

Processing Guide

cara Temp PMMA

Tooth shaded PMMA for temporary crowns and bridges for the cara CAD/CAM system.

Chemical composition:

Polymethyl methacrylate and interlinking copolymers of methacrylic acid.



Software Setting Parameters PMMA; Dental Designer™ (3Shape)

(all values in mm):

Software Designation	Internal crown surface			External crown surface/core build-up						
	Extra cement gap	Cement cap	Dist. to margin line	Wall thickness	Wall height	Marginline offset	Offset angle	Extension offset	Connector thickness mm ²	
Indication										
Single Crowns	Anterior	0.02 – 0.04	0.010	1	0.6 – 1.2	1.0 – 2.5	0.2	75 – 100°	0.15	–
	Premolar	0.02 – 0.04	0.010	1	0.6 – 1.2	1.0 – 2.5	0.2	75 – 100°	0.15	–
	Molar	0.02 – 0.04	0.010	1	0.6 – 1.2	1.0 – 2.5	0.2	75 – 100°	0.15	–
	Primary crown	0.02 – 0.04	0.010	1	0.6 – 1.2	1.0 – 2.5	0.2	45 – 80°	0.20	–
Splinted single crowns										
Settings as above but note connector size										
10 – 16										
Bridges (3 units)	Anterior (1 – 3)	0.04	0.010	1	0.6 – 1.2	1.0 – 2.5	0.2	70 – 90°	0.15	≥ 10
	Posterior (3 – 5)	0.04	0.010	1	0.6 – 1.2	1.0 – 2.5	0.2	70 – 90°	0.15	≥ 16
	Posterior (5 – 8)	0.05	0.010	1	0.6 – 1.2	1.0 – 2.5	0.2	70 – 90°	0.15	≥ 16
Bridges (4 units)	Anterior	0.05	0.015	1	0.6 – 1.2	1.0 – 2.5	0.2	70 – 90°	0.15	≥ 10
	Posterior	0.05	0.015	1	0.6 – 1.2	1.0 – 2.5	0.2	70 – 90°	0.15	≥ 16
Bridges (5 units)	Anterior	0.06	0.015	1	0.6 – 1.2	1.0 – 2.5	0.2	70 – 90°	0.15	≥ 10
	Posterior	0.06	0.015	1	0.6 – 1.2	1.0 – 2.5	0.2	70 – 90°	0.15	≥ 16
Bridges (6 – 16 units)		0.07	0.015	1	0.6 – 1.2	1.0 – 2.5	0.2	65 – 90°	0.15	≥ 16

Depending on the initial clinical situation and width with respect to the connector cross-sections, it is also possible to bridge two adjacent pontics!

Indications:

- Temporary crowns and bridges up to 16 units.
- Not more than one pontic between 2 pillars.

We fabricate your frameworks based on your design specifications. We do not offer any guarantee for constructions that are not covered by our range of indications.

Giving a hand to oral health.



KULZER
MITSUI CHEMICALS GROUP

Design:

Observe the **minimum wall thickness** for the design of PMMA crowns and bridges:

- minimum wall thickness (cervical): 0.6 mm
- minimum wall thickness (occlusal): 1.2 mm
- connector cross-section, anterior: 10 mm²
- connector cross-section, posterior: 16 mm²

Finishing:

- Use appropriate cross-cut tungsten carbide burs or cutting disks suitable for resin materials.
- Pre-polishing is performed using appropriate silicone polishers and goat hair brushes.
- Next, the high-gloss polishing is performed using appropriate diamond polish such as Signum HP diamond or our Signum HP paste.

To prevent fitting imprecision, do not allow high temperatures to build up when working and polishing

Cleaning:

- We recommend performing mechanical cleaning under running water. This prevents the build-up of high temperatures!

Cementation:

- Essentially any approved temporary cements can be used, although eugenol-free cements are preferable.
- For long-term temporary elements we recommend glass ionomer cements without bonding.

Repair:

- Frameworks, crowns and bridges can always be repaired using conventional cold-cure resins.

Veneering:

When veneering the framework, observe the relevant instructions for your preferred, appropriate veneering material.

Veneering PMMA frameworks:

- The milled cara PMMA framework can be veneered using conventional resin veneering materials. PMMA-based veneering composites are preferable.
- For the purposes of customisation, the appropriate areas are tapered for a smooth transition running to the base material.
- When using composite veneering, the bonding with the PMMA must always be performed according to the manufacturer's specifications.
- To individualise the frameworks, we recommend Signum veneering material in combination with Signum connector to achieve the perfect bond:
- Sand-blast the framework (aluminum oxide 50 µm or 110 µm at a max. 2 bar)
- Apply Signum connector, leave for 2 min. and polymerise for 90 s in the light unit (e.g. HiLite power).
- Apply custom incisal (e.g. Signum matrix opal incisal) or fissure effects (e.g. Signum cre-active maroon). Polymerise for 90 s in the light unit.

Tip: The areas coated with Signum cre-active should also be given an additional thin covering of Signum matrix (e.g. OT1) transpa material, as Signum cre-active does not provide an abrasion-resistant finish.

- Then perform final curing for 180 s in the light unit (HiLite power).
- Polish with the Signum Toolkit and Signum HP diamond polishing paste.

Signum is when one thing perfectly fits another.

signum®

Signum is a modular designed system made of universal and special veneering composites, colouring kits, tools and accessories resulting from Kulzer research. Each component of the Signum system is highly developed and specialised for its own range of application. And each individual component has been perfectly matched for interaction with the other Signum components, respectively. Enjoy the security of perfect restorations!

The general safety guidelines for working with dental products are to be observed.

Contact in Germany

Kulzer GmbH
Leipziger Straße 2
63450 Hanau, Germany
cara-service@kulzer-dental.com