

Stability
from the inside

DeltaFil



Handmix



Confirmed GIC benefits + innovative technology = **DeltaFil**

Glass ionomer cements offer numerous advantages and have an established presence in dental practices with good reason. These cements are particularly suitable for specific patient groups such as children and senior citizens, as their special requirements can be optimally fulfilled. Until now, however, the use of these materials has been limited on the grounds of mechanical properties, such as abrasion behaviour and aesthetics.

DeltaFil is a GIC based on an innovative technology – elastomeric micelle technology (EMT). Elastomeric micelles are dispersed within the GIC, increasing fracture toughness and thereby strengthening the cement. This results in greater resistance of the restorations without affecting biocompatibility and fluoride release.



DeltaFil: New possibilities thanks to elastomeric micelles

DeltaFil is an innovative new glass ionomer cement with EMT

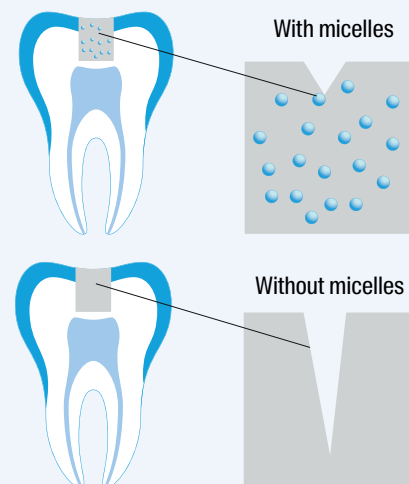
Its defining feature: elastomeric micelles incorporated into the material prevent cracks from developing.

In addition to increased stability, the patent-pending micelle technology developed by DMG also ensures particularly easy handling, similar to that of composites.

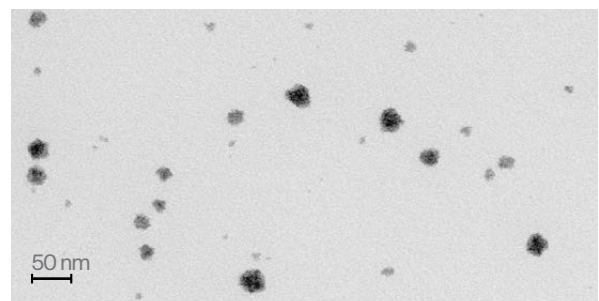
Easy and fast application

- Simple to mould
- Does not stick to the instrument
- Perfect adaption to the cavity wall
- Optimised consistency
- Conducive working time
- Excellent setting behaviour
- Suitable for use with metal matrices

Minimal development of cracks thanks to micelle technology



Elastomeric micelles minimise the development of cracks in the filling material.



Transmission electron microscope (TEM) image of a DeltaFil micelle suspension. Staining to increase contrast.

Source: Copyright Fraunhofer IMWS, Feb. 2021, data not published.
Patent submission 2019 (WO2019/185175 A1)

DeltaFil: New possibilities

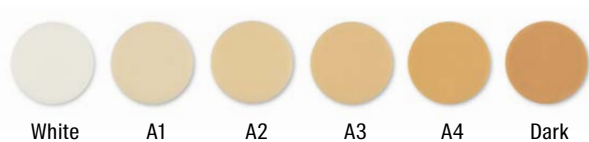
The versatile glass ionomer cement

DeltaFil benefits

- Increased flexural strength and fracture toughness thanks to innovative micelle technology
- Natural surface shine without protective varnish
- Easy to use, no drying necessary
- Promotes remineralisation through fluoride release
- Self-adhesive
- Excellent biocompatibility
- Suitable for atraumatic restorative treatment (ART)
- Range of shades adapted to specific patient groups

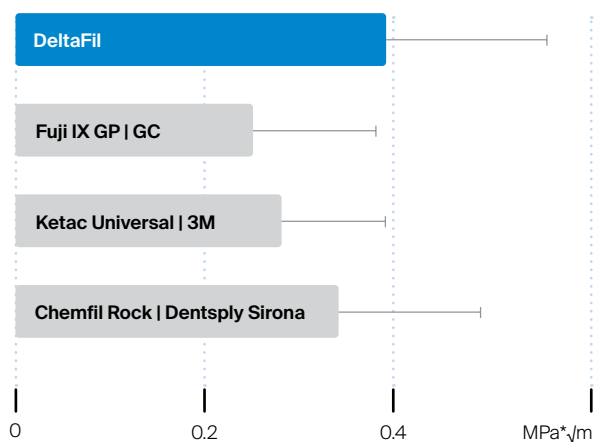
Optimal aesthetics and an extensive selection of shades

- **White:** Ideal for the treatment of primary and bleached teeth
- **Dark:** Ideal for the treatment of older patients whose teeth may be severely discoloured



DeltaFil displays optimal aesthetics and is extremely versatile due to the practical selection of shades available.

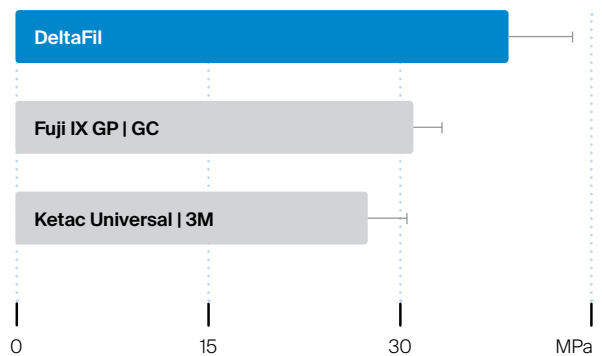
Fracture toughness



Compared to all other materials tested, DeltaFil achieves the highest fracture toughness.

Source: Ilie et al., LMU Klinikum, March 2020. Data not published.

Flexural strength



In this category, DeltaFil achieves the highest flexural strength of all materials tested.

Source: Irie et al., Okayama University, August 2020. Data not published.

Technical data

Mixing time [s]	30
Max. extraoral working time [s]	120
Net intraoral setting time [s]	240
Start time for finishing, from the start of mixing [s]	360
Compressive strength 24 h/7 d [MPa]	189 ± 14/ 210 ± 14
Acid erosion [mm]	0.067 ± 0.001
Opacity/C _{0.7}	0.82
Radiopacity [% Al]	228 ± 4

Indications

- ↗ Class I, II, III and V restorations of primary teeth
- ↗ Class I and II restorations not subject to occlusal load; sandwich technique
- ↗ Class V restorations; sandwich technique
- ↗ Class I, II, III and V temporary restorations
- ↗ Extended fissure sealing
- ↗ Base and liner
- ↗ Core build-up



Product overview

DeltaFil

Handmix

Starter Pack:	1 Bottle @ 15 g powder, 1 bottle @ 7.5 ml liquid, Mixing pad, measuring spoon
Shade White	REF 520045
Shade A1	REF 520030
Shade A2	REF 520031
Shade A3	REF 520032
Shade A4	REF 520034
Shade dark	REF 520046

Handmix

Refill pack:	1 Bottle @ 15 g powder, measuring spoon
Shade White	REF 520047
Shade A1	REF 520035
Shade A2	REF 520036
Shade A3	REF 520037
Shade A4	REF 520039
Shade dark	REF 520048

Accessories:

1 Bottle @ 7.5 ml liquid	REF 520040
1 Mixing pad	REF 520041

DeltaFil Conditioner

Packaging:	1 Bottle @ 7.7 ml	REF 520020
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**A smile ahead
together**



DMG

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