

# IPS e.max<sup>®</sup> CAD-on

Connecting the next generation



**all** ceramic  
**all** you need

# Lithium disilicate (LS<sub>2</sub>) forges new paths ...



IPS e.max CAD HT B40



IPS e.max ZirCAD MO B40

The unique IPS e.max CAD lithium disilicate (LS<sub>2</sub>) glass-ceramic combines high strength (360 MPa) with impressive esthetic properties to create long-lasting all-ceramic restorations. Used successfully in the fabrication of single-tooth restorations, lithium disilicate now forges new paths.

The IPS e.max CAD-on technique is a CAD/CAM-based fabrication process which allows high-strength and highly esthetic restorations to be fabricated from IPS e.max CAD and IPS e.max ZirCAD ceramics.

The new IPS e.max CAD-on technique combines the advantages of lithium disilicate glass-ceramic with those of zirconium oxide in an innovative way. This enables users to fabricate tooth- or implant-supported posterior bridge restorations (with up to 4 units) with an outstanding overall strength.



... for excellent overall strength

high esthetics



IPS e.max CAD veneering structure

efficient



IPS e.max CAD Crystall./Connect fusion glass-ceramic

high strength



IPS e.max ZirCAD framework

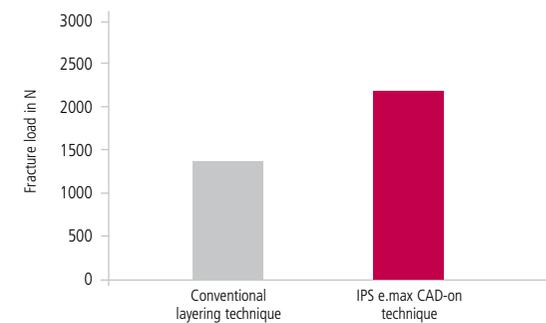
### High esthetics and high strength

The desired tooth shade of CAD-on restorations is achieved by choosing the appropriate shades of the coordinated components: the HT blocks, the fusion glass-ceramic and the shaded ZirCAD blocks.

The impressive esthetics and lifelike appearance of IPS e.max CAD-on restorations are the result of this combination.

The IPS e.max CAD-on technique marks a new era in bridge fabrication which combines convenience, efficiency and overall strength in a unique way.

Fracture loads of 4-unit ZrO<sub>2</sub>-based posterior bridges

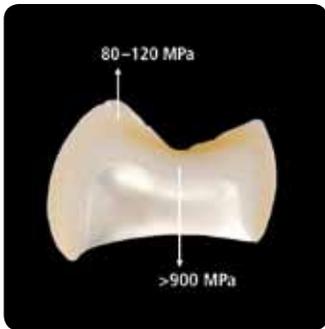


Source: R&D, Ivoclar Vivadent AG, Schaan, November 2010  
Test method: occlusal load with steel antagonist to the point of fracture.

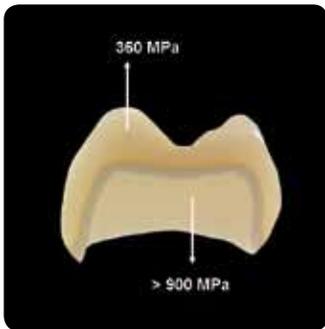
### The highlights

- High-strength, monolithic LS<sub>2</sub> veneering structure
- High esthetics due to coordinated ceramic components
- Innovative, homogeneous all-ceramic bond
- Zirconium oxide-supported posterior bridges can be fabricated in one day
- Excellent overall strength of the restoration

# Lithium disilicate (LS<sub>2</sub>) forges new paths ...



Zirconium oxide (ZrO<sub>2</sub>), veneered

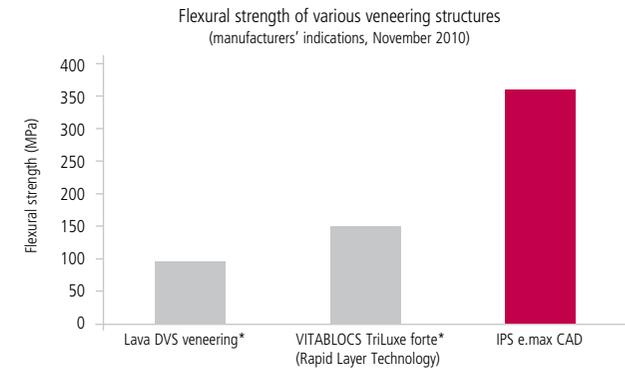


Lithium disilicate (LS<sub>2</sub>) on zirconium oxide (ZrO<sub>2</sub>)

## Unique material combination: LS<sub>2</sub> + ZrO<sub>2</sub>

Due to its final strength (>900 MPa), IPS e.max ZirCAD is the material of choice for the fabrication of bridge frameworks. Shaded MO blocks (MO 0 – MO 2) are available for the fabrication of the zirconium oxide framework.

The monolithic LS<sub>2</sub> veneering structure milled from the new IPS e.max CAD HT B40 block meets the most exacting expectations in terms of esthetics and combines modern technology with outstanding user friendliness in the fabrication of unique restorations. The LS<sub>2</sub> veneering structure is mainly responsible for the impressive esthetics and the excellent overall strength of the CAD-on restorations.



\*not registered trademarks of Ivoclar Vivadent AG



Framework after milling and sintering



Veneering structure after milling



Check the fit



Apply Crystall./Connect into the veneering structure



Disperse Crystall./Connect by means of vibration

... in combination with zirconium oxide (ZrO<sub>2</sub>)



Programat S1

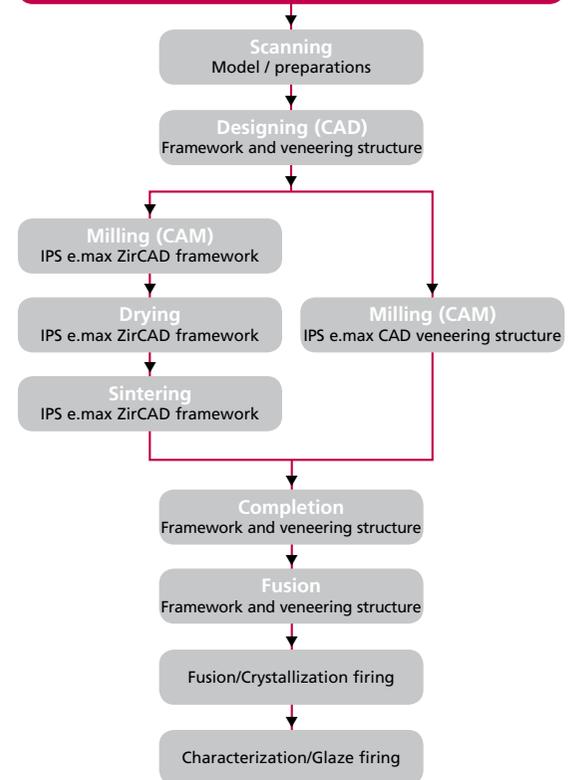


### Efficient processing

The IPS e.max CAD-on technique can be used to fabricate zirconium oxide-supported bridges as an alternative to the conventional layering or press-on techniques. The framework and the suitable, accurately fitting veneering structure can be created in one step by means of the user-friendly Multilayer software.

The efficiency and productivity are increased as a result of the simultaneous fabrication and the short processing times (e.g. sintering in a Programat S1) required to complete the restoration. This means, the active working time is reduced by up to 40%.

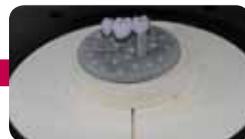
### IPS e.max CAD-on technique



Insert framework into veneering structure / fusion process with Ivomix



Cleaning



Fusion/crystallization firing in one step



Carry out characterization/glaze firing with Crystall. Shade/Stains Glaze



Completed IPS e.max CAD-on restoration

# Lithium disilicate (LS<sub>2</sub>) forges new paths ...



Fusion glass-ceramic



IPS e.max CAD-on bridge (R. Watzke, Ivoclar Vivadent AG, Liechtenstein)

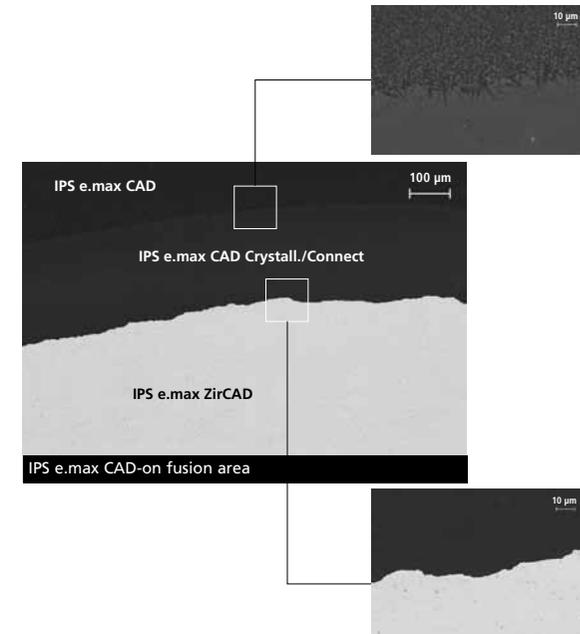
## Homogeneous all-ceramic bond

The homogeneous ceramic bond between the ZrO<sub>2</sub> framework and the LS<sub>2</sub> veneering structure is achieved by means of the innovative IPS e.max CAD Crystall./Connect fusion glass-ceramic.

The fusion glass-ceramic is pre-dosed and ready to use. Therefore, it always features the ideal consistency for a strong bond and homogeneous fusion with the Ivomix.

The fusion and crystallization firing is conducted in a Programat® P300/G2, P500/G2, P700/G2, EP 3000/G2, EP 5000/G2 or Programat CS furnace. The homogeneous bond is achieved and the final material properties are imparted to the veneering structure in one step.

The all-ceramic bond allows for subsequent characterization and corrective firings.



Source: R&D, Ivoclar Vivadent AG, Schaan, November 2010



Ivomix vibrator

... with coordinated components



Vivaglass® CEM



SpeedCEM®

### All you need for cementation

Your dentist can select from the range of tried-and-tested cementation materials from Ivoclar Vivadent depending on the indication.

IPS e.max CAD-on restorations can be seated using adhesive, self-adhesive or conventional cementation systems.



Multilink® Automix

### Multilink® Automix

The universal, dual-curing luting composite covers a wide range of indications. It offers high bonding strength and ensures a durable, sound bond. Together with the Primer AVB, it seals the dentin and ensures a good marginal seal.

### SpeedCEM®

The new self-adhesive resin cement is even easier to process than a conventional cement and additionally offers the advantages of a composite material, such as higher bond strength values and translucency as well as a lower water solubility.

### Vivaglass® CEM \*

The classic self-curing glass ionomer cement is suitable for the cementation of high-strength ceramics such as IPS e.max. It contains a transparent glass filler for esthetic results.

# IPS e.max<sup>®</sup> CAD-on

all ceramic  
all you need



This product forms part of our All-Ceramics and Implant Esthetics competence areas. All the products of these areas are optimally coordinated with each other.