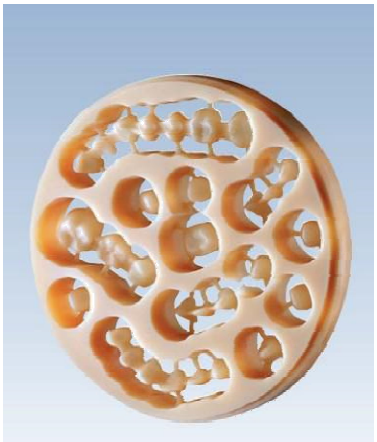
Technical data sheet

PMMA Disc
TELIO CAD®



Manufacturer

Ivoclar Vivadent AG
Bendererstrasse 2
9494 Schaan
Liechtenstein

Ivoclar Vivadent AG is certified according to
- **DIN EN ISO 13485**
- **RL 93/42/ECC (CE 0123)**

Designation

TELIO CAD® PMMA Disc for CAD/CAM

Description

TELIO CAD® discs are blanks of PMMA (polymethyl methacrylate). CAD/CAM can be used to machine single teeth as well as single or multi-unit, fully-anatomic temporary restorations. By using additional layers and stains, aesthetic optimisation can be obtained.

The most important benefits of TELIO CAD® discs are:
- high material homogeneity due to the industrial manufacturing process
- no toxins and benzene peroxide free
- lasting shade stability and natural fluorescence
- simple reproducibility of the temporary dental prosthesis

Indication

- Anterior and posterior crowns can be worn up to max. 12 months
- Anterior and posterior bridges with up to 2 pontics can be worn up to max. 12 months
- Implanted temporary restorations can be worn up to max. 12 months
- Therapeutic care for correction of temporomandibular joint problems and occlusal plane

Contraindication

- Use for definitive restorations
- Bridge constructions with more than two pontics in one piece
- Patients with parafunctions, e.g., bruxism
- if the allergy to one of the constituents is known, TELIO CAD® must not be used

Options

The TELIO CAD® PMMA discs are available in the following shades A1, A2, A3, A3,5 and B1.

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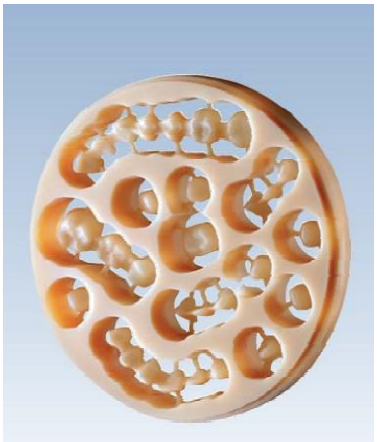

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Modelling

During the construction of crown and bridge framework, the following parameters must not be their values specified: Minimum wall thickness (circular): 0.8 mm
- Minimum wall thickness (occlusal): 1.5 mm
- Connector cross-section of anterior bridges with 1 pontic: min. 12 mm²
- Connector cross section of anterior bridges with 2 pontics: min 12 mm²

Connector cross section of posterior bridges with 1 pontic: min. 12 mm²
- Connector cross section of posterior bridges with 2 pontics: min. 16 mm²

CAD/CAM Fully anatomic production with final polishing

In this processing technique, the restoration is polished and integrated into the CAD/CAM system immediately after machining. The surface finish gloss is adjusted by manual polishing. This processing step is very efficient, and makes it easy to obtain an aesthetic result quickly.

Finishing

The following procedure is recommended for the preparation and revision of TELIO CAD® restorations:
- Grinding the tapping point with fine cross-toothed carbide cutters
- shape corrections with fine cross-toothed carbide cutters or commercially available diamond tools
- Avoid overheating the material
- smooth the entire occlusal surface with a fine diamond tool. This will even the surface caused by CAD/CAM processing
- Observe the minimum wall thickness specifications
- Thoroughly clean the restoration before further processing (id abrasive residues remains → veneer problems!)
- Try-in and adjustment of occlusion or articulation, if necessary
- Polish (see manufacturer's instructions)

For further processing techniques, such as "cut-back" technology, see the manufacturer's processing instructions.

Processing instructions

Operating and processing instructions for the dental technician *IVOCLAR VIVADENT TELIO CAD® / TELIO CS®* http://www.ivoclarvivadent.com/de/alle/produkte/chairside-cad-_-cam-bloecke/telio-cad
On the right-hand side of the processing instructions *click TELIO Lab - CAD* → Open PDF File

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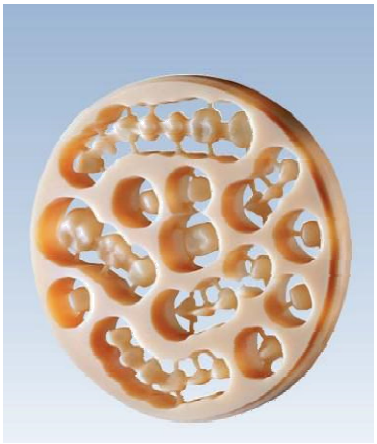

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Chemical composition

PMMA (polymethyl methacrylate) 99.5% / pigments < 1.0%

Physical/mechanical properties (guidelines)

Density **ρ** (at 20°C)	**1.18**	[g/cm³]
Elasticity module (at 20°C)	**3,200** (± 300)	[MPa] or [N/mm²]
Water absorption **W**	**< 28**	[µg/mm³]
Water absorption **L**	**< 0.6**	[µg/mm³]
Ball indentation hardness H_K	**180** (± 5)	[MPa] or [N/mm²]
Vickers hardness **HV 10**	**190** (± 5)	[MPa] or [N/mm²]
Flexural strength β_B	**130** (± 10)	[MPa] or [N/mm²]

Thermal properties (guidelines)

Vicat softening temperature (melting point) T_V	**approx. 100** [°C]	or	**212** [°F]
Flash point T_F	**> 250** [°C]	or	**482** [°F]
Thermal conductivity **λ** (at 23°C)	**0.19** [W/(K*m)]		
Specific heat capacity **c** (at 23°C)	**1.47** [J/(g*K)]		

CADstar Digital Dental Solutions