

And the winner is: Visalys[®] Temp.

The strong temporary crown and bridge material.



Kettenbach: Trend-setting in Dental and Medical

Being one of the leading suppliers in the market Kettenbach develops, produces and markets medical products of the highest quality in the fields of dentistry and medicine. Dentists, doctors and patients have profited for over 65 years from innovations made by Kettenbach. Kettenbach is the specialist for dental impressions. Product ranges such as Futar®, Panasil®, Silginat® or Identium® set new standards worldwide with regard to precision and user-friendliness.

Following intensive development, Kettenbach is now extending its range by a new product category. The requirement here is also to provide the highest product quality and maximum customer benefit. Temporary restorations fabricated using Visalys® Temp are exceptionally stable and fracture resistant due to their monomer structure. Simply intelligent.



For strong crowns and bridges: Visalys® Temp

The high fracture stability of a temporary crown or bridge is an essential criterion for the quality of the material. Before developing Visalys® Temp Kettenbach had already defined six parameters crucial for the stability and fracture resistance of a temporary restoration:

- Impact strength
- Flexural strength
- Diametral tensile strength
- E-Modulus
- Abrasion
- Fatigue limit

As measurements in the laboratory alone are not adequate, dentists were asked by a market research institute to use and then evaluate Visalys® Temp during their daily routine in the practice. The result is impressive: temporary crowns and bridges fabricated using Visalys® Temp fracture noticeably less often than temporary restorations made from other materials.

Stable is good – but not good enough. Visalys® Temp is therefore particularly easy to use and is ideal for temporary restorations, which are intended to meet the highest aesthetic demands. Visalys® Temp is also bisphenol A-free.

The advantages at a glance:

Easy application

- Smooth surface and high luster without polishing: time-saving – polishing can be omitted or greatly reduced.
- Minimal smear layer: the temporary restoration is more pleasant to handle after removal from the impression.
- Can be trimmed precisely: easy finishing of the temporary restoration, minimal dust generation.
- Easy to apply: Visalys® Temp flows ideally and is firm enough to prevent it running uncontrollably.

Exceptional stability

- Considerably fewer repairs: less time-consuming, satisfied patients.
- Also suitable as a long-term temporary restoration (> 4 weeks).
- Temporary restorations fracture less often during removal and re-fitting.

High-quality esthetics

- Translucency and opalescence similar to that of a natural tooth ensure optimal integration in the existing dentition due to the chameleon effect.
- Natural fluorescence.
- Also suitable for particularly high-quality esthetic anterior temporary restorations.

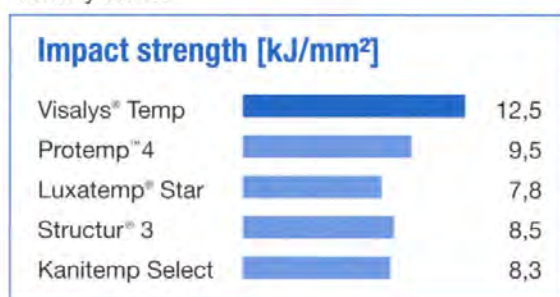
Bisphenol A-free

- No health effects on the treating dentist or patient by exposure to Bisphenol A.

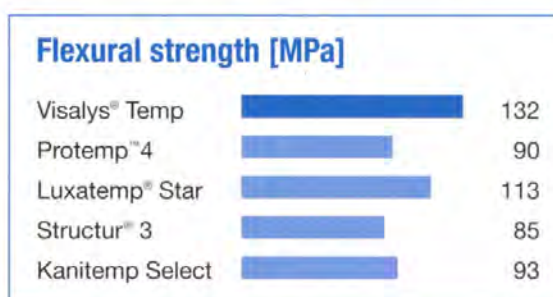


The result: exceptionally stable

High flexural strength combined with high impact strength reduces the risk of the temporary restoration fracturing in the mouth as a result of high or sudden masticatory loading – e.g. when biting unexpectedly on a cherry stone.

