

Porcelain Restoration Selection Guide

Points of Comparison	IPS Empress Esthetic	IPS e.max	Captek	inVizion®	PFM	BruxZir
Goals	Esthetics, Translucency, Metal-Free	Esthetics, Metal-Free, Strength	Sub-Gingival Response, Esthetics, Strength	Metal-Free, Strength, Esthetics	Strength, Cost Variety (high noble, noble, base)	Metal-Free, Strength
Primary Applications	Veneers, Crowns, Inlays & On lays	Veneers, crowns, inlays/onlays. Single	Single crowns & 3-unit bridges	Single crowns and 3-6 unit bridges up to a 42mm span	Single crowns through long span bridges	Crowns and Bridges
Preparation Requirements	Shoulder margin design 1.0 mm minimum at the margin, 1.5-2.0 mm reduction at incisal/occlusal, facial & lingual	Shoulder margin design 1.0 mm minimum at the margin, 1.5-2.0 mm reduction at incisal/occlusal, facial & lingual	Any margin design with minimum 0,8 mm gingival reduction, 1.5-2.0 mm reduction at incisal/occlusal & facial	Deep chamfer design with minimum .8mm gingival reduction, 1.5-2.0mm reduction at incisal/occlusal & facial+++	Any margin design with 1.0-1.5 mm reduction for color, 1.5-2.0 mm reduction at incisal/occlusal and facial+++	Shoulder preparation preferred, feather edge is okay Clearance similar to full cast gold preps. - 1.0 mm is ideal, 0.5 mm is acceptable.
Cementation Guidelines	Adhesive bonding with dual cure bonding agent++	Adhesive bonding or conventional cementation++	Conventional cementation	Conventional or translucent adhesive (cannot etch Zr)	Conventional cementation	Conventional cementation
Flexural Strength	90-150 MPa before and 700MPa after bonding	350-400 MPa prior to seating. Material is 2.5x's stronger than Empress Esthetic	1000 MPa	1100-1300 MPa	1200-1400 MPa	900-1300 MPa
Enamel Wear ×	Comparable to natural enamel	Comparable to natural enamel	Depends on type of veneering porcelain	Depends on the type of veneering porcelain	Depends on the type of veneering porcelain	Ongoing Research
Restoration Composition	Lucite reinforced glass	Lithium disilicate	88% gold (22k) composite metal with feldspathic porcelain	Zirconium oxide substructure with VITAVM®9 fine-structure porcelain	Au, Pd, or Ni/Cr alloy substructure with feldspathic porcelain	Monolithic Zirconia
Years of Clinical Success	15 years	12 years	15 years	10 years	> 40 years	3 years

+ Provides a higher strength inlay/onlay, yet does not possess the more esthetic chameleon effect of Empress Esthetic.

++ Strictly adhere to adhesive manufacturer's instructions for proper bonding.

+++ The substructures for LAVA and Porcelain Fused to Metal (PFM) crowns must be a minimum of 0.3-0.5 mm thick for sufficient strength. In order to achieve the prescribed shade, the veneered surfaces of the restoration must be at least 1.3 mm thick.

×Most modern brands of fine grain porcelain show wear closely to that of enamel as claimed by individual manufacturers.