

e.max[®]
IPS

Press

Monolithic Solutions
Instructions for Use



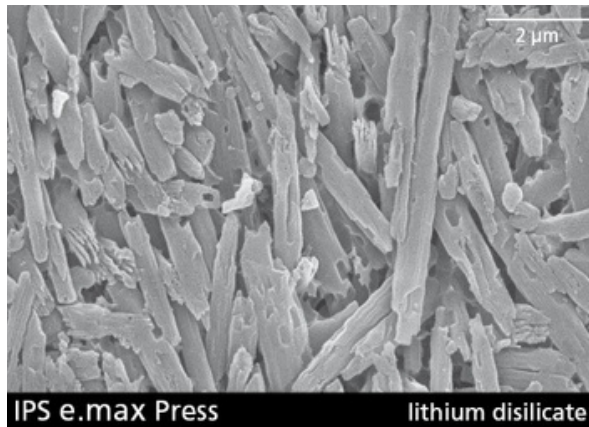
ivoclar
vivadent
technical

IPS e.max® Press Monolithic Solutions

Material

IPS e.max® Press

IPS e.max Press are lithium disilicate glass-ceramic ingots for the Press technology. The industrial production process creates absolutely homogeneous ingots in different translucency levels. They demonstrate a strength of 470 MPa (typical average value). The ingots are pressed to restorations with outstanding accuracy of fit in Ivoclar Vivadent press furnaces. The pressed, tooth-coloured, highly esthetic restorations are stained and glazed with IPS Ivocolor or veneered with IPS e.max Ceram and the stained and glazed with IPS Ivocolor.



IPS e.max Press lithium disilicate

Property	Specification	Typical average value
CTE (25 – 100°C) [10 ⁻⁶ /K]	10.5 ± 0.5	–
Flexural strength (biaxial) [MPa]	≥ 360	470
Chemical solubility [μg/cm ²]	< 100	–
Type/Class	Type II / Class 3	–

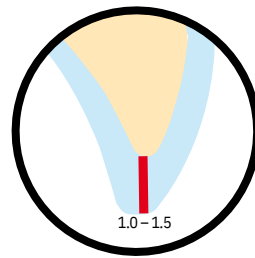
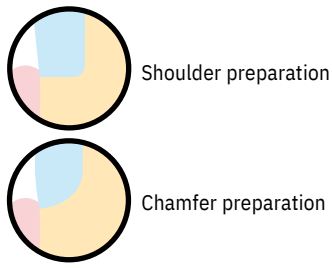
According to ISO 6872:2015

Preparation guidelines

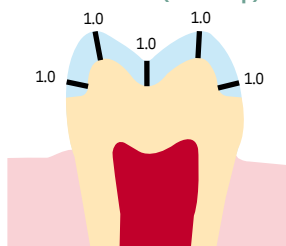
Successful results can only be achieved with IPS e.max Press if the guidelines and minimum layer thicknesses are strictly observed.

Basic preparation guidelines for all-ceramic restorations

- No angles or edges
- Shoulder preparation with rounded inner edges and/or chamfer preparation
- The indicated dimensions reflect the minimum thickness for IPS e.max Press restorations.

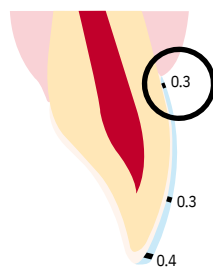


Occlusal veneer (table top)



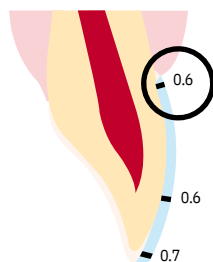
- Reduce the anatomical shape and observe the stipulated minimum thickness.
- Prepare a circular shoulder with rounded inner edges or a chamfer at an angle of approximately 10° – 30°. Width of the circular shoulder/chamfer at least 1.0 mm.
- Reduce the crown third – in the occlusal area – by approx. 1.0 mm.

Thin veneers



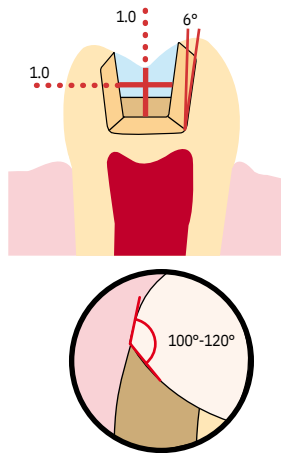
- If possible, the preparation should be located in the enamel.
- The incisal preparation margins should not be located in the area of the abrasion surfaces and dynamic occlusal surfaces.
- The minimum layer thickness of the thin veneer in the cervical and labial area is 0.3 mm. A restoration thickness of 0.4 mm must be planned at the incisal edge.
- If there is enough space, preparation is not necessary.

