Everything for chairside CAD/CAM restorations

CEREC dentists have been relying on Ivoclar Vivadent products for many years. There are many reasons for their trust. When it comes to innovative material concepts, clinical reliability is precisely what makes a product so attractive for dental professionals all over the world.

Based on science

IPS e.max, Scientific Report, Vol. 03/2001-2017
IPS e.max, all-ceramic … all you need, Ivoclar Vivadent Report, No. 17, June 2006
All-Ceramic Report. All-Ceramic Restorations – Materials Science and Development. Ivoclar Vivadent Report No. 16, February 2006
IPS e.max® and IPS Empress® are ceramic materials that are valued all over the world.

The brands are known for innovation, reliability, long-term clinical success and versatility. Patients can be confident that their restorations will stay in good condition for many years.

Scientific studies document the long-term reliability of these materials.

**What is in it for me?**

- Enhanced quality of your single-visit restorations due to coordinated products with high clinical evidence
- Suitable material and range of shades for each clinical situation
- Improved workflow efficiency due to innovative auxiliaries

**What is in it for my patients?**

- Time savings: no temporaries and no unpleasant impression-taking
- Reduced need for anaesthetics

1 Based on sales figures
2 IPS e.max, Scientific Report, Vol. 03/2001-2017
3 IPS e.max CAD customer satisfaction survey in Germany and the USA, 2014
All you need for restorations in a single visit

The coordinated products out of one hand cover an extensive range of indications and offer all that is needed for treatment in a single visit. The benefits: durable, esthetic and accurate restorations paired with efficient and time-saving workflows.

IPS e.max® Shade Navigation App
is the intelligent app which assists you in finding the most suitable Ivoclar Vivadent blocks. Just 5 clicks to find the right solution – for an optimum shade match.

CNS: The Cementation Navigation System, the popular multimedia application, offers dentists practical orientation and guidance in the selection of the best luting material for each case.
IPS e.max® Shade Navigation App

is the intelligent app which assists you in finding the most suitable Ivoclar Vivadent blocks. Just 5 clicks to find the right solution – for an optimum shade match.

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1. Average biaxial flexural strength, over a period of 10 years
2. Typical mean value of biaxial flexural strength of IPS e.max ZirCAD LT
3. Typical mean value of biaxial flexural strength

R&D Ivoclar Vivadent, Schaan, Liechtenstein
IPS e.max® CAD is the world’s best-selling glass-ceramic. It is suitable for the efficient fabrication of full-contour restorations and is known for its versatile application options, comprehensive range of indications and for its high strength of 530 MPa\(^2\).

Both its esthetic properties and durability have been confirmed by everyday clinical practice.

**Indications:**
- Minimally invasive crowns (1 mm)\(^3\)
- Crowns
- Three-unit bridges (up to the second premolar as the terminal abutment)
- Implant-supported hybrid restorations (hybrid abutments, hybrid abutment crowns)
- Veneers, thin veneers (0.4 mm) and occlusal veneers
- Inlays, onlays, partial crowns

**Processing options**
“Blue” restorations can either be:
- polished and then crystallized,
- glazed and crystallized in a single step,
- stained, glazed and crystallized in a single step.

**Overview of benefits**
- Excellent esthetics and high strength of 530 MPa\(^2\), efficiently created in the dental practice
- Full range of indications for your chairside CAD/CAM system
- Minimally invasive crown preparation; adhesively cemented
- Clinical long-term success and scientifically documented results

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\(^1\) Based on sales figures
\(^2\) Average biaxial flexural strength, over a period of 10 years, R&D Ivoclar Vivadent, Schaan, Liechtenstein
\(^3\) On the basis of long-term clinical evidence and the material’s high strength, the fabrication of crowns with a minimum thickness of 1 mm is allowed if an adhesive cemntation technique is used.
Having used IPS e.max® CAD for ten years in clinical applications, I’m fascinated by the material’s reliability, high esthetics and biocompatibility. The high number of bridges that we have successfully created at chairside is an indication of the new dimensions that this material opens up for patients and operators.

Polishing technique

- Polishing of the “blue” restoration, followed by speed crystallization for 15 minutes.

Staining Technique

- Glazing of the “blue” restoration followed by speed crystallization for 15 minutes.

