cavity should have a **mattny appearance**. Excessive drying can result in post-operative sensitivity after filling.

**Preparation**  
Ketac Molar Easymix Powder for use in the A.R.T. technique (Armatum Restorative Treatment):  
▶ Ketac Molar Easymix is available in A3 shade based on the VITA Classical color system.

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Inbesondere bei A.R.T. Technik: Mindestens notwendige Instrumente und Materialien sind: Mundspiegel, Sonde, Pinzette, großer, mittlerer und kleiner Excavator, beifingiges Schneideinstrument (Gingivalfänger), Modelliermesser/-instrument, Armatumspatze, Armatumspatze, Armatumspatze, Armatumspatze, Armatumspatze, Armatumspatze (sterilisierbar oder Einwegbecher). Je nach Ausstattung der Praxis und den örtlichen Gegebenheiten kann diese Grundausstattung erweitert werden.

**Dosierung**  
Die Mischungsverhältnisse sind 4,5 Teile Pulver (1 gestrichener Löffel) zu 1 Teil Flüssigkeit (1 Tropfen).

**Verarbeitung**  
Traditionelle Fülltherapie und A.R.T. Technik:  
▶ Warten Sie auf das Schließen der Flasche, indem Sie den Löffel über die Öffnung steift, durch mehrfaches Wechseln der Watterollen das Arbeitsfeld trocken halten.

**Kavitäten-Präparation**  
Herkömmliche Fülltherapie:  
▶ Nur kleine Zahnräume entfernen, Längsschnitts sind nicht notwendig.  
▶ Keine dünnen ausstehenden Ränder präparieren, für das Material muss eine Wandstärke von 0,5 mm gewährleistet sein.  
▶ Die Kavität mit Wasser reinigen und mit Luft trocknen.

**A.R.T. Technik:**  
▶ Bei kleinen Kavitätformen mit einem Dentalmetall- oder Gingivalfänger, bei größeren Zungen mit einer Kavität erweitern. Dadurch bricht nicht unterstütztes Schmelz aus und der Zugang für den kleinsten Handexcavator wird geschaffen.  
▶ An der Schmelz-Dentin-Grenze beginnend, kleinsten Dentin mit dem kleinsten Handexcavator durch kreisförmige abschabende Bewegungen, vollständig bis zur Kavität entfernen. Dabei überhängendes, nicht unterstütztes Schmelz ebenfalls wegschneiden.  
▶ Anschließend den Kavitätflächen freiräumen.  
▶ Bei tiefen Kavitäten den gingivären Excavator und geringen Druck anwenden, um die Pulpa nicht durch punktförmigen Druck verschoben zu drohen!

**Finishing**  
Traditionelle Fülltherapie und A.R.T. Technik:  
▶ Beginnen Sie nicht früher als 5 Minuten nach dem Mischen der Mischung mit dem feinsten Calciumhydroxid-Präparat abgedeckt werden, um Irritationen der Pulpa zu vermeiden.  
**Konditionierung**  
Herkömmliche Fülltherapie und A.R.T. Technik:  
▶ Die bei der Präparation entstandene Schmelzschicht gründlich entfernen, um eine optimale chemische Haftung an der Zahnoberfläche zu gewährleisten.  
▶ Direkt vor dem Auftragen des Füllmaterials die Kavität mit Wasser reinigen und in nur 2-3 kurzen Intervallen trocken tupfen.  
▶ Anschließend gründlich mit Wasser spülen und in nur 2-3 kurzen Intervallen trocken tupfen.  
▶ Erneute Kontamination vermeiden, anderfalls die Konditionierung wiederholen.

**Zeitplan**  
Bei 23°C/73°F Raumtemperatur und 50% rel. Luftfeuchtigkeit gelten folgende Zeiten:  
Mischen: 00:30  
Verarbeiten ab Mischbeginn: 03:00  
Bindung ab Mischbeginn: 05:00

Höhere Temperaturen verkürzen, niedrigere Temperaturen verlängern die Verarbeitungszeit (z.B. Armatum auf einer gekühlten Glasplatte). Eine höhere Temperatur beschleunigt die Verarbeitungszeit, während eine niedrigere Temperatur die Verarbeitungszeit verlängert (z.B. Armatum auf einem kalten Metallblech).  
Die Pulpa wird durch punktförmigen Druck verschoben und droht zu extrudieren!

**Dosierung**  
Das Mischverhältnis beträgt nach Gewicht 4,5 Teile Pulver (1 gestrichener Löffel) : 1 Teil Flüssigkeit (1 Tropfen).

**Herstellung**  
Herkömmliche Fülltherapie und A.R.T. Technik:  
▶ Ketac Molar Easymix bei Raumtemperatur (20-25°C/68-77°F) zubereiten.  
▶ Das Pulver mit dem belagenden Löffel entnehmen und den Löffel am Plastik-anschlag abstreifen, das Pulver nicht comprimieren.  
▶ Das Pulver in einem kleinen Behälter abgeben, eventuell eine Matrix, ein rotes Wachsmodell, ein Kautschukmodell oder ein Kautschukmodell verwenden.  
▶ Die Fläche der Kavität senkrecht halten und die Pulvaermenge passende Anzahl Tropfen nehmen das Pulver dosieren.  
▶ Die Tropfen langsam auf die Kavität auftragen, bis die Kavität vollständig gefüllt ist. Ketac Molar Easymix Flüssigkeit auf die präparierten Flächen auftragen und 10 sec einwirken lassen.

**Verarbeitung**  
Traditionelle Fülltherapie und A.R.T. Technik:  
▶ Die Kavität mit Wasser reinigen und trocken tupfen.  
▶ An der Schmelz-Dentin-Grenze beginnend, kleinsten Dentin mit dem kleinsten Handexcavator durch kreisförmige abschabende Bewegungen, vollständig bis zur Kavität entfernen. Dabei überhängendes, nicht unterstütztes Schmelz ebenfalls wegschneiden.  
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