Veneer



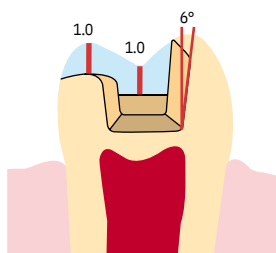
- If possible, the preparation should be located in the enamel.
- The incisal preparation margins should not be located in the area of the abrasion surfaces and dynamic occlusal surfaces.
- Reduce the cervical and/or labial area by 0.6 mm, and the incisal edge by at least 0.7 mm.

Inlay



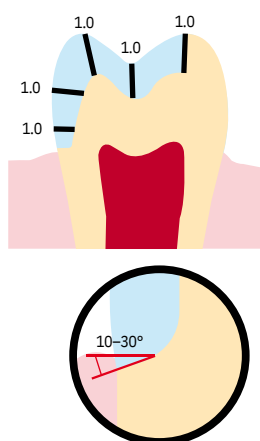
- Static and dynamic antagonist contacts must be taken into consideration.
- The preparation margins must not be located on centric antagonist contacts.
- A preparation depth of at least 1.0 mm and an isthmus width of at least 1.0 mm must be observed in the fissure area.
- Prepare the proximal box with slightly diverging walls (preparation angle 6°) and observe an angle of 100° – 120° between the proximal cavity walls and the prospective proximal surfaces of the inlay. For inlays with pronounced convex proximal surfaces without adequate support by the proximal shoulder, marginal ridge contacts should be avoided.
- Round out internal edges and transitions in order to prevent stress concentration within the ceramic material.
- Do not prepare slice-cuts or feather edges.

Onlay



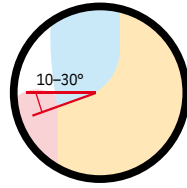
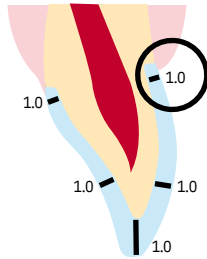
- Static and dynamic antagonist contacts must be taken into consideration.
- The preparation margins must not be located on centric antagonist contacts.
- A preparation depth of at least 1.0 mm and an isthmus width of at least 1.0 mm must be observed in the fissure area.
- Prepare the proximal box with slightly diverging walls (preparation angle 6°) and observe an angle of 100° – 120° between the proximal cavity walls and the prospective proximal surfaces of the onlay. For onlays with pronounced convex proximal surfaces without adequate support by the proximal shoulder, marginal ridge contacts should be avoided.
- Round out internal edges and transitions in order to prevent stress concentration within the ceramic material.
- Do not prepare slice-cuts or feather edges.
- Provide at least 1.0 mm of space in the cusp areas.

Partial crown



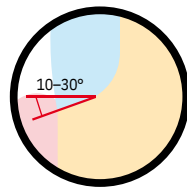
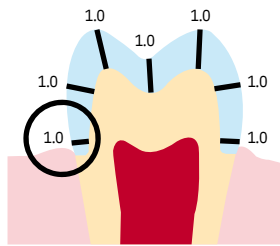
- Static and dynamic antagonist contacts must be taken into consideration.
- The preparation margins must not be located on centric antagonist contacts.
- Provide at least 1.0 mm of space in the cusp areas.
- Prepare a circular shoulder with rounded inner edges or a chamfer at an angle of approximately 10° – 30°. Width of the shoulder/chamfer at least 1.0 mm.

Minimally invasive anterior crown (adhesive cementation is mandatory)



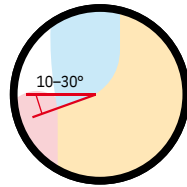
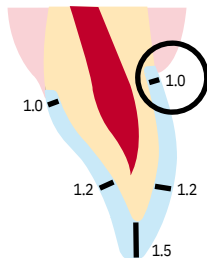
- Reduce the anatomical shape and observe the stipulated minimum layer thickness. Circular shoulder preparation with rounded inner edges and/or pronounced chamfer preparation. Width of the circular shoulder/chamfer at least 1.0 mm.
- Reduce the incisal crown third by at least 1.0 mm.
- Reduce the vestibular and/or oral area by approx. 1.0 mm.