Delivery form:

- 6 block sizes (I 12, C 14, C 16, B 32) and 2 abutment block sizes (A 14, A 16)
- 4 translucency levels and 2 Impulse blocks (HT – High Translucency, MT – Medium Translucency, LT – Low Translucency, MO – Medium Opacity)
- Comprehensive range of shades: available in A–D and BL shades (the range of shades varies depending on the translucency level)
IPS e.max® ZirCAD involves a quick sintering process, which allows monolithic and esthetically pleasing zirconium oxide restorations to be created directly in the dental practice using an efficient procedure.

IPS e.max ZirCAD is known for its high flexural strength (1,200 MPa*) and fracture toughness. It allows the fabrication of restorations with considerably lower wall thicknesses (posterior crowns: minimum 0.6; anterior crowns: minimum 0.4 mm). Preparations preserve tooth structure and restorations can be cemented conventionally.

Glazing is achieved with IPS e.max CAD Crystall./Glaze, which is available in two versions, one with fluorescent effect and one without.

Processing options
Once sintered, the restorations can either be:
- glazed and fired,
- stained (optional), glazed and fired,
- polished.

Indications:
- Crowns
- Three-unit bridges

Overview of benefits

- Chairside zirconium oxide restorations allow practices to expand their portfolio of offerings
- Pleasing esthetics combined with high strength
- Tooth-preserving preparation and conventional cementation
- No risk of chipping
- Biocompatibility

* Typical mean value of biaxial flexural strength, IPS e.max ZirCAD LT; R&D Ivoclar Vivadent, Schaan, Liechtenstein

Coordinated system

IPS e.max® ZirCAD
Zirconium oxide ceramics (ZrO₂)
Dr Ronny Watzke
Ivoclar Vivadent, Schaan, Liechtenstein

For me, IPS e.max ZirCAD zirconium oxide for chair-side restorations ideally complements IPS e.max CAD for posterior bridges.

Dr Lukas Enggist, Ivoclar Vivadent, Schaan, Liechtenstein

IPS e.max® ZirCAD LT bridge
Starting situation: metal-ceramic bridge, palatinal view

For me, IPS e.max ZirCAD zirconium oxide for chair-side restorations ideally complements IPS e.max CAD for posterior bridges.

Dr Ronny Watzke
Ivoclar Vivadent, Schaan, Liechtenstein

IPS e.max® ZirCAD LT bridge
Starting situation: metal-ceramic bridge, palatinal view

Dr Lukas Enggist, Ivoclar Vivadent, Schaan, Liechtenstein

Delivery form:
- 2 block sizes (C 17, B 45)
- 1 translucency level (LT – Low Translucency)
- Available in shades BL, A1, A2, A3, B1, B2, C2, D2
IPS Empress® CAD is associated with more than 20 years of successful clinical performance. It closely reproduces the natural tooth structure due to its distinct chameleon effect and natural fluorescence. IPS Empress CAD is known for the highest levels of esthetics and can be easily polished to a high gloss. Grind – polish – done.

A special highlight is the innovative polychromatic IPS Empress CAD Multi block. This block is distinguished by a lifelike transition of shade and fluorescence from dentin to incisal.

**Processing options**

Once ground, restorations can either be:
- polished,
- stained (optional) – glazed.

**Indications:**
- Crowns
- Inlays, onlays
- Veneers

**Overview of benefits**

- Highly esthetic restorations, efficiently created
- Clinically proven ceramic material with a flexural strength of 185 MPa*
- Optimum adjustment to the natural tooth structure due to the chameleon effect

*Average biaxial flexural strength, over a period of 10 years, R&D Ivoclar Vivadent, Schaan, Liechtenstein
I’m impressed with IPS Empress CAD Multi because of its natural light scattering. The transition of shade and fluorescence maximizes the esthetic effect without application of characterizations. Its durability has been confirmed in everyday clinical practice.

Polishing technique

High-gloss polishing with OptraFine®

Delivery form:
- 5 block sizes (I 8, I 10, I 12, C 14, C 14 L)
- 2 translucency levels and Multi block (HT – High Translucency, LT – Low Translucency)
- Wide range of shades: available in A–D, Chromascop and BL shades (the range of shades varies depending on the translucency level and block size)
**Tetric® CAD**

Composites

Tetric® CAD is an esthetic composite block for the efficient fabrication of single-tooth restorations. Due to the pronounced chameleon effect, Tetric CAD restorations blend in well with the residual tooth structure.