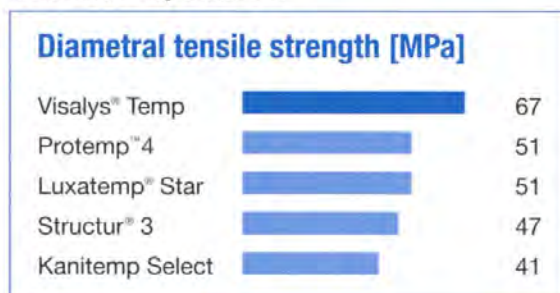


Measurement at the University of Erlangen, Germany, according to DIN EN ISO 179, DIN 53453



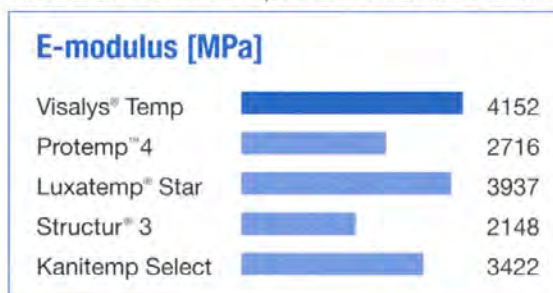
Internal measurements Kettenbach, according to DIN EN ISO 10477 (Feed rate: 1 mm/min)

The higher the diametral tensile strength, the lower the risk that, e.g. the margins of the temporary restoration may break off.



Internal measurements Kettenbach, according to ADA Specification No. 27:76

A high E-modulus means that the temporary restoration is resistant to deformation and reliably conserves the intraoral situation until the permanent restoration is fitted.



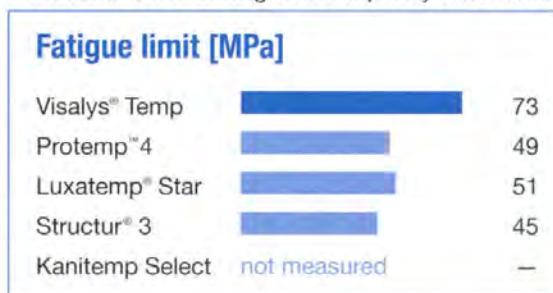
Internal measurements Kettenbach, test set-up according to DIN EN ISO 10477

The lower the abrasion, the less wear on the temporary restoration under masticatory loading over time.



Measurement at the University of Erlangen, Germany, according to ISO/TS 14569-2

The higher the fatigue limit, the more the material remains fracture resistant, even with ageing, and the more suitable it is for long-term temporary restorations.



Datz S, Dasch W, Petschelt A: "Fatigue behavior of selected provisional crown and bridge materials", Poster contribution PER/IADR, Helsinki, 2012

The tooth: fully protected

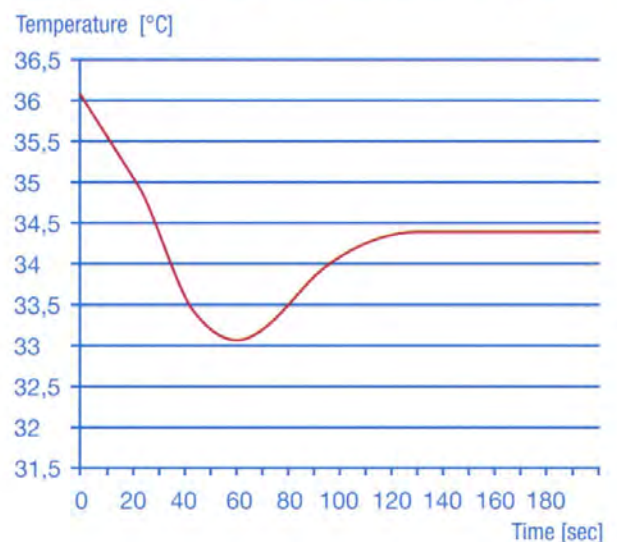
Visalys® Temp protects the pulp – Smooth surfaces virtually prevent biofilm/plaque build-up.

Visalys® Temp was put to the test in a clinically oriented test.

Test conditions: Visalys® Temp and the impression were stored at room temperature (20 °C). Visalys® Temp was applied at 36°C with an impression to a prepared human molar (stored at 36°C) with a retrograde excavated pulp chamber and fitted temperature sensor.