Minimally invasive posterior crown (adhesive cementation is mandatory)



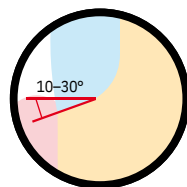
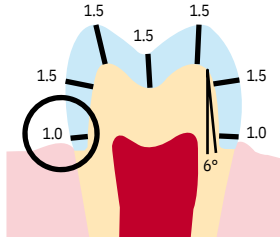
- Reduce the anatomical shape and observe the stipulated minimum layer thickness. Circular shoulder preparation with rounded inner edges and/or pronounced chamfer preparation. Width of the circular shoulder/chamfer at least 1.0 mm.
- Reduce the occlusal crown third by at least 1.0 mm.
- Reduce the vestibular and/or oral area by at least 1.0 mm.

Anterior crown / bridge abutment in the anterior region



- Reduce the anatomical shape and observe the stipulated minimum layer thickness. Prepare a circular shoulder with rounded inner edges or a pronounced chamfer at an angle of approximately 10° – 30°. Width of the circular shoulder/chamfer at least 1.0 mm.
- Reduce the incisal crown third by at least 1.5 mm.
- Reduce the vestibular and/or oral area by at least 1.2 mm.
- For conventional and/or self-adhesive cementation, the preparation must demonstrate retentive surfaces and sufficient preparation height.

Posterior crown / bridge abutment in the premolar region



- Reduce the anatomical shape and observe the stipulated minimum layer thickness. Prepare a circular shoulder with rounded inner edges or a pronounced chamfer at an angle of approximately 10° – 30°. Width of the circular shoulder/chamfer at least 1.0 mm. Preparation angle 6°.
- Reduce the occlusal crown third by at least 1.5 mm.
- Reduce the vestibular and/or oral area by approx. 1.5 mm.
- For conventional and/or self-adhesive cementation, the preparation must demonstrate retentive surfaces and sufficient preparation height.

Cementation and aftercare

Cementation options

Esthetic cementation options are decisive for the harmonious shade effect of an all-ceramic restoration.

Depending on the indication, IPS e.max restorations can be seated using either adhesive, self-adhesive or conventional cementation.

– For the adhesive cementation of IPS e.max restorations, Multilink® Automix or Variolink® Esthetic are the ideal composite

cements.

– For the self-adhesive cementation of IPS e.max restorations, SpeedCEM® Plus is available.

– The glass ionomer cement Vivaglass® CEM is recommended for the conventional cementation of IPS e.max restorations.

Short definition of the different cementation methods:

– Adhesive cementation

With adhesive cementation, the bond is also created by static friction, but primarily by the chemical and/or micromechanical

bond between the luting material and the restoration, as well as between the luting material and the preparation. Given the chemical and/or micromechanical bond, retentive preparation is not required. Depending on the cementation material, special adhesive systems are used on the preparation to generate the micromechanical bond with the dentin and/or enamel. Adhesive cementation results in enhanced “(overall) strength” of the seated all-ceramic restoration.

– Self-adhesive cementation

The cementation material features self-adhesive properties on the tooth, which is why no additional special conditioning of the tooth surface is necessary. Hence, the adhesion of the restoration is partially achieved by a micromechanical and/or chemical bond. In order to achieve sufficient bonding strength values, retentive preparation (preparation angle 4 – 8°, preparation height at least 4 mm) is recommended. Self-adhesive cementation does not result in enhanced “(overall) strength” of the seated all-ceramic restoration.

– Conventional cementation

With conventional cementation, the bond is almost entirely created by static friction between the cementation material and the restoration, as well as between the cementation material and the preparation. In order to obtain the necessary mechanical friction, a retentive preparation showing a preparation angle of approximately 4 – 8° is required. Conventional cementation does not result in enhanced “(overall) strength” of the seated all-ceramic restoration.

Cementation possibilities for the different indications

		Adhesives Cementation	Self-adhesives Cementation	Conventional Cementation
IPS e.max Press	Occlusal veneers, thin veneers, veneers	✓	–	–
	Inlays, onlays, partial crowns	✓	–	–
	Minimally invasive anterior and posterior crowns	✓	–	–
	Anterior and posterior crowns	✓	✓	✓
	3-unit bridges up to the 2nd premolar	✓	✓	✓



Leave the cementation maze

More information at www.cementation-navigation.com



More detailed information on the clinical working steps can be found in the IPS e.max Clinical Guide.

Care Notes

As with natural teeth, high-quality IPS e.max restorations require regular professional care. This is beneficial for both the health of the gingiva and teeth, as well as the overall appearance. The pumice-free Proxyl® pink polishing paste is used to care for the surfaces without causing any wear. The low RDA* value = 7 (*Relative Dentin Abrasion)

is a reliable confirmation that a low-abrasion cleaning paste is used. Scientific investigations and long-term clinical experience have proved the gentle effect compared to other pastes.