Restorations are ground, polished and then seated using an adhesive cementation technique. This processing procedure is very efficient, leading to esthetic results quickly and easily.

**Processing options**

Once ground, restorations can be:

- polished
- characterized (optional).

**Indications:**

- Veneers
- Inlays
- Onlays (e.g. partial crowns, occlusal veneers)
- Crowns

**Benefits at a glance**

- Lifelike integration into the oral environment due to the unique chameleon effect
- Excellent polishability and intraoral repairability
- Easy and efficient processing
- Stability even in restorations with limited layer thicknesses, thinly tapered margins are possible without chipping
- Reliable adhesive bond due to a coordinated system of cementation materials

**Coordinated system**

Tetric® N-Bond Universal, Variolink® N
Tetric CAD is fast and easy to process. After the restoration has been ground, it can be polished to a high gloss in no time.

Polishing technique

Fast high-gloss polishing in only one step (OptaPol®)

Delivery form:
- 2 block sizes (I 12, C 14)
- 2 translucency levels
  (HT – High Translucency, MT – Medium Translucency)
- available in shades BL, A1, A2, A3, A3.5
  (the range of shades varies depending on the translucency level)
Telio® CAD are cross-linked PMMA blocks for the efficient fabrication of long-term temporaries.

As a result of an optimized manufacturing process, the restorations feature a smooth surface that can be quickly and efficiently polished.

**Processing options**
Once milled, restorations are:
- polished
- characterized (optional).

**Indications:**
- Temporary crowns
- Temporary bridges with up to two connected pontics
- Implant-supported temporary hybrid abutment crowns

**Overview of benefits**
- High material homogeneity and process reliability reduce mixing errors and air entrapments compared with conventional methods
- Shade stability and lifelike fluorescence
- Excellent polishability
- Economical fabrication of temporaries

**Coordinated system**
Telio CAD is a material that combines esthetics with biocompatibility. The contours can be adjusted without difficulty at any time. It's an excellent choice for long-term temporaries.

Polishing technique

Quick high-gloss polishing in only one step (OptraPol®)

Delivery form:
- 3 block sizes (A 16, B 40 L, B 55)
- 1 translucency level (LT - Low Translucency)
- Available in the shades BL3, A1, A2, A3, A3.5, B1, B3, C2, D2 (the range of shades varies depending on the translucency level)
IPS e.max® CAD Crystall./Shades/Stains and Glaze

IPS e.max® CAD Crystall./Shades/Stains and Glaze is a universal range of stains and glazes designed for IPS e.max® CAD, IPS e.max® ZirCAD and IPS Empress® CAD.

The glaze is available in two versions - with or without fluorescent effect. Minor corrections (e.g. proximal contact areas) can be applied to IPS e.max CAD and IPS e.max ZirCAD restorations using IPS e.max CAD Crystall./Add-On.

Indications:
- IPS e.max® CAD
- IPS e.max® ZirCAD
- IPS Empress® CAD

Overview of benefits
- Reduced inventory, reduced costs – a single range suitable for all the ceramic materials from Ivoclar Vivadent
- Familiar application and consistent high quality
- Glaze with and without fluorescent effect
- Possibility to apply corrections (e.g. proximal contacts) with Add-On

Delivery form:
- 7 IPS e.max CAD Crystall./Shades, 3 g each (0, 1, 2, 3, 4, Incisal 1, Incisal 2)
- 7 IPS e.max CAD Crystall./Stains, 1 g each (white, cream, sunset, copper, olive, khaki, mahogany)
- 1 IPS e.max CAD Crystall./Glaze Paste, 3 g
- 1 IPS e.max CAD Crystall./Glaze Paste Fluo, 3 g
- 1 IPS e.max CAD Crystall./Glaze Spray, 270 ml
- 2 IPS e.max CAD Crystall./Add-On, 5 g each (Incisal, Dentin)
- 1 IPS e.max CAD Crystall./Glaze Liquid, 15 ml
- 1 IPS e.max CAD Crystall./Add-On Liquid, 15 ml (allround)

Coordination system

IPS e.max® CAD, IPS Empress® CAD, IPS e.max® ZirCAD
Programat® – for optimum firing results

Clinicians and dental technicians all over the world simply love the high quality standard, long service life, homogeneous firing results and straightforward operation, together with the many other innovative features. It is not without reason that the Programat range is among the best-selling ceramic furnaces*. The brand has gained a track record of success spanning more than 40 years.

*Based on sales figures

All furnaces are equipped with a power-saving key. In the stand-by mode, the furnaces uses 40 % less energy.

Overview of benefits

- 40-year success story underpins the high quality standard
- Precision firing ensures homogeneous results
- Pre-set Ivoclar Vivadent programs enhance process reliability
- "Power Saving Technology" reduces energy consumption in the stand-by mode

Programat® CS2
Glazing and crystallization furnace with colour touch screen

Programat® CS3
Glazing and crystallization furnace with colour touch screen and Digital Shade Assistant

Programat® CS4
Glazing, crystallization and sintering furnace

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<td>15 min.</td>
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Implant prosthetics

From temporary to permanent restoration

The IPS e.max® CAD and Telio® CAD ranges comprise blocks that come with a pre-fabricated interface for the direct cementation to a titanium base, e.g. Dentsply Sirona Ti Base. This allows implant-supported hybrid abutments and hybrid abutment crowns to be created at chairside using clinically proven products. Cementation is achieved with the self-curing Multilink® Hybrid Abutment luting composite.

Overview of benefits

**Telio® CAD**
- Straightforward design of the emergence profile
- Visualization of the permanent restoration

**IPS e.max® CAD**
- Exceptional and long-lasting esthetics due to tooth-coloured hybrid abutments
- Hybrid abutment crown (2-in-1) offers functionality and efficiency
- Excellent biocompatibility with oral soft tissues

Coordinated system

for IPS e.max® CAD
- IPS Ceramic Etching Gel
- Monobond® N
- Multilink® Hybrid Abutment

for Telio® CAD
- SR Connect
- Multilink® Hybrid Abutment
Care

Implant restorations require professional care during the different phases of an implant treatment and the required lifelong aftercare.

Implant Care is a coordinated system of products which assist the practice team and its patients in assuring the long-term quality of valuable implant restorations.

Multilink® Hybrid Abutment
- Permanent cementation thanks to high bond strength values
- Optimum esthetics due to high opacity
- Easy handling due to convenient Automix syringe

Delivery form:
Telio® CAD
- 1 block size (A 16) with pre-fabricated interface in size “S” or “L” (Dentsply Sirona Ti Base)
- 1 translucency level (LT – Low Translucency)
- Available in shades BL3, A1, A2, A3, A3.5, B1

Multilink® Hybrid Abutment
- 9-g automix syringe, 15 mixing tips each, shade HO 0

IPS e.max® CAD
- 2 block sizes (A 14, A 16) with pre-fabricated interface in sizes “S” and “L” (Dentsply Sirona Ti Base)
- 2 translucency levels (LT – Low Translucency and MO – Medium Opacity)
- Block sizes LT: A 14 and A 16, available in shades BL2, A1, A2, A3, A3.5, B1, B2, C1, C2, D2
- Block sizes MO: A 14 blocks, available in shades 0, 1, 2, 3, 4
Variolink® N – ideal for esthetic restorations
Variolink® N is an esthetic luting composite for glass-ceramic, lithium disilicate glass-ceramic and composite resin restorations. The luting composite can be used for light-cure applications as well as dual-cure applications.

Variolink® N LC – ideal for veneers
The special amine-reduced cement Variolink N LC produces optimum results, particularly in anterior teeth. This material enables very thin (< 2 mm) and highly translucent restorations like veneers to be seated esthetically.

Overview of benefits
• Highly esthetic results
• Dual-cure and light-cure materials in seven shades
• High radiopacity

Indications:
Veneers, inlays, onlays, crowns and bridges made from:
• IPS e.max® CAD
• IPS Empress® CAD
• Tetric® CAD

Variolink® N System Kit with
Tetric® N-Bond Universal
• 4x Base 1.5 ml syringe: transparent, yellow, white, bleach XL
• 4x Cat 1.5 ml syringe: transparent/flow viscosity, transparent/high viscosity, yellow/low viscosity, yellow/high viscosity
• 1x 5 g Monobond N
• 1x 2 g Tetric N-Bond Universal VivaPen or Bottle

Variolink® N Base, 1 x 1.5 ml syringe
• Available in: transparent, yellow, white, bleach XL

Variolink® N Catalyst, 1 x 1.5 ml syringe
• Available in: transparent/low viscosity, transparent/high viscosity, yellow/low viscosity, yellow/high viscosity

Variolink® N LC, 1 x 1.5 ml syringe
• Available in: Clear, +1, +2

Variolink® N Try-In, 1 x 1.5 ml syringe
• Available in: transparent, yellow, white, bleach XL

Variolink® N LC Try-In, 1 x 1.5 ml syringe
• Available in: Clear, +1, +2

Monobond® N
• 5 g bottle
Multilink® Speed
The self-adhesive resin cement

Multilink® Speed is a self-adhesive, self-curing composite resin cement, with optional light-curing. The cement is characterized by a straightforward application protocol and good mechanical properties. The integrated MDP adhesive monomer generates a stable chemical bond to zirconium oxide like IPS e.max ZirCAD and to natural tooth structure, which makes an additional primer or adhesive unnecessary.

Indications:
Crowns and bridges made from:
• IPS e.max® ZirCAD
• IPS e.max® CAD
• Metal and metal-ceramics

Overview of benefits
• Excellent self-curing performance, ideal for IPS e.max ZirCAD and metal-ceramics
• User friendly handling and easy clean-up
• Efficient process with just one component

Delivery form:
Multilink® Speed
• 6 g automix syringe
• One Universal shade: transparent

Ivoclean®
• 5 g bottle
A system
designed for clinical success

Many dentists rely on the products of Ivoclar Vivadent, and with good reason. It is not only the familiar blocks but also the range of innovative and proven auxiliaries that make our products so attractive for CAD/CAM dentists all over the world.

Everything out of one hand for restorations in a single visit.
OptraGate®
retracts the lips and cheeks easily and gently over a large area.

IPS e.max® Shade Navigation App
facilitates the selection of appropriate blocks, ingots and discs. The app takes all the essential factors (tooth shade, indication, shade of the preparation, layer thickness, material) affecting the overall shade design of the restoration into account to recommend a suitable material.

The IPS Natural Die Material shade guide assists in determining the shade of the prepared tooth.

Tetric® N-Bond Universal
is designed for both direct and indirect bonding procedures and features compatibility with all etching techniques. Thanks to the VivaPen® delivery form, the material can be directly applied in the patient’s mouth.

Bluephase® N
offers a light intensity of 2,000 mW/cm² ± 10 % and features polywave LED technology. The ergonomic design and shortened light guide make this curing light especially delightful to work with. All tooth surfaces can be accessed without extreme opening of the mouth.

Cervitec® F
is a protective varnish providing multiple protection to help maintain the high quality of restorations. Cervitec F is applied by the dental professional directly to susceptible areas, for instance along the margins of crowns and bridges.
### Strong combinations

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#### IPS e.max® CAD
Lithium disilicate glass-ceramics (LS2)

- **Occlusal Veneers**: ✔ ✔
- **Thin Veneers, Veneers**: ✔ ✔
- **Inlays, Onlays, Partial Crowns**: ✔ ✔
- **Minimally Invasive Crowns (1 mm)**: — ✔
- **Crowns**: — ✔ ✔
- **Three-Unit Bridges**: — ✔ ✔
- **Hybrid Abutments**: — — ✔
- **Hybrid Abutment Crowns**: — — — ✔

#### IPS e.max® ZirCAD
Zirconium oxide ceramics (ZrO₂)

- **Crowns**: — ✔ ✔
- **Bridges**: — ✔ ✔

#### IPS Empress® CAD
Leucite glass-ceramics

- **Inlays, Onlays, Partial Crowns**: ✔ ✔
- **Veneers**: ✔ ✔
- **Crowns**: — ✔ ✔

#### Tetric® CAD
Composite

- **Veneers, Inlays, Onlays (e.g. Partial Crowns, Occlusal Veneers)**: ✔ ✔
- **Crowns**: — ✔ ✔

#### Telio® CAD
Cross-linked PMMA material

- **Temporary Crowns**: — ✔ ✔
- **Temporary Bridges (max. 2 connected bridge pontics)**: — ✔ ✔
- **Temporary Hybrid Abutment Crowns**: — ✔ ✔

- ✔ Recommended product combinations
- ✗ Not recommended
- * Conditioning with Monobond® N and IPS® Ceramic Etching Gel
- ** Conditioning with Tetric® N Bond Universal
- *** Conditioning with SR Connect

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**IPS e.max® Shade Navigation App**

**CNS: The Cementation Navigation System**

www.cementation-navigation.com