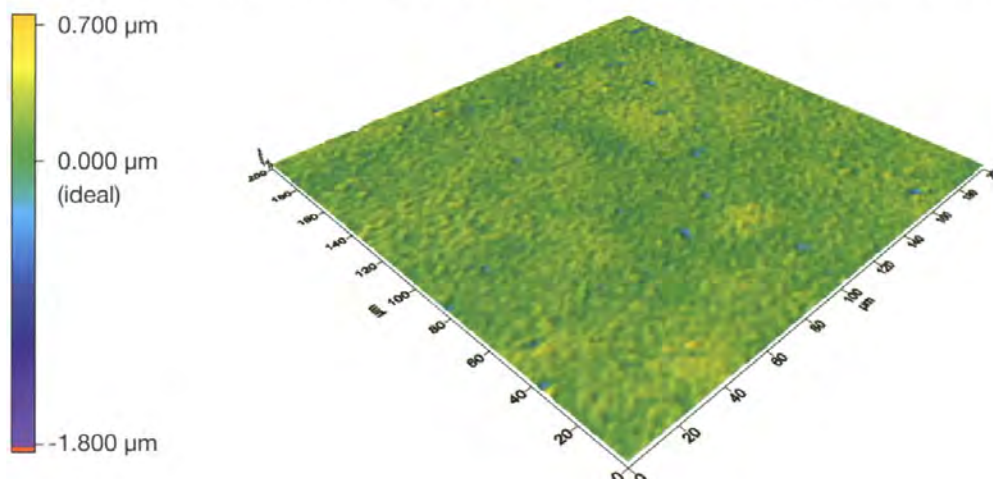
The temperature in the pulp chamber dropped initially when the Visalys® Temp, stored at room temperature, and impression material were applied. The temperature then increased slightly during setting of the Visalys® Temp, but it did not reach the initial temperature of 36°C, even after three minutes. Conclusion: The heat created during the setting of Visalys® Temp does not pose a threat to the pulp.

Temperature in the pulp chamber [°C] ■



Microscope image – the difference is in the detail.

3D-image from the University of Erlangen of the non-polished Visalys® Temp surface in an optical profilometer. The uniform, level structure produces a high luster without polishing and hinders the accumulation of plaque.



The opinions: convincing

In a market study* 30 dentists, who currently use either Protemp™ 4 (3M Espe) or Luxatemp® (DMG), were asked by a market research institute to test Visalys® Temp in vivo and the two materials were then evaluated in comparison with each other.

The results:

How do you evaluate the fracture resistance/stability of the temporary restoration in situ?



How do you evaluate the possibility of fitting the temporary restoration a second time?



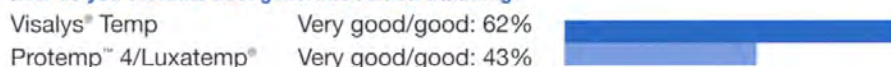
How do you evaluate the luster of the temporary restoration without polishing?



How do you evaluate the trimability of the temporary restoration?



How do you evaluate dust generation when trimming?



How do you evaluate the thickness of the smear layer after removal from the impression?



How do you evaluate the shade stability of the temporary restoration in situ?



Would you change to Visalys® Temp in future?



*iConsult, Munich, Germany, 2012, data available at Kettenbach



All in all: Simply intelligent



The range

| | | |
|-------|--------------------------------------|--|
| 13780 | Visalys® Temp - shade A1 | |
| 13781 | Visalys® Temp - shade A2 | 1 x 50 ml cartridge, 15 mixing tips |
| 13782 | Visalys® Temp - shade A3 | |
| 13785 | Visalys® Temp - Intro pack, shade A3 | Applyfix® 6 dispensing gun, 1 x 50 ml cartridge, 15 mixing tips |
| 13789 | Visalys® Temp - 50 mixing tips | |
| 17208 | Applyfix® 6 dispensing gun | |

Match Visalys® Temp ideally: Silginat® and Multi-Trays

Silginat® and, depending on the indication, partial Multi-Trays are ideal for taking the impression before preparation. Impressions taken using Silginat® are dimensionally stable and can be stored for several weeks. Their crisp detail and easy handling are impressive